

THE SPREAD OF THE CATTLE EGRET IN THE UNITED STATES

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THE entry of the Cattle Egret (*Bubulcus ibis*) into the United States (see Sprunt, 1955, for history) presented an opportunity to explore the ecological problems of population growth and dispersal. No advantage had been taken of previous opportunities (*e.g.*, House Sparrow, Starling, several game birds) to study such problems, but the present case seemed in 1956 to permit an examination of population changes in relation to birth and mortality rates. Therefore, a program to obtain data about the changes in numbers of egrets was initiated, and it was hoped that results of importance to population ecology would be obtained. Unfortunately, the objectives of the program have not been attained. However, since good data on distribution were obtained, this paper describes the spread since 1956 throughout the United States and suggests that little extension is to be expected.

The discovery of the Cattle Egret in Florida and its early history have been ably reviewed (Sprunt, 1955). However, a number of additional notes are listed in the bibliography. Their content is usually self-evident from the title. In addition, notes on the spread of the Cattle Egret in South America, Africa, and Australia are presented.

Data were obtained by writing to bird clubs in the area from Minnesota to Texas and from Florida to Maine. The first letter explained the purpose and emphasized that *spread* can only be demonstrated if absence is proved. Thus a report of absence is as valuable as a report of presence. The following mimeographed forms were sent to about 70 clubs.

1. April 1957—Explanation and request for information up to 1957.
2. September 1957—Request for information for 1957.
3. October 1957—Results and map for 1957.
4. April 1958—Thank you and alert for 1958.
5. October 1958—Request for information for 1958.
6. January 1959—Results and map for 1958.
7. April 1959—Questions about vegetation and alert for 1959.
8. October 1959—Request for information for 1959.

The questionnaire simply asked for name, area explored, and whether Cattle Egrets had been seen in the preceding spring or summer. The coverage was good except in the Piedmont and in the region from West Virginia to Missouri. In addition, letters were sent to special persons in critical areas and to authors of notes on egrets. Further-

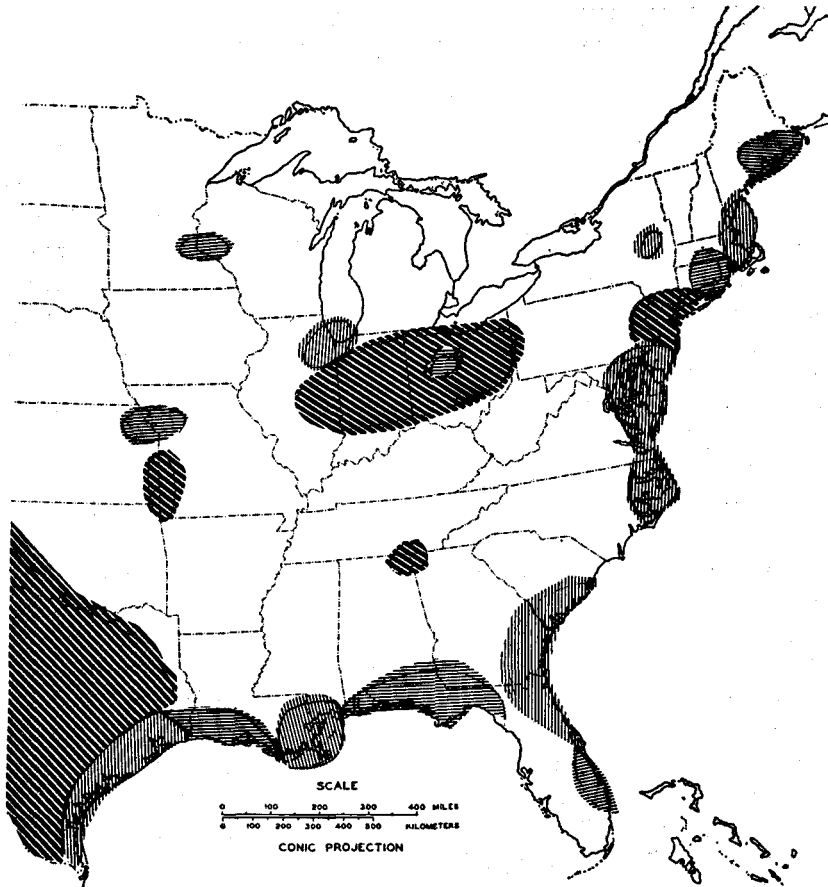


Figure 1. Presence and "absence" of Cattle Egrets in the United States since 1955. Thin, vertical lines show distribution before 1957; thin, horizontal lines, the increase in 1958. Areas of "absence" are indicated by heavy, slanted lines. Areas lacking information are blank.

more, the Audubon Field Notes were examined regularly. By these means, it seems likely that adequate information was available to map the distribution, although certainly some records were missed. At all times, it was emphasized that knowledge of absence is as important as of presence.

It is impossible to list the 80 persons who answered the persistent questions. Perhaps the best appreciation is to make their efforts available to others. The Audubon Society kindly supplied the original list of clubs.

RESULTS

The replies to the questionnaire may be summarized concisely. By 1956 Cattle Egrets were scattered from the tip of Texas to Boston. Accidentals had appeared in various other places (Chicago) from time to time but had not persisted. The species was absent in the interior and not reported from several areas such as the west coast of Florida and Mississippi. The information for 1957, 1958, and 1959 showed that the species filled in many gaps but still was not reported from the west coast of Florida in spite of special effort to get reports. Accidentals continue to appear in various places (Schenectady, New York; St. Joseph, Missouri; Minneapolis, Minnesota; Columbus, Ohio). Figure 1 shows distribution before 1957 and the increase in 1958. Egrets were considered absent if several groups of persons regularly searched the region. The extent of area for accidentals (Chicago, Columbus, Schenectady, Minneapolis, St. Joseph) is obviously not properly scaled.

The lack of recent extension suggests that the spread of the Cattle Egret has stopped. Although accidentals have appeared away from the coast for several years, none has become established in contrast to the rapid increase along the coast. There are several reasons that might explain the cessation of spread.

One tempting possibility concerns the type of vegetation used for nests. All reports of breeding colonies show that the birds nest low in thick trees or bushes such as cedars, willows, or mangroves. However, Smith (1958) reports birds nesting in tall trees in Cuba. It would be helpful to note whether there are areas in the interior that have thick, low vegetation adjacent to water.

The spread of the Cattle Egret has been trivial between 1955 and 1959. It appears that local extensions will occur and that accidentals will appear in many scattered spots. Several puzzles exist. Why are there so many reports in New England? Why the absence of reports from the west coast of Florida? Why the lack of reports in the New York City area, even though accidentals appeared on Long Island as early as 1954?

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