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botanic garden, which is situated at about one mile from the sea, at Basse-Terre. Its mate was seen at the same time, but could not be obtained. There are now several specimens at the museum of Pointe a Pitre. Mr. Vetrac lately showed me two, which he assured me were young ones, taken from the nest in a cliffy bank, but in size and coloring they did not differ apparently from adults. However, I did not observe them very closely."

From Mr. Charles Colardeau I received the following account:

"The large Kingfishers, *C. torquata*, are very rare, and when seen are very hard to secure, as they are very wild. I only saw three in two years, although I hunted a great deal for them."

OCTOBER 20, 1885.

REMARKS UPON THE PLUMAGE OF *REGULUS CALENDULA*.

R.

By CHARLES WICKLIFFE BECKHAM.

As the books appear to be considerably at sea as to the presence of the brightly colored crown-patch of the Ruby-crowned Kinglet in females and young autumnal birds, it may not be out of place to attempt the elucidation of the matter.

Wilson, Audubon, and Nuttall all say substantially the same thing in regard to the female—that it is similar to the male; and in Audubon's plate of the species the female, as well as the male, is figured with the brilliant scarlet-vermilion crown. As to the presence of this ornament in young birds in the fall they are all silent. In "Birds of North America," 1858, p. 227, it is stated that "the female differs very little in color. It is quite probable that the species does not attain the red patch in the crown until the second year, as the spring migrations of the species always embrace a considerable number with the head perfectly plain."

The "History of North American Birds," 1874, Vol. I, p. 75, gets nearer to the truth than any of the other authorities by saying, "Female and young without the red on the crown."

In the "American Naturalist" for 1870 (IV, p. 54), Mr. Allen, in a brief note, questions the possession of the crown-patch by the female, and calls for the "experience of others." Mr. Dall, in the same volume, p. 376, mentions that he "took ten or twelve specimens in May and June in Alaska, all of which had the red crown, and proved on examination to be males." He saw no females at all. Dr. Cones, in the same volume, p. 316, in the "Key," 1872, p. 78, and in "Birds of the Northwest," 1874, p. 16,* expresses the belief that the male and female are similarly

* "There has been some discussion respecting a supposed sexual difference in the scarlet crest of this species. But the fact is that both sexes possess this ornament,

decorated, but he adduces no evidence in support of this supposition. In the "Birds of the Colorado Valley," 1878, p. 93, and in the second edition of the "Key," 1884, p. 259, he expresses a doubt upon this point. He says (*ll. cc.*): "This beautiful ornament is apparently not gained until the second year, and there is a question whether it is ever present in the female. * * * Young for the first year (and ♀ ?) quite like the adult, but wanting the scarlet patch."

The "British Museum Catalogue of Birds," Vol. VIII, p. 85, "keeps the ball rolling," denying the crown to the young bird, but silent as to its possession by the female. In fact, the same statement, in substance, runs through all the books I have seen that have had occasion to describe the plumage of this abundant and interesting little bird.

As regards the alleged presence of the ornament in the female, it is difficult to see how this error could have so long prevailed. In addition to the large series of the National Museum, I have examined a good many others, amounting in the aggregate to about 125 specimens, and but one of those having a red crown-patch purports to be a female. This skin, No. 10937 U. S. N. M., was collected in April, 1858, at Fort Bridger, Utah, by Mr. C. Drexler; but this determination may be set aside as in all probability erroneous. The error originated with the older American ornithologists, who, knowing that the females of all the other *Regulinae* had a brightly colored crown, although differing from that of the male, doubtless took it for granted that this one had it also.

The presence of this character in young autumnal males is a fact that I have but recently ascertained. During October of this year (1885) I took four young males, and Mr. William Palmer, of Washington, two, all with the brightly colored crown; three of the former were taken on the same day. I took particular pains in determining the fact that they were young birds, and Mr. Palmer informs me that he exercised the same care with his two specimens. This point was easy enough to determine, on account of the very incomplete ossification of the various parts of the skeleton, particularly the skull, the softness of the rictal membrane, &c. Altogether I shot seven of the birds this fall, all of them "birds of the year"—four males, as above stated, with the bright crown, one male without the crown (shot in September), one female, and one (without the crown) whose sex, on account of the mutilation of the parts, was not determinable. This would seem to indicate the numerical preponderance of the young males with the crown over those without this decoration. The large series I had under examination contains a good many fall males with the crown, and I have no doubt that most of them were birds of the year, a fact of easy de-

and that neither gains it for at least one year is proved by the circumstance that in the spring migrations a number of individuals are found with the head perfectly plain. The sexes are never positively distinguishable by outward characters. In this respect the species differs from *R. satrapa*, the female of which lacks the scarlet central patch in the yellow of the crown."

termination in the way above indicated, but one which the respective collectors, not realizing the importance thereof, failed to ascertain.

