A minimum of nine nest or mate replacements occurred during construction when pairs returned to a flock for the night (Ervin 1974, loc. cit.). Of the displaced birds, all but one may have been making their first nesting attempt. Of 9 marked, displaced birds 3 were known yearlings, 5 were potential yearlings, and 1 was a known ASY bird. Death of the original individuals or pairs was not a primary factor in replacements as six of nine displaced birds were seen building second nests. Five of the displacing birds had lost their own nests to predators or other disturbance prior to any replacement action.

Evaluation of this behavior must await further study. At this time, differential attachment to a nest site resulting from temporal changes in aggressiveness or previous use of a site (nest 119) are indicated. Predation rate as well as previous experience of individuals may also play a part.

This research was supported by the Chapman Fund.—STEPHEN ERVIN, *Department of Biology, California State University, Fresno, Fresno, California 93740.* Accepted 9 Jun. 76.

**The breeding status of the Long-billed Curlew in Colorado.**—The Long-billed Curlew (*Numenius americanus*) formerly bred commonly throughout the prairie regions of central North America (Bent 1929), but plowing of the prairies and hunting have considerably reduced the species' breeding range since the mid-19th century (Palmer 1967). They now nest from southern British Columbia, Alberta, Saskatchewan, and Manitoba south to Utah, New Mexico, and Texas, having been eliminated from Illinois, Wisconsin, Iowa, and Minnesota (A.O.U. 1957). In apparent response to the above trend the United States Department of the Interior (1973) placed the northern race, *N. a. parvus*, on its "status-undetermined" list, which means that it "has been suggested as possibly threatened with extinction."

The southern race, *N. a. americanus*, nests from Nevada, Idaho, Wyoming, and South Dakota south to Utah, New Mexico, and Texas. Although common in parts of this range, its distribution and abundance throughout its range are poorly documented. Specifically in Colorado, curlews formerly nested regularly on Colorado's eastern prairie and in Middle and South Parks (Bailey and Niedrach 1965) (Fig. 1). E. Sirios

