

A number of authorities have in past years given it as their opinion that the Cormorants of southern Indiana, being found there throughout the summer months, breed in the heavy timber of cypress, pecan, oak and hickory bordering this largest body of water in the southernmost county. However, no definite evidences of their breeding, so far as I can find, were given.

During field excursions made there in 1929, I found what I believe to be a single nest of a Cormorant in a tree on the western edge of the lake. The nest, placed twenty-five feet up in the tree, was empty. It was the size of a Crow's, was made of sticks and was lined with Gull feathers.

Then on June 16, 1934, I observed two immature Cormorants a little more than half grown, perched in a dead cypress tree standing out in the lake. While I watched the parent bird flew towards these young ones, perched beside and fed them.

The flock of Cormorants usually remains until November, the latest date at which they were observed being December 1 (1932).—S. E. PERKINS III, *Indianapolis, Ind.*

On the Genera *Oligocorax* and *Miocorax*.—Dr. Kálmán Lambrecht in his great work on fossil birds (*Handbuch der Palaeornithologie*, 1933, pp. 290–295, fig. 104) has divided the fossil Cormorants into several genera on the form of the intermuscular line on the anterior face of the coracoid. According to his treatment the fossil species included in our North American fauna would stand as follows: *Oligocorax marinavis* (Shufeldt), *Oligocorax mediterraneus* (Shufeldt), *Miocorax femoralis* (Miller), *Phalacrocorax idahensis* (Marsh), *Phalacrocorax macropus* (Cope), *Phalacrocorax auritus* (Lesson).

Recently in connection with work on the A. O. U. 'Check-List' I have had occasion to examine the characters of the new genera proposed, having available for comparison in the osteological collections of the U. S. National Museum representation of most of the living species of Cormorants of the World. From study of this series of skeletons I am not able to substantiate Lambrecht's opinion that the form of the intermuscular line on the coracoid is of generic significance.

Peters (*Check-List of Birds of the World*, vol. 1, 1931, pp. 85–95) has recognized three groups among living Cormorants, namely, *Phalacrocorax*, including all of our American species, *Haliëtor* for the small, long-tailed Cormorants, and *Nannopterum* for the flightless form of Narborough and Albemarle Islands in the Galápagos. There is no definite separation possible on the character under discussion in these three groups as the various modern species show considerable variation, the variation being such as to bridge the gaps that seem to separate the fossil forms.

With regard to the fossil forms the intermuscular line in *Haliëtor africanus* is similar to that of *Phalacrocorax miocaenus* which Lambrecht places in his genus *Oligocorax*, while in *Haliëtor melanoleucus* it varies toward the form found in those species that Lambrecht considers true *Phalacrocorax*. If the form of this line is to be accepted in determining genera then *miocaenus* could be placed in *Haliëtor* on its resemblance to *africanus*, but when compared with *H. melanoleucus* would go in *Phalacrocorax*.

As for *Phalacrocorax femoralis* Miller (illustrated in *The Condor*, 1929, p. 168, fig. 58) which Lambrecht includes in his genus *Miocorax*, this species has the intermuscular line similar to that of modern *Phalacrocorax punctatus* and *Phalacrocorax carbo sinensis*. It will be recalled that *P. carbo* is the type of the genus *Phalacrocorax*.

With due respect for Dr. Lambrecht's opinion, I am forced to conclude that so far as North American fossils are concerned, at least, the genera *Oligocorax* and *Miocorax* are not valid so that the species included in our fossil list should remain in

the genus *Phalacrocorax* as in the fourth edition of the A. O. U. 'Check-List.'—ALEXANDER WETMORE, *U. S. National Museum, Washington, D. C.*

The Status of the Great Blue Heron in the West Indies.—The West Indian Great Blue Heron (*Ardea herodias adoxa* Oberholser) is usually considered to be resident throughout this region as well as on islands in the southern Caribbean, including Trinidad and Curaçao, from which latter island the type was described. After many years study of birds on these islands, I have come to believe that the Great Blue Heron breeds in the West Indies only in Cuba, the Isle of Pines and Jamaica, where it is resident. It may occasionally wander to other islands, but I believe that the great majority, if not all of these Herons that are found elsewhere in the West Indies, are migrants from North America (*A. h. herodias*). Among these I would place Oberholser's type of *A. h. adoxa*. All Great Blue Herons that have been recorded in the West Indies have been hitherto regarded as *adoxo*, with one exception, that being a bird that had been banded at Hat Island, Green Bay, Wis.¹ The presence of these Herons on Hispaniola and other islands during the spring and summer months is no sure criterion for considering them as residents, a Black-crowned Night Heron banded at Barnstable, Mass., having been recovered in Haiti on May 21, 1928! Furthermore, according to Gundlach, this species breeds during the winter months from November to January. West Indian specimens of the Great Blue Heron that I have examined, including two that I secured on the Isle of Pines, can be matched perfectly with specimens of *A. h. herodias*. Although they appear to average paler above, some specimens of the northern bird are as pale on the upper parts as any that I have examined from the West Indies. Oberholser states that *A. h. adoxa* is "of somewhat smaller size," a statement scarcely borne out by his measurements (in millimeters), which are as follows:

	Wing	Tail	Exposed Culmen	Height of bill at base	Tarsus	Middle Toe
<i>A. h. herodias</i>	433-480	159-187	123-151.5	23.5-31.3	157-205	93-115
<i>A. h. adoxa</i>	430-468	168-185	121-150	24-30	162-180	92-113

It will be observed from these measurements that any difference in size is insignificant and, as I have already mentioned, the paler coloring of the upper parts is not a constant character. West Indian Great Blue Herons should therefore be regarded as *A. h. herodias*, since at present there is no sure way of distinguishing two forms. This is not infrequently the case when subspecies are described merely on average characters.

Perhaps the taking of breeding examples in the West Indies may show that a race distinct from *herodias* inhabits this region, but at present there is no reason to believe that this is the case, although the form occurring on the islands is certainly distinct from *A. h. wardi* of the southeastern United States.

The only definite records of breeding colonies of the Great Blue Heron in the West Indies are from Cuba and Jamaica, and it is interesting and rather significant that these islands are in the restricted West Indian range of *Ardea occidentalis repens* Bangs and Zappey. These two birds are frequently seen in pairs on these islands and behave precisely alike. In spite of Mr. Holt's admirable report on the specific distinctness of *A. occidentalis*,² it is my opinion that this is merely a local color phase of *A. herodias*, comparable with the melanistic phase of the Sparrow Hawk, and the

¹ See Auk, Vol. XLIX, Oct. 1932, pages 457-458.

² Sci. Pub. Cleveland Mus. Nat. Hist. Vol. I, No. 1, 1928, pages 1-35.