

RADIO

# New Radio "Mirror," 35 Miles Above Earth, Found in India

**Ionized Region Much Lower Than Previously Known  
Layers May Cause The Fading of Broadcast Signals**

**A** NEW layer of ionized air molecules which may strongly absorb radio waves in the ordinary broadcasting region has been found at a height of thirty-five miles above the earth's surface.

Known as the "D" layer, the zone is some fifteen miles above the top of the much-discussed stratosphere. Yet it is only a little over half as high as any previously recognized radio zone such as the "E" layer at 60 miles altitude. Other radio layers are the  $F_1$  region at 110 miles altitude and the  $F_2$  layer at 145 miles height.

First suggested by Profs. E. V. Appleton and J. A. Radcliffe, British scientists, in 1930, the "D" layer has just been found in experiments performed by the Indian scientist, Mitra P. Syam, of the Wireless Laboratory, University College of Science at Calcutta. (*Nature*, June 7)

Chief characteristic of the new "D" layer is its property of strongly absorbing long radio waves and its permitting

penetration by waves below a definite wavelength.

Reflection of radio waves off the "D" layer appears to be a rare happening, Mr. Syam reports, which occurs only when its ordinarily diffuse boundary becomes sharp.

In reply to inquiries about the "D" layer, radio experts of the National Bureau of Standards said the discovery was of wide interest because of the possibility that it may explain the occasionally poor transmission of ordinary broadcasting waves during the day time.

For no known reason radio waves in broadcasting range seem sometimes just to disappear. While yet unaware of the details of the report by Mitra Syam to *Nature* the government scientists suggested tentatively that the strong absorbing power of the "D" layer for long waves might account for this known disappearance.

*Science News Letter, June 15, 1935*



**FIRST "TAME" GRANDCHILD**

*Peter, one-month-old chimpanzee, is here shown as he was photographed by Dr. Robert M. Yerkes, of the Yale Laboratories of Psychobiology. His birth and survival are of great importance to scientists because he is the first known offspring of an ape who was herself born in captivity.*

Bokar, a young male believed to be about eight years old. By August, 1934, when she was just eight years, five months old, Cuba was expecting her son. Peter was born on April 11, 1935, eight calendar months later, a full-term healthy infant who had a before-birth lifetime just about one month shorter than that of man.

Cuba is not a good mother. She held her baby awkwardly, usually grabbed in one hand. She would not allow him to cling to her as baby apes do in the wild. She would not nurse him. Instead she treated him much as she might any strange object which interested, puzzled and annoyed her.

Overnight the scientists allowed Cuba to keep the baby, watching them from time to time until morning came. Then they took him away from her so that he might not be killed by her neglect or abuse. She did not seem disturbed by the separation.

And Peter got along very nicely without his mother. He was fed a diet such as any human infant might enjoy. Evaporated milk, irradiated with the sunshine vitamin, corn syrup, water and lemon juice. He took it readily enough from the bottle and thrived from the first.

Although the parentage of Peter's mother is certified to by scientific records, his father's ancestry is unknown. Bokar's birth was not witnessed. He was brought from French Guinea to the Yale station in 1930 by Dr. Henry W. Nissen, and it was then estimated that he must have been born about 1925.

Cuba, her mother Mona and her fath-

ZOOLOGY

# Baby Chimpanzee Is First Born To Captive-Born Mother

**A** NNOUNCEMENT: Mr. Bokar and Mrs. Cuba Chimpanzee announce the birth of a baby son, Peter, on April 11, 1935. Weight: four pounds. The mother was formerly known as the daughter of Jim and Mona of Havana, Cuba.

Such an announcement, but worded very differently, appears in the dignified print of the scientific journal *Science* (June 1). It is of great interest to scientists because young Peter is the first known offspring of an ape born in captivity. He is the first "tame" grandchild.

Cuba, the mother, is the first of the man-like animals for whom a complete scientific record is available of her birth, the age at which she became an adult, and her treatment of her infant son.

This birth at the Yale Anthropoid Experiment Station, Orange Park, Fla., marks a mile-stone in the building up of a colony of animals whose whole history is known to science, and who will provide standardized laboratory material for the scientists who wish to use them for biological or psychological research. It is the hope of the station's director, Dr. Robert M. Yerkes, who makes the announcement, that within a few years every animal in the colony will have a complete record available of birth date, ancestry, and developmental history.

Chimpanzees mature somewhat earlier than man, Cuba has demonstrated. She became physically an adult when she was just over seven years old, in April, 1933. The next month she was given her mate,