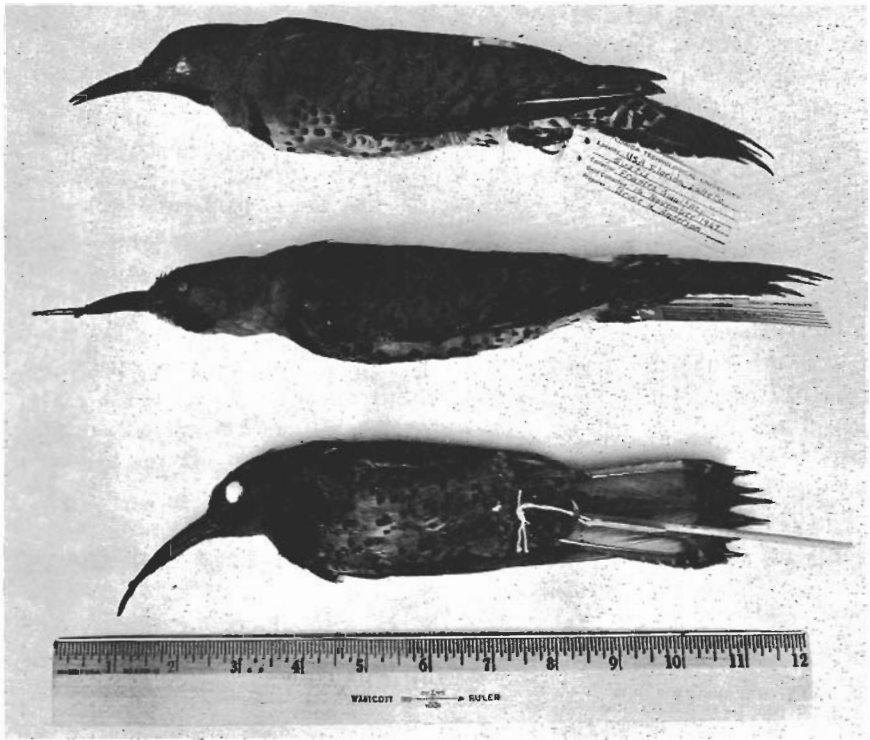


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## BILL DEFORMITIES IN TWO FLORIDA BIRDS

Walter Kingsley Taylor

The question of whether to document in the scientific journals instances of birds with abnormally crossed bills has recently been discussed by Parkes (1969) and by Gochfeld (1972). Parkes is of the opinion that



Two abnormal-billed Yellow-shafted Flickers shown with a normal specimen.

further reports of this particular phenomenon do not merit publication in scientific journals, especially since the cost of journal pages is so expensive. Gochfeld, on the other hand, believes that the crossed mandible condition in birds is one example of a defect which needs closer attention, especially at a time when widespread use of environmental contaminants occurs. He calls attention to the fact that chemical pollutants not only cause direct lethal effects, but also may be potential mutagenic, teratogenic, or carcinogenic agents. Gochfeld presented data indicating that deformed mandibles in 3 species of terns (Common, *Sterna hirundo*; Roseate, *S. dougallii*; and Sooty, *S. fuscata*) are more prevalent today than they were in the past few years.

In various areas of Florida, especially central, there have been several documented cases (both published and unpublished) in the past 5 years of Brown Thrashers (*Toxostoma rufum*) with malformed bills (Steffee, 1968; Stitt, 1968; Taylor, 1972). Within the past 18 months, 3 instances of Common Flickers (*Colaptes auratus*) with elongated and crossed bills have come to my attention. Two of the 3 specimens were found dead in the greater Orlando area and were brought to Audubon House in Maitland (Figure 1). The third abnormal-billed flicker was observed this past

spring on Merritt Island, Brevard County, Florida, by L.M. Ehrhart (pers. comm.). In looking through the literature pertaining to Florida birds, I have been unable to locate any records of crossed bills in the Common Flicker.

A description of the 2 collected specimens (FTU 1131 and 1432) follows. Bill measurements taken follow those illustrated by Baldwin, Oberholser, and Worley (1931). The female was found dead on 6 May 1972 near Pine Hills, Orange County, Florida. Anatomical features, including the gizzard and tongue, appear to be normal except that the bill is decidedly elongated and crossed. The maxilla is decurved, and the mandible is slightly recurved. The exposed culmen length is 53.0 mm, and the total length of the mandible measures 49.0 mm. The maxilla extends almost 20 mm beyond the point where the mandible crosses the maxilla. An X-ray taken shows that the extended length of the bill is due entirely to abnormal growth of the rhamphotheca. The bony components of the bill and skull appear to be normal. The male flicker was found in the spring of 1973. The exact location of the carcass and the name of the person who found it are unknown. The abnormal bill is quite unlike that of the female mentioned above. The maxilla is normal, but the mandible is straight, compressed, and greatly elongated. The total length of the mandible is 51.0 mm. Mean length of exposed culmen for 4 normal specimens in the FTU Ornithological Collection is 32.8 mm; total length of mandible is 35.5 mm.

Whether these cases of malformed bills are incidental or represent a new pathologic event cannot be assessed at this time. More data are needed before the significance of the cross-bill abnormality in these and other birds can be understood.

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