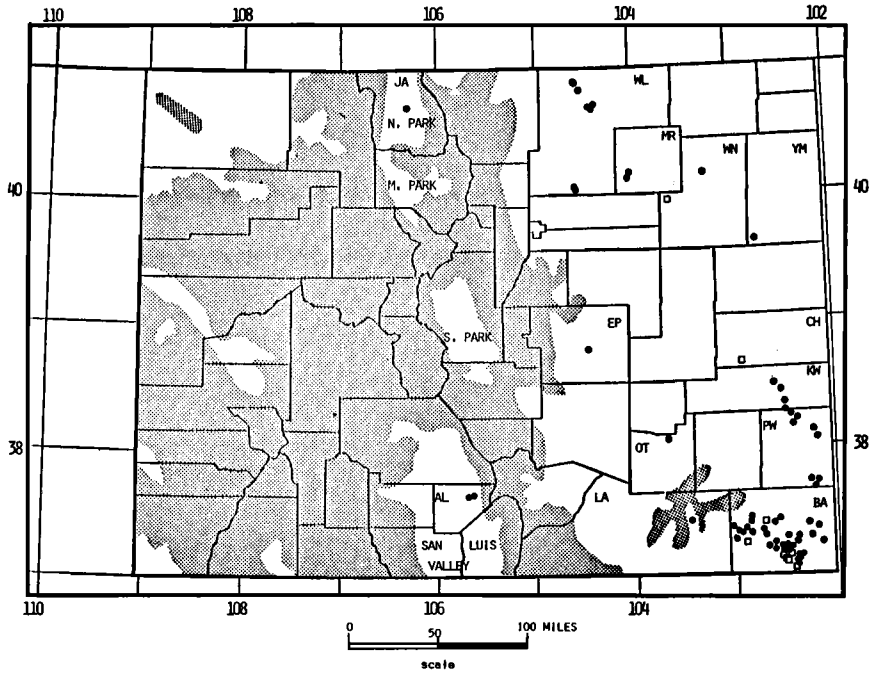


Fig. 1. Long-billed Curlew Breeding Distribution in Colorado, 1974–1975. Solid circles indicate presence of adults during the breeding period (15 May–31 July). Open squares indicate locations where eggs or downy young were seen. County Code: AL, Alamosa; BA, Baca; CH, Cheyenne; EP, El Paso; JA, Jackson; KW, Kiowa; LA, Las Animas; MR, Morgan; OT, Otero; PW, Prowers; WN, Washington; WL, Weld; YM, Yuma. Stippling represents forested or wooded regions unsuitable for curlew nesting habitat.

(pers. comm.) reported that 40 years ago in Weld County curlews occurred by the hundreds during migration, and many nested in the area. To our knowledge, the only recent published nesting record in Colorado is a report of one pair in Weld County (Graul 1971). The present study, therefore, was initiated to determine the current breeding status of this species in Colorado.

In 1974 and 1975 McCallum requested information on recent sightings of curlews in Colorado from members of the Colorado Field Ornithologists and employees of the U.S. Soil Conservation Service. In 1975 Graul sent a postcard survey form to all field personnel in the Colorado Division of Wildlife (DOW). These persons also were asked to distribute the postcards to other potential observers. Zaccagnini conducted a field study of the species in Baca County for the DOW from 29 May 1975 to 19 June 1975.

Seventy-three sightings involving 226 individual curlews in 13 counties were reported for the breeding seasons (15 May to 31 July) of 1974 and 1975 (Fig. 1). On the basis of extreme migration dates cited by Bent (1929) and Palmer (1967) it is unlikely that many of these birds were transients. Additionally as many individuals (presumably mostly prebreeding birds) remain on the wintering grounds through the summer (Palmer 1967) it seems likely that most of these Colorado birds were at least potential breeders.

The observations in the San Luis Valley (Alamosa County) and North Park (Jackson County) are especially noteworthy in that they were made in regions with no historic nesting records. Both places are large, high altitude (over 7,500 ft), unforested valleys, virtually surrounded by very high mountains. The observation of 15 June 1975 at San Luis Lake, Alamosa County, the highly alkaline terminus of an interior drainage, is especially suggestive of at least intermittent nesting in that area. Reports from the eastern prairie counties, including nesting records in Washington and Kit Carson counties, corroborate the reasonable but undocumented assumption that Long-billed Curlews are found throughout that region. It is also noteworthy that no sightings were reported from the historical nesting areas of Middle and South Parks or the area immediately east of the Denver metropolitan area. The former case may be due to an absence of observers, but the latter is more likely attributable to expanding urbanization.

In Colorado the Long-billed Curlew prefers to nest in the shortgrass prairie regions. For instance, in Baca County the birds are found in shortgrass areas, but seem to avoid the taller vegetation along the eastern edge of the county. Occasionally, nests also are found in fallow fields.

The presence of shortgrass prairie alone does not fully explain curlew distribution in Colorado. Many large tracts of shortgrass prairie contain no nesting curlews. As other members of the genus *Numenius* nest in boggy or marshy areas, it may be that Long-billed Curlews also prefer to nest near standing water. This seems plausible, as elsewhere they nest in the vicinity of water, e.g. Bear River Bird Refuge in Utah (Forsythe 1970), along the Saskatchewan River (D.A. Sadler, pers. comm.), and the pothole region of Nebraska (Graul, pers. obs.). Ligon (1961) asserted that the presence of water has a direct bearing on initiation of nesting and that curlews desert otherwise appropriate areas in dry years. Data collected by Zaccagnini in 1975 add support to this hypothesis (Table 1). Note that 41% of the birds observed were within 100 yards of standing water. This can hardly be attributed to chance.

