

and corn was by far the most important single item of the doves' food. These results are in general agreement with the findings of similar studies in other regions.—JAMES L. CHAMBERLAIN, *Department of Biology, Randolph Macon Woman's College, Lynchburg, Virginia, 13 April 1964.*

Southerly occurrence of Clark's Nutcracker.—The very recent paper "The 1961 Irruption of the Clark's Nutcracker in California" by Davis and Williams (1964. *Wilson Bull.*, 76:10-18) reminded us of a 1961 observation of a Clark's Nutcracker that should be worthy of public record.

On 16 November 1961, one adult Clark's Nutcracker (*Nucifraga columbiana*) was seen flying southeasterly over Mexican Highway 40 in the pine-oak forests of the Sierra Madre Occidental of southwestern Durango a few miles to the east of a highway monument known as Puerto Buenos Aires. This species has been observed for years in the Sierra Nevada of California by all of us, so it was readily identifiable. Other species seen in this area, the Steller's Jay, Mexican Chickadee, Pigmy Nuthatch, Ruby-crowned Kinglet, Gray Silky Flycatcher, Green-tailed Towhee, and Chipping Sparrow, were all, for the most part, similar to those species seen in nutcracker range in California.

This location lies over 500 miles to the south of El Paso, Texas, and thus constitutes a significant range extension in the Sierra Madre Occidental from previously known Mexican records in Baja California, Sonora, and Nuevo Leon ("Distributional Check-List of the Birds of Mexico," *Pac. Coast Avifauna*, 33:119).

The timing of this observation fits nicely with the nutcracker irruption dates reported by Davis and Williams, for the irruption was well under way into the southern United States by late September and early October 1961 (loc. cit.:10). Further, during this irruption which lasted into the spring of 1962, nutcrackers were seen far from their normally known range in such states as Kansas, Missouri, Oklahoma, and Texas (loc. cit.: 13).—FRED G. EVENDEN, 7805 *English Way, Bethesda, Md.*, AND A. J. AND L. B. ARGANTE, 7246 *Fair Oaks Blvd., Carmichael, California, 10 May 1964.*

Attempted Robin predation by crow.—On an early June (1953) afternoon in a wooded area of the U.S. Naval Training Center, Bainbridge, Maryland, I observed a flying Common Crow (*Corvus brachyrhynchos*) being attacked by two, possibly three birds. Because the crow appeared to be carrying something in its beak, I observed it carefully. It alighted in the top of a tall (40-50 feet) deciduous tree and paused a few moments before flying away again. In leaving the branch, it lost considerable altitude and suddenly dropped the object in its beak. As I picked up the young bird, a Robin (*Turdus migratorius*), I noted the time as 1520. Subsequently, I found the bird to weigh 53.7 g. It seemed dazed and paralyzed by the fall, and died at 1645. Hartman (1946. *Auk*, 63:59) gives the mean body weight of 14 adult Robins as 79.7 ± 9.1 g.

These notes became misplaced during my return to civilian life following active Naval duty and only recently came to light. It is hoped that this delay in no way invalidates the observation.—KENNETH W. PRESCOTT, *New Jersey State Museum, Trenton, 23 December 1963.*

House Sparrow with a bill abnormality.—An unusual bill abnormality was noted in a female House Sparrow (*Passer domesticus*) collected by W. Hesse at his banding station in Burnaby, British Columbia on 20 October 1963. The maxilla was strongly decurved, and its right side had grown downward, resulting in a lateral surface with the



FIG. 1. Bill abnormality in House Sparrow. Note the right lateral downgrowth and the two projections of the mandible.

tomium paralleling the culmen to the tip of the bill (Fig. 1). The mandible consisted only of two short, keratinized, anterior projections from the rictal region. There was no medial connection between these projections and both were much twisted (Fig. 2). The tongue was somewhat dried but otherwise appeared normal. The exposed culmen measured 13.6 mm. Culmen lengths of 15 females in the collections at the University of British Columbia ranged from 10.8 to 12.2 with mean and standard deviation of 11.78 ± 0.44 mm. The bird appeared to be in good health, weighing 32.6 g (after having been frozen for 2 months). The crop and stomach were filled with grain, and a small amount of fat was present about the feather tracts. The bird was in a condition of molt; the remiges being still partly contained in sheaths. The skull was fully granulated. The bill abnormality was noticed post-mortem, thus, the methods of feeding and preening were not observed. The specimen is now No. 11567 in the U.B.C. research collection.

Bill anomalies in wild passerines are probably regular in occurrence. Most of those described involve growth of the keratin structure of the bill in such a way that the abnormal structure is superimposed on a basic bill structure. The present bird is unique in having most of the lower mandible entirely absent. Bill abnormalities involving overgrowth and decurving of the maxilla, often crossing the mandible, have been described in the Red-winged Blackbird (*Agelaius phoeniceus*) (Morton, 1963. *Wilson Bull.*, 75: 281), Starling (*Sturnus vulgaris*) (Dady, 1951. *Brit. Birds*, 44:60; Warham, 1951. *Brit. Birds*, 44:349), and in a number of the British titmice (Howard, King and Collette, 1951. *Brit. Birds*, 44:350-351). Similar deformities have been reported among



FIG. 2. Bill abnormality in House Sparrow. Note the right lateral downgrowth and the two projections of the mandible.

nonpasserines (Batts, 1954. *Wilson Bull.*, 66:142). The frequency of occurrence of bill anomalies is suggested by Hick's (1934. *Bird-Banding*, 5:103-118) study of Starlings in Ohio, where an examination of 10,000 birds revealed 38 with abnormal bills.

Most authors in describing bill abnormalities have speculated on the problems of feeding, but few have mentioned the possible difficulties involved in preening. Shelley (1935. *Bird-Banding*, 6:35-36) mentioned that a Downy Woodpecker (*Dendrocopos pubescens*) with half of the upper mandible broken off had difficulty in preening away the parts of the feather sheaths during molt. In the present bird, the normal patterns of preening were probably ineffective since the remiges had parts of the feather sheaths still encircling the vanes.

It is apparent that bill deformities may result from accident, but many probably occur through abnormal developmental processes. West (1959. *Auk*, 76:534-537) has shown that bill and claw keratin structural deformities can be induced in the Tree Sparrow (*Spizella arborea*) by high temperature. Howard (1951. *Brit. Birds*, 44:350) described the development of an abnormal bill in a 4-year-old Great Tit (*Parus major*) during each of two successive winters. The impediment was shed during the intervening period, and the author suggests that this may have been in part due to vigorous bill-wiping. The abnormality of the present bird involved not only the keratin but also the skeletal structure.—DOUGLAS D. DOW, *Department of Zoology, University of British Columbia, Vancouver 8, B.C.*, AND WERNER HESSE, *7217 16th Avenue, Burnaby 3, B.C.*, 19 March 1964.