

use not only saves one the fatigue of blowing by the mouth, but it does the work much more quickly. It also enables the particular collector to blow his large eggs with small holes—for instance, a large hawk's egg can be completely blown with a 1-16 hole, and with one of double that diameter they can be emptied in double-quick time.

The vital feature of this outfit is a little foot-pump sold by physicians' supply houses, for use with atomizers. It is four by one and one-half inches when closed, and its interior may be used for storage when traveling. From it runs a rubber tube up to the work table, on which lies a pure rubber ice bag closed by a doubly perforated cork, through which are two small glass tubes. One of these is attached to the tube coming from the pump, the other has a tube running to the blow pipe. To use it, insert the fine glass tip into the egg, and pump with the foot. The pressure expands the rubber icebag which renders the jet from the blowpipe uniform, steady and continuous, and at the same time the swelling of the bag is a gauge by which one can control his pressure, as it is easy to burst a small egg with this pump. If many eggs are to be blown, one may attach a Y or two, and then two or three persons can work at once from the same pump.

I have been surprised at the extent of my patience in blowing a large egg, when I did not need to provide the necessary force with my cheeks, and am sure that the result has been for me, better specimens with less labor. Sometimes I have found it well to put a second icebag over the first, thereby doubling the pressure, where two persons are working together.—W. E. SAUNDERS, *London, Ontario*.

A Sage Sparrow in Boulder County, Colorado.—On March 18, 1904, I obtained a sample copy of *Amphispiza belli nevadensis* here on my farm, ten miles north of Boulder. Only the one bird was seen. The A. O. U. Committee requires this species to inhabit the "Great Basin." W. W. Cooke in his research for the material for his "Birds of Colorado" and two "Supplements" could find but one record "East of the Front Ranges" viz., a specimen taken by Mr. F. Bond, near Cheyenne, Wyoming.—FRED. M. DILLE, *Longmont, Colorado*.

The Coues Flycatcher as a Guardian of the Peace.—All who are interested in bird life are acquainted with the pugnacious tendencies of flycatchers. My observations have been principally confined to the Coues flycatcher, probably the most alert and warlike member of the family. During the breeding season, while the female is on the nest, the male may be seen nearby on one of his numerous perches, usually on the top of some dead tree, where he sits on guard from daylight until dark. Occassionally he darts off to catch an insect, and at short intervals utters his never-changing note, which gives him his Mexican name. This note is best described in Spanish, and sounds very much like Jose, Jose-Maria. There is no mistaking the bird once you have heard him, for he tells you his Mexican name with proper accent. From the last two syllables he is often called the Jose Maria bird—simply the names of Joseph and Mary in Spanish.

The Coues flycatcher is a lively, wide-awake fellow, and while sitting on his lofty perch he keeps a sharp lookout for any of his numerous enemies who may venture too near his dwelling place. The moment a jay, hawk, squirrel or snake makes its appearance, the flycatcher leaves his perch and pounces upon the intruder, at the same time giving the note of alarm which never fails to bring the female to the scene. Then there is a snapping of beaks, and a regular whirl of wings and tails about the unwelcome visitor, who is forced to leave the locality faster than he came.

With all his warlike proclivities, the Coues flycatcher has another quality—that of attracting friends—which is equally strong. Among the more timid birds he numbers a host of friends who seem to be conscious of the existing bond, and very readily take advantage of it. My attention was first called to this fact in the Huachuca Mts., Arizona, in 1896, when on my first trip to that section, in company with H. S. Swarth, H. G. Rising, and W. B. Judson. While we were all walking up the canyon above our camp, one of our party found a nest of the plumbeous vireo, on a low branch of an oak, within reach from the ground. We were in the act of taking this nest, which contained a set of eggs, when one of us observed a nest of the hepatic tanager in another oak, not more than twenty feet distant. Naturally our attention was turned to the new find, when some one else caught sight of still another nest on a branch of the same limb containing the tanager's. Upon flushing the bird, it proved to be a Coues flycatcher. I was soon up the tree where I could see into both nests, as they were close together on the same level, and each contained eggs. To come to the point for which this paper was written, here on the same limb, not more than four feet apart, was a nest of the Coues flycatcher and one of the hepatic tanager, with a nest of a plumbeous vireo not more than twenty feet from the others. All these nests contained full sets of eggs, showing that nest building had been carried on at the same time in all three cases. Naturally we wondered how these three pairs of birds, including the belligerent flycatcher, could get along in perfect harmony, building their nests and sitting on their eggs side by side. Not until later years did I have opportunity to observe the cause and effect of the

