

## Research Note

### NOTES ON THE ECTOPARASITES OF THE CATTLE EGRET IN PUERTO RICO<sup>1,2</sup>

The cattle egret, *Bubulcus ibis* L., was first found in Puerto Rico in 1953<sup>3</sup>. This species is now one of the more common birds found on the island. This bird can frequently be seen associated with cattle, often perched on the backs of animals, or following agricultural equipment when land is being tilled. The beneficial role of the cattle egret in agriculture has been reported by various authors from around the world<sup>4,5,6,7</sup>. The results of a recent study showed that the cattle egret may play a beneficial role in agriculture in Puerto Rico also (Abreu and Garris, unpublished data).

Delanoy<sup>8</sup> while studying the reproductive biology of the cattle egret in Puerto Rico, found that its most common ectoparasite was *Ciconiphilus decimfasciatus* (Boisduval and Lacordaire). No other published reports are available in the literature on the ectoparasites of the cattle egret in Puerto Rico. During a study to determine the hosts of the tropical bont tick, *Amblyomma variegatum* (F.), on the island, cattle egrets were killed by shotgun and the ectoparasites attached were determined. The insects and mites parasitizing the cattle egrets sampled in the above study are herein reported.

Seventy six cattle egrets were killed during 1980–1982 at various places around the island. Birds were collected at Aguadilla, Cidra, Isabela, Salinas, and Cabo Rojo. The following ectoparasites were found: *Ardeicola expallidus* (Blagoveschtchensky) (Mallophaga:Philopteridae), *Ciconiphilus decimfasciatus* (Boisduval and Lacordaire) (Mallophaga: Menopimidae), *Ornithoica confluenta* (Say) (Diptera:Hippo-

<sup>1</sup> Manuscript submitted to Editorial Board December 8, 1982.

<sup>2</sup> The authors thank Drs. K. C. Emerson and W. W. Wirth, Insect Identification and Beneficial Insect Introduction Institute, USDA, ARS, BARC, Beltsville, Maryland, and Dr. W. T. Ateyo, University of Georgia, Athens, Georgia, for identification of specimens.

<sup>3</sup> Biaggi, V., 1973. Las aves de Puerto Rico, Editorial Universitaria, Univ. P.R. 1:373.

<sup>4</sup> Fogarty, M. and W. M. Hetrick, 1973. Summer food of cattle egret in North Central Florida, The Auk. 90:268–81.

<sup>5</sup> Heatwole, H., 1965. Some aspects of the association of cattle egrets with cattle, Animal Behavior 13:79–83.

<sup>6</sup> Kadry, I., 1942. The economic importance of the buffbacked egret (*Ardea ibis*) as a factor in Egyptian agriculture, Zool. Soc. Egypt, Bull. 4:20–6.

<sup>7</sup> Siegfried, W. R., 1971. The food of the cattle egret, J. Appl. Ecol. 8:447–68.

<sup>8</sup> Delanoy-Juliá, C. A., 1976. Studies on the reproductive biology of the cattle egret, *Bubulcus ibis* (L.) at Jobos Bay, Guayama, P.R. (Unpublished M.S. thesis, Univ. P.R., Mayagüez Campus, P.R.)

bascidae), *Myiagles anchora* Trouessart (Acarina:Epidermoptidae), and an undetermined feather mite (probably a new family, W. T. Ateyo 1982, personal communications).

*Ornithoica confluenta* was found on 82% of the birds (table 1). A total of 1,339 flies were collected from 76 birds for an average of 18 flies per bird. The highest parasitism of a single bird was 156 flies which occurred in Cidra, Puerto Rico.

Of the 1,339 *O. confluenta* collected from the 76 cattle egrets, 64 flies had one or more *M. anchora* attached to the abdomen. These mites are parasitic on *O. confluenta* and the cattle egret. Only the gravid female of this mite parasitizes *O. confluenta*<sup>9</sup>. The other stages of this mite are parasites of the cattle egret.

TABLE 1.—Observations on the number of *Ornithoica confluenta* found on the cattle egret *Bubulcus ibis* in Puerto Rico, 1980–1982

Sample site	No. of cattle egrets sampled	Total no. of <i>O. confluenta</i> collected	Average no. <i>O. confluenta</i> collected	Birds infested %
Cidra	37	908	24	92
Isabela	22	342	15	91
Salinas	12	28	2	33
Aguadilla	3	56	19	100
Cabo Rojo	2	5	3	50
Total	76	1,339	18	82

Since the cattle egrets were collected in different places and at different times, it was not possible to determine seasonal abundance of *O. confluenta*. However, in Cidra where most of the birds were collected, the number of *O. confluenta* found on the cattle egrets was higher during March, April and May. In this study, the most common ectoparasite found on the cattle egret was *O. confluenta*.

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<sup>9</sup>Evans, G. O., A. Fain and J. Bafort, 1963. Decouverte du cycle evolutif du genre *Myialges* avec description dune espèce nouvelle (Myialgidae: Sarcoptiformes) Bull. Ann. Soc. Roy. Entomol. Belg. 99 (34):486–500.