

finds 71 characteristic of the Tropical, 62 of the Subtropical, 12 of the Temperate and 42 of general distribution, while an additional table gives the altitudinal range of each.

His several collecting stations are described in detail with the characteristic species of each, and then follows the well annotated list.

As Mr. Holt says "with a few notable exceptions local lists of birds are practically non-existent for Brazilian localities and those that do exist contain no data on altitudinal distribution." It will therefore be at once evident that he has made a contribution of no mean importance to zoogeography.

As the Serra do Itatiaya is—with one exception, Pico da Bandeira—the highest mountain in Brazil, and is separated by some 1200 miles from the nearest outlying spur of the Andes, it would be extremely interesting to have some comparison of the avifauna of the two ranges. We trust that Mr. Holt's valuable survey will place Dr. Chapman in a position to make such a comparison, and to trace the origin of the fauna of these coastal mountains as he has already done for the Andean system.—W. S.

#### **Kendeigh and Baldwin on Temperature Control in House Wrens.**

—The investigations described in this paper<sup>1</sup> were carried on at the Baldwin Bird Research Laboratory, with the use of specially constructed mercury thermometers and thermocouples, the latter proving more reliable and satisfactory.

There is much detailed description of the methods employed and the data obtained. The object in view was the determination of the amount of variation in temperature exhibited by nestling House Wrens of various ages. The data show that, under natural nest conditions, the body temperature varies several degrees during the first few days out of the shell, but by the time the young are ready to leave the nest, the temperature is higher but distinctly less variable, so that the young nestlings are more like "cold-blooded" animals than like warm-blooded ones, so far as their temperature variation is concerned.

Other investigations show that there is a definite development of a resistance against cold which follows the sigmoid growth curve but there is no efficient resistance against extreme heat, though rapid respiration and the development of air sacs probably serve to this end.

This paper is a good illustration of the excellent work, in what might be termed "experimental ornithology," that is being carried on in Mr. Baldwin's Research Laboratory, and we look forward to many other important investigations under his efficient direction.—W. S.

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<sup>1</sup> Development of Temperature Control in Nestling House Wrens. By S. Charles Kendeigh and S. Prentiss Baldwin. *American Naturalist*, LXII, May-June, 1928, pp. 249-278.