

pearance of a black patch, nearly as conspicuous as the olive green one in *Compsothlypis americana*. In still another, the crown is thickly marked with black shaft lines.

Dendroica castanea.—In a male, May 5, 1888, the buff on the sides of the neck is continued into a broad cervical collar, streaked with dusky. Another May specimen, also a male, shows indications of a similar collar.

Geothlypis formosa.—Breeding females of this species from Mt. Pinnacle and Cæsar's Head are duller colored on an average than the males. The black, especially, is less intense, and considerably restricted. In some it is nearly wanting on the crown. The brightest females and the dingiest males, however, are indistinguishable.

FURTHER NOTES ON THE EVENING GROSBEAK.

BY AMOS W. BUTLER.

In addition to the records of the range of the Evening Grosbeak (*Coccothraustes vespertinus*), given in 'The Auk' for July, 1892, I am enabled, through the kindness of several friends, to offer some additional notes.

In the winter of 1889-90 Evening Grosbeaks were tolerably common in the vicinity of Ft. Wayne, Indiana. Mr. C. A. Stockbridge, in addition to the two reported Feb. 15, 1890, noted eleven Feb. 16, one March 22, one April 9, and one April 12.

Mr. C. E. Aiken of Salt Lake City, Utah, informs me that a large number of specimens were obtained near Whiting Station, Indiana, in the winter of 1886-87 by Mr. R. A. Turtle of Chicago. To some few of these I have doubtless referred before.

Prof. F. Cramer, Lawrence University, Appleton, Wis., under date of March 14, 1891, says: "Two weeks ago a flock of five Evening Grosbeaks spent a few minutes on a tree in our back yard. They were quietly eating the little crab apples that had not fallen off the tree. Feb. 7 Professor Lummis saw a flock of ten eating the fruit of a climbing bitter-sweet near his house. They did not stay long."

Mr. T. McIlwraith, Hamilton, Ontario, very kindly sent me an account of his observations concerning these birds in the winter of 1889-90. He says: "The first flock was noticed on Dec. 22, 1889. I soon found their haunts, which I visited almost daily till the end of January when the eastern migration ceased. Passing flocks were again seen in March going rapidly westward, but the numbers were less, and they made no stay. In Canada they seemed to travel on a straight, narrow line from Windsor to Quebec, north or south of which they were not observed, till they reached the east end of Lake Ontario, when they scattered south through New York. Near Hamilton they frequented the north shore of the lake, where they fed on the berries of the red cedar; they were also noticed taking the seeds from such apples as remained on the trees at that season."

Mr. L. W. Watkins, Manchester, Michigan, has been very obliging in supplying me with the following notes: "Late in the fall of 1889 Washtenaw and other counties were visited by the Evening Grosbeak. They came in large flocks, sometimes two hundred or more. These flocks were scattered very generally over the country, about one flock to every six square miles. They frequented gardens, orchards, and dooryards. Towards dusk they all disappeared, but at early dawn they were back again in the apple orchards where they fed upon the apple seeds, cracking them open as do the tame canaries their hemp seeds. There were many frozen apples upon the trees and on the ground. These they pulled to pieces, rejecting all but the seeds. When the supply of fruit seeds gave out they ate maple seeds, but, so far as I have observed, they ate evergreen cone seeds only as a last resort. Their unwary nature, and high, bell-toned, garrulous chirrup attracted the attention of even the most unobserving. I resolved to try to capture some, thinking they might breed in confinement. In our yard was a crab-apple tree. The ground beneath it was covered with the little fruits. When the Grosbeaks had exhausted the supply of food in the orchard they came to this tree. When frightened, while upon the ground, they invariably flew straight up among the branches of that tree instead of flying off to some other. I arranged an old pigeon net among the branches to try to catch some. When coming to feed they always alighted in a body upon the ground, and did not alight

first upon the tree. I was only enabled to capture one, — a fine male, — and I could never repeat the netting. The captive was put into a large cage and he soon became accustomed to the new conditions. By using the captive as a stool pigeon, with the aid of some hemp seed, I was enabled to induce two males to enter the house. Suddenly I closed the entrance way, when they were easily caught. Although I often tried, I never could get a female to approach the cage. They seemed much more timid than the males. The three captives were very cross to each other, the bully being nearly as persistent in his attacks upon his companions as is the cock in the farmyard upon his rivals. Their food consisted of sunflower seeds, mixed canary seeds and apple seeds. When very hungry they would eat oats, but very reluctantly. Corn, wheat, barley, the pulp of fruit, and garden vegetables, they would not touch. Diptera, hymenoptera, lepidoptera and coleoptera were offered them and were refused. Angle worms and spiders were likewise uneaten. When caged, their note was changed from the usual chirrup to a shrill whistle or shriek, and, at times, they closely mimicked a young chicken when lost. They never sang, but occasionally chattered to each other with much animation. They also made sounds closely approaching a low warble. They always slept, at night, with the head under one wing. I was very anxious to know how they would stand the hot weather, but 90° F., in the shade, found them as unconcerned as in winter. Neither did they show any restlessness in spring, when their mates were leaving. A remarkable change was manifest after their first moult. The olivaceous and yellowish tints, in the new feathers, were turned to slaty drab and brownish green, respectively, though the pure yellow on forehead and scapulars remained as before, as also did the black and white portions. Thus they were changed from bright, attractive birds to very oddly and conspicuously trimmed birds of plain — rather dirty — color. Nor did this color change with the age of the feathers. The next summer showed the same shades. In the fall of 1891, after living in confinement two years, one after another died, not from neglect, but they seemed to pine away and die from the effects of captivity.”