The above hypothesis does not at first appear to explain some nests that are found each year far from water. Curlews, however, apparently return each year to the same place to nest. Thus it is conceivable that when a site is initially chosen for nesting standing water is present, but when the birds return to nest in subsequent years the water has gone. Graul (1971) described a nest that was near a dry basin. E. Sirios (pers. comm.) has seen curlews nesting regularly for the last 40 years on an isolated 100-acre tract of shortgrass prairie in Weld County. This tract is adjacent to a low basin that contains water on a sporadic basis.

Throughout most of Colorado's eastern prairie, curlews were found as isolated pairs. There were two

TABLE 1

DISTANCE FROM WATER—BACA COUNTY

| Distance | Number of birds | Actual percentage | Cumulative percentage |
|---|---|---|---|
| Within 50 yd | 2 | 3.2 | 3.2 |
| Within 100 yd | 24 | 38.1 | 41.3 |
| Within ¼ mi | 17 | 27.0 | 68.3 |
| Within ½ mi | 2 | 3.2 | 71.5 |
| Over 1 mi | 8 | 12.7 | 84.2 |
| Undetermined | 10 | 15.8 | 100.0 |
| Total | 63 | 100.0 | |

exceptions to this pattern. On the 100-acre Weld County tract described above, 3–4 pairs have nested regularly over the last 15 years (E. Sirios, pers. comm.). The other exception is the Baca County area. The high number of observations from this county (42 of 73 reported) is in part due to more work in that region, but there is no doubt that Baca County contains more nesting curlews than any other comparable Colorado area. Exact density data for Baca County are not available, but Zaccagnini found three nesting pairs on a 1-mi$^2$ tract. By comparison, Graul conducted intensive field work in northern Weld County from 1969–1974 and never found more than two pairs of curlews in any one year, although his study area included many square miles.

As concrete historical data on curlew distribution and densities in Colorado are lacking, it is difficult to evaluate any changes that may have occurred. It does tentatively appear that the species no longer nests in some historical areas and that overall breeding numbers have declined. At the same time, it is possible that curlews now nest in regions where they have not been reported previously, but additional data are needed for verification of this.

From the scattered locations where curlews were reported (Fig. 1), it is likely that isolated pairs nest throughout Colorado's eastern prairies, with the main population limited to Baca County.

We are especially grateful to those who replied to our requests for data, in particular D. W. Mustard, state biologist for the U.S. Soil Conservation Service, who coordinated the efforts of the personnel of that agency. The cooperation of the U.S. Forest Service in connection with our work on the Comanche National Grassland in Baca County is appreciated. We also thank E. Sirios for valuable information and access to his land. Bayard Cobb handled the correspondence in 1974. Finally, we are grateful to Alexander Cruz, who read the manuscript and offered helpful suggestions.

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**Hoopoe, a first record for North America.**—On 2 September 1975 a male Hoopoe, *Upupa epops,* fed among drift logs and debris near Old Chevak, Clarence Rhode National Wildlife Range, Yukon-Kuskokwim Delta, Alaska (at 61°26′N, 165°27′W), and on 3 September, it was collected (UAM 3419, fat moderate with left testis 2 × 1 mm). The specimen was determined to be *U. e. saturata* by John Farrand, American Museum of Natural History. This adds a new species and family (Upupidae) to the avifauna of the Western Hemisphere.

The species is widely distributed in the temperate zones of Europe and Asia. This subspecies breeds in central and eastern Siberia from between the upper Ob and Yenisei Rivers eastward, and throughout China south to Kwantung, Yunnan and the Himalayas; wintering southward to southeastern Asia, with stragglers recorded in Sakhalin and the southern Kurile Islands (Vaurie 1959, The birds of the Palearctic fauna, Nonpasseriformes, London, H. F. & G. Witherby, Ltd., p. 680).—Christian P. Dau and Jack Paniyak, *U. S. Fish and Wildlife Service, Post Office Box 346, Bethel, Alaska 99559.* Accepted 19 May 1976.