

## TROPICAL ORIOLES COOPERATIVELY POLYGAMOUS

An island midway between the Atlantic and Pacific in the center of the Panama Canal is the unique location of a laboratory of tropical research. The scientists in charge, while living in the heart of a primeval tropical forest, enjoy the comfort of modern shower baths and ice delivered three times a week by passing steamers. Dr. Frank Chapman, ornithologist of the American Museum of Natural History, New York, reported to the National Academy of Sciences.

While four different kinds of monkeys roar defiance at the airplanes traveling over head, these scientists on the island of Barro Colorado, have ascertained many new facts about tropical bird and animal life. Prominent among the pictures of tropical fauna secured by Dr. Chapman was that of a tree containing forty nests of a species of oriole, observations upon the life of which he said had revealed a condition of more or less harmoniously worked out cooperative polygamy.

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## EARTHQUAKES AND METEORS REVEAL EARTH'S COMPOSITION

Studies of earthquakes, meteors which hit the earth from outer space, and the atmosphere of the sun, all contribute to knowledge of the earth's composition, according to Dr. Henry S. Washington, of the Carnegie Institution of Washington, who spoke before the American Geophysical Union recently.

"We are almost certain that the earth consists of a core of metallic nickel-iron, which changes, into outer silicate shells, the thickness and mass of which can be approximately estimated," he said.

"From these data, we can calculate the chemical composition of the earth as a whole. The whole earth is composed mostly of the following elements; iron, about 40 per cent. (about 32 per cent. being in the metallic central core); oxygen, about 28 per cent; silicon, about 15 per cent; magnesium, about 9 per cent; with smaller amounts of nickel, calcium, aluminum, and sulphur; these make up about 98 per cent. of the earth, the other 84 elements making up the remaining 2 per cent.

"The order of abundance of the chief elements in the sun's atmosphere is in general like that in the earth, indicating that the earth originated from the outer part of the mass of matter that eventually condensed as the sun. The average composition of all meteorites is much like that of the whole earth and of the sun's atmosphere."

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Some astronomers have believed that Saturn and Uranus are very hot, but measurements show that Saturn's temperature is about 240 degrees below zero Fahrenheit, and Uranus is 275 degrees below.

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