

"We went ashore with the savage . . . On our coming into the house two mats were spread out, to sit upon, and immediately some food was spread, served in well made redwood bowls. Two men were also dispatched at once with bows and arrows in quest of game, who soon after brought in a pair of pigeons which they had shot."—W. B. MERSHON, *Saginaw, Mich.*

Some Weights of Mourning Doves in Captivity.—In an article in 'The Auk' of July, 1928, on "A Method to Determine the Weight of Food Digested Daily by Birds" Mr. Wm. B. Taber, Jr., describes his procedure of trapping wild birds late in the afternoon and weighing them then and on the following morning; from the differences in these weights he calculates the 24 hour rate of loss and considers that this "must be equivalent to the daily food consumption," i. e. "dry matter and water." In 1919 in Norman, Oklahoma, I had in captivity two young male Mourning Doves (*Zenaidura macroura marginella*); and the results of some feeding tests with these birds may be of interest in connection with Mr. Taber's paper.

The older bird, "F," was given to us September 25, when about two months old; "D," was taken from the nest October 1, at the age of about nine days. They were kept in a large room with open windows and remained in good health, but of course took much less exercise than if they had been at liberty. On test days each bird was weighed before its breakfast and after its last meal at night. A generous amount of the different kinds of food was always supplied.

From November 16 to 25, "F's" morning weights varied from 97.2 to 99.7, averaging 98.4 gr., his evening weights varied between 106.5 and 109.6, averaging 108 gr. Multiplying his nightly loss by two we find that his 24 hour loss varied between 15.3 and 23.7% of his morning weight, averaging 19.2%. From December 28 to January 3 his morning weights varied between 103.8 and 105.7, averaging 104.8 gr., his evening weights varied between 112.7 and 115.4, averaging 114.3 gr. His average 24 hour loss was 17.1% of his morning weight.

From November 17 to 23, "D," varied between 97.5 and 101.5 gr., averaging 99.3 in the morning, and between 105.5 and 108.7, averaging 107 gr., in the evening. His daily loss varied between 12.6 and 19.5% of his morning weight, averaging 16.5%. From December 28 to 31 his morning weights varied between 97.5 and 99 gr. averaging 98.4; his evening weights between 106.5 and 108, averaging 107.3 gr., while the 24 hour loss averaged 18.9%.

It is not clear why such large variations in nightly loss should occur under uniform conditions. The high and low rates of loss appeared to occur at random; they certainly did not coincide with the two birds. The average 24 hour loss of these captives is not far different from that of Mr. Taber's 22 wild Mourning Doves—16.1%; his maximum was 24.1—a little higher than any of mine, while his minimum was decidedly lower than any of mine—7.8%. He states that "the daily food consumption of 13

Mourning Doves trapped from April 2 to August 1 averaged 11.7% of their weights, while the daily food consumption of 9 trapped from September 6 to October 6 averaged 20.4%." With "F" the loss was somewhat less in December than November, with "D" the opposite was true.

As to the food eaten, six days' consumption by one bird of a mixed diet (59.9 gr. of seeds and grain, 27.6 gr. of bread and milk) amounted to 87.5 gr., while the 24 hour loss during that period came to 111 gr.—a difference of 23.5 gr. Six days' consumption of seeds and grain alone amounted to 69.3 gr., while the loss was 106.8 gr., giving a difference of 37.5 gr. This difference I suppose was made up by water; when some liquid was provided in the shape of milk, the discrepancy between food and total loss was 21.2% of the latter; with only dry provender, it was 35.1%. The daily consumption of seeds and grain varied between 10.3 and 12.9 gr., averaging 11.6 gr. for one bird; the assumed consumption of water varied between 5.4 and 6.7 gr., averaging 6.2 gr.—MARGARET MORSE NICE, Columbus, Ohio.

The Field Marks of the Black Vulture (*Coragyps urubu*).—While in Charleston, S. C., during the A. O. U. meeting, I made an effort to work out a definite field identification mark for the Black Vulture. In former years they gathered round the market, but today they are to be found on a dump on the eastern edge of the city along the Cooper River. There were about 400 of this species present together with some of the Turkey Vulture (*Cathartes aura septentrionalis*). Coues, in the fifth edition of his 'Key to North American Birds,' makes several statements that are not concurrent with my personal experiences. In contrasting the two in flight, he has this to say, "Catharista [Black Vulture] never sails for any distance without interrupting that easy motion by flapping the wings." On the contrary, I have seen these birds soar for hours without once moving their wings. However, when they are apparently headed for some distant point, they fly in close formation with much flapping. Frequently they soar in the high winds as easily as *Cathartes*. Coues, in further describing the Black Vulture in flight, remarks, "The ends of the quills are neither spread apart nor bent upward." In every instance I have found the opposite of this to be true. While the tips of the wings are bent up in both species the wings of the Turkey Vulture gradually taper upward, the quills being spread but in the Black Vulture only the quills turn up. At the end of each wing in the Black Vulture there is a white patch, visible from above and below, caused by the white shafts of the primaries. The undersurface of the wings of Turkey Vulture on the other hand is white for three fourths of its inner area, seen only from below.

In distinguishing the tail of the Black Vulture from that of the Turkey Vulture, Coues says, "Shorter and more rounded tail." Its tail is shorter but it is distinctly squared, whereas the Turkey Vulture's tail is quite rounded. The wrist joint of the Black Vulture, too, is held quite straight in flight while in the Turkey Vulture it is held at a distinct angle but this