relation between these pugnacious flycatchers and their more timid friends. On many occasions, in seasons following, I found nests of various warblers, vireos, tanagers, and other birds in close proximity to nests of the Coues flycatcher. Once, by using a small cloth scoop on the end of a pole I took a set each of Coues flycatcher and a black-fronted warbler, without changing my position in the tree. Another time I took a set of olive warbler and a set of black-fronted warbler from the same tree, and a set of Coues flycatcher from a tree not more than fifteen feet distant. In these, as well as in many other instances, I had the opportunity to learn the reason for these family gatherings. In the locality where my observations have been made, the smaller and more peaceable birds suffer great loss from snakes, squirrels, and jays. Probably the most bitter enemy of the smaller birds is the long crested jay, who is continually in search of their nests. When the jay locates a nest, his call-note brings as many as half a dozen of his hungry comrades to the scene, and under a feeble attack from the parent birds, the eggs or young, as the case may be, are carried off or devoured on the spot. Many times, even, the nest is torn into shreds. All this, however, does not occur when there is a nest of the Coues flycatcher in the vicinity, for upon the first alarm, the flycatcher comes to the rescue, and the would-be assailant is forced to leave. This wholesale slaughter seems to teach these much imposed upon species to seek the protection of the more independent flycatcher.—O. W. HOWARD.

Road-runners Eat Young Mockingbirds.—Mr. Leroy Abrams of the department of botany, Stanford University, states that while he was collecting plants in the Mission Valley near San Diego, California, between May 1 and 10, 1903, his assistant observed a road-runner (*Geococcyx californianus*) remove from a nest a young mockingbird and devour it. Both road-runners and mockingbirds are common at this locality. It is known that road-runners eat eggs, but I have never heard of their killing young birds. How general is this habit? Have our readers any observations on this point?—WALTER K. FISHER.

THE EDITOR'S BOOK SHELF

BIRDS OF THE HUACHUCA MOUNTAINS, ARIZONA. By HARRY S. SWARTH. Pacific Coast Avifauna No. 4, pp. 1-70, April 15, 1904.

It affords us great pleasure to call attention to this interesting contribution to the ornithology of southeastern Arizona, and to commend the thoroughness of the work. It is based, with the exception of a few scattered records, on observations made and specimens collected by the author, W. B. Judson, H. G. Rising and O. W. Howard during three visits to the region in 1896, 1902, and 1903. It certainly is refreshing to find a paper entirely devoted to the life histories of birds—a subject of absorbing interest—and not given over to descriptions of closely split subspecies, the principal function of which is to burden the already plethoric pages of synonymy. The arbitrary limiting of the list to such species as occur in the mountains proper, above the surrounding plains may be in some respects a good plan, though by its adoption certain valley forms noted near the canyon openings are included, while others of similar distribution are omitted. Moreover, interesting information relating to the migration and distribution of water-fowl and waders in the San Pedro and Barbocomari valleys is necessarily left out. Although the author has had phenomenal success in securing a large amount of material, it may not be out of place to make the list more complete by adding the following species which have come directly or indirectly under the observation of the reviewer.

Lophortyx gambeli. Examples of this quail were shot by one of the officers at Fort Huachuca near the post in January, 1895. *Scardafella inca*. Mr. R. D. Lusk secured two specimens in Ramsay Canyon, one in 1891, and the other on Sept. 15, 1894. *Urubitinga anthracina*. During May and early June, 1892, this species was seen on several occasions near Fort Huachuca. Although no specimens were secured the broad white single band on the tail served to identify them. *Asio wilsonianus*. A specimen of this owl was secured near Fort Huachuca April 28, 1892. *Micropallas whitneyi*. On May 7, 1892, my lamented friend Major J. L. Fowler found one of these little owls in a clump of oak leaves where it was secured. A month later Mr. Frederick H. Fowler discovered a female and three eggs in an old woodpecker's hole, in the canyon above the Fort. *Calypte anna*. Mr. Fowler took two specimens of this hummer at the Fort, Oct. 12, 1892, and Mr. H. Kimball one, Sept. 11, 1895. *Otocoris alpestris actia*. Three specimens were taken by Mr. Fowler Jan. 10, 1893. *Xanthocephalus xanthocephalus*. This blackbird is considered a common winter resident about the Fort. One was seen there May 4, 1892, and others in the valley below fully three weeks later. *Amphispiza belli nevadensis*. Secured by