is the Camino Real, the King's Highway, and once it knew the tread of many patient feet, human and hoofed, bearing heavy loads of the wealth of the Indies from a laden galleon on the South Sea to a waiting galleon on the Spanish Main, while their guards looked to their matchlocks and muttered bits of prayer to the saints for protection against possible lurking English marauders.

If you want so see anything of the wild life in the forest reserve, you will have to go silently. For the wild things hear voices and see movement at astonishing distances, and if you do not hush they will, and you will pass them by, seen yourself but unseeing.

What the patient and speech-forbearing visitor may see in the newly accessible forest is well and richly foretold in the many scientific studies that have been conducted on Barro Colorado by such naturalists as Dr. Frank M. Chapman and Dr. Frank Lutz of the American Museum of Natural History, Paul R. Standley, botanist at the Field Museum and Dr. Thomas Barbour of the Museum of Comparative Zoology at Harvard. Dr. Chapman has caught some of the flow of his enthusiasm in a book which he calls "My Tropical Air Castle."

Trees Full of Birds

If you walk circumspectly, and (preferably) carry a good pair of field glasses, you will be able to see much of the interesting life of the jungle. Parrots you will hardly avoid seeing—and hearing. If they take alarm and fly from one treetop to another, they will advertise their going with the earsplitting din that makes every zoological garden's parrot house a Bedlam.

You may have the luck to find a nest-tree of the oropendola, a great builder of hanging nests that put even the workmanship of our Baltimore oriole to shame. The oropendola is a fairly big bird—the male some fifteen inches long—dark-colored, marked with yellow, very social in its habits. A whole colony of them will build in the same tree, making it look as though the children of some extraordinarily long-legged family of giants had hung up their stockings on Christmas eve.

With rare luck you may see a specimen of the beautiful white hawk, that seems to let other birds pretty much alone and feeds mainly or wholly on snakes.

Toucans you are likely to see, though again you will have to use your field-glasses, for this bird that is mostly beak is another hunter of the tree tops. Dr. Chapman discovered the only known use for this apparently overgrown organ. It is a grand help to a lazy bird, for a toucan can sit on a branch and merely by turning his head—hardly even stretching his neck—gather in fruits and berries from a wide radius around him.

IL PENSEROSO

Young howling monkey, in a Barro Colorado treetop, studies men while they study him.

Conspicuous among the treetop inhabitants are the monkeys—principally two, the active, acrobatic Capuchins and the slower, more deliberate but very decidedly noisier howlers. The howling monkey does not exactly howl; his call is more like a half-yelping bark, and he utters it very abundantly, especially just about dawn and when a rain roars upon the leafy roof of his trees.

The dominant dwellers of the forest floor are of course the furred and footed closer kindred of man, the mammals. Some of these are not hard to find. The coati, for example. If you hear a pattering, a rustling, a mild crashing in the underbrush, stand still and a little flock of coatis will very likely come to you.

The coati is a relative of the familiar raccoon, and looks (*Please turn page*)

ASTRONOMY

Most Distant Visible Nebula Seen by Palaeozoic Light

A "PALAEOZOIC PICTURE," a photograph made with light which is supposed to have started toward the earth 300,000,000, years ago, has been shown by Dr. Edwin P. Hubble, of the Mount Wilson Observatory in a lecture at Princeton University.

It was a photograph of the most distant nebula yet studied by astronomers and it was made with light that left the "island universe" on the fringe of known space at about the time when coal was in the making here on earth.

The achievement of a giant telescope in amplifying our knowledge of the material universe was depicted by Dr. Hubble in the Vanuxem lectures on "The Exploration of Space." Observational astronomy, once concerned chiefly with the solar system, then with the stars in our Milky Way or galaxy, is now, he declared, entering upon a third phase—the accurate description of the extra-galactic nebulae.

Thirty million of these, he estimated, lie within 300,000,000 light years of our own galaxy. These thirty million nebular "neighbors" are scattered through this vast space more or less at random; but on the whole their distribution is homogeneous and isotropic, according to the careful statistical study he has been conducting at Mount Wilson. The hundred-inch reflector there can penetrate no farther into the depths of space, and speculative conjectures are our only guide at present when we consider what lies beyond the observational frontier, farther away than 300,000,000 light years.

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