The explanation of the fact that some males are taken in spring without this coronal decoration is not very easily found, and the only one I can advance—a not very satisfactory one, it must be admitted—is that they are birds of very late broods, which for this or some other reason have not undergone the fall molt.

Two of the birds shot this fall, and several more found in the National Museum collection, exhibit such a remarkable difference in the color of the crown from the normal scarlet-vermilion that it may be well to indicate them in detail:

No. 1971 (Coll. C. W. B.), ♂ *hornot*. Ilchester, Md., October 25, 1885. Collected by C. W. Beckham.

No. 59315 (U. S. N. M.). Washington, D. C., October 20, 1859 (not "sexed," but undoubtedly a male, and probably a *hornotine*). Collected by D. W. Prentiss.

The color of the crown in these two specimens is almost exactly of the same shade, *i. e.*, a pale red-lead approaching orpiment-orange,* and there is a tendency to pale vermilion toward the ends of the feathers, a few of which are tipped with dusky, and the white at the bases is more pronounced than in any other specimens examined.

No. 1481 (Coll. W. P.), ♂ *hornot*. Alexandria County, Virginia, October 25, 1885. Collected by William Palmer.

This is the most interesting skin of the series, the feathers of the crown being white at the base, passing insensibly into a light yellow, and then into vermilion towards the tips, perhaps indicating that the feathers change into the normal scarlet-vermilion without molting.

No. 60955 (U. S. N. M.). Henry's Fork of Green River, October 3, 1870 (not "sexed," but doubtless a male of the year). Collected by H. D. Smith. Quite similar to the last, but the contrast between the yellow and vermilion is not so marked as in that one.

No. 66706. (U. S. N. M.), ♂. Fort Garland, Colo., May 30, 1873. Collected by H. W. Henshaw.

The crown of this specimen is quite like those of the first two, but of a more decided reddish hue, approaching the usual scarlet-vermilion. This is the only spring male of the series that has this yellowish crown, but the feathers of the general plumage are very much abraded and decomposed—almost mere shreds—showing that the bird had not molted at the usual time and was still wearing his last year's clothes. With this explanation I think it may be safely assumed that this pale-yellowish crown is a peculiarity of the fall plumage of some young males. Whether it pertains to an early plumage of all of them, and subse-

* These color terms are those adopted in Mr. Ridgway's forthcoming manual, "A Nomenclature of Colors for the Use of Naturalists, and a Compendium of Useful Knowledge for Ornithologists."

quently gives place to the scarlet-vermilion, in the light of our present knowledge, can only be a matter of conjecture.

These two points, however, may be regarded as pretty well settled: (1) that the female does not have this brightly-colored crown, and (2) that some young autumnal males (very likely a large majority of them) do possess this ornament.

In regard to the use of this decoration, I strongly suspect it to be not merely an ornament induced by sexual selection for the delectation of the female, but of considerable service to the bird in his "entomophagical" pursuits. But as I have no evidence to offer upon the subject, it would be unprofitable to discuss it here.

A careful comparison of Eastern with Western Province specimens fails to reveal any tangible differences of plumage or structure.

NOTICE OF A COLLECTION OF STALKED CRINOIDS MADE BY THE STEAMER ALBATROSS IN THE GULF OF MEXICO AND CARIBBEAN SEA, 1884 AND 1885.

By RICHARD RATHBUN.

During the early part of 1884 and of 1885, the U. S. Fish Commission steamer Albatross, Lieut. Commander Z. L. Tanner, U. S. N., commanding, was engaged in exploration to the south and southeast of the United States. The former year, under the direction of the Hydrographic Bureau of the U. S. Navy, she was mainly employed in making sounding observations in the Caribbean Sea region; but a short stop for dredging purposes was made off Havana, Cuba, where the U. S. Coast Survey steamer Blake had already discovered a rich assemblage of stalked crinoids. In 1885 the Albatross remained about three months in the Gulf of Mexico, visiting the same locality off Havana, and adding very largely to the natural-history results of the previous year. Brief accounts of these two cruises have already been given in this volume of Proceedings (pp. 83 and 696).

Stalked crinoids were collected off Havana, Cuba, off Santiago de Cuba, and in the northeastern part of the Gulf of Mexico, off the coast of Florida. Only four species were obtained—*Rhizocrinus Rawsoni*, *Pentacrinus decorus*, *P. Mülleri*, and *P. asterius*. The first-mentioned species was taken at all of the above localities, *Pentacrinus decorus* and *P. asterius* off Havana only, and *P. Mülleri* off Havana and off Santiago de Cuba.

The collection made off Havana is an exceedingly fine one, containing over 600 specimens, a large proportion of which are in a very perfect state of preservation, due to the great care bestowed upon them by the naturalists on board. As regards this locality, Mr. James E. Benedict, the chief naturalist of the Albatross, states that all the specimens of sea-lilies were obtained to the eastward, and within sight, of