

First breeding record of the Sora and American Coot in Alaska— with comments on drought displacement

*Evidence of significant correlations between duck populations
and the occurrence of rails in Alaska*

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ON JULY 11, 1980 a SORA (*Porzana carolina*) was flushed from a nest on Farm Island (56°38'N, 132°25'W), located at the delta of the Stikine River, southeastern Alaska, by Robus and R. H. Kacyon. At the time of discovery the nest held nine eggs (Fig. 1). This observation constitutes the first documented evidence of nesting in Alaska by the Sora. In addition to finding the nest, Robus and Kacyon heard at least one Sora at Barnes Lake (56°40'N, 131°54'W), located near the United States-Canada border on the Stikine River (and the site of several previous spring and mid-summer records), in early June, 1980.

Kessel and Gibson (1978) considered the Sora to be a rare migrant, summer visitant, and local probable breeder in southeastern Alaska. They listed four mid-summer records, two of which are from the Stikine River drainage. The nearest known breeding locality is the Caribou and Peace river districts of northern British Columbia (A.O.U. 1957, Godfrey 1966). The delta of the Stikine River is only about 350 km west-northwest (straight-line distance) of the Caribou and Peace river districts, but the Coast Mountains (1550-3100 m elevation) provide an effective physical and ecological barrier to migrating rails. The Stikine is by far the largest river to bisect this massif, thereby providing a corridor from the interior of British Columbia to the coast of southeast Alaska.

Of related interest are two Soras heard at Moon Lake (63°23'N, 143°23'W), upper Tanana River Valley, in mid-July, 1980 (R. J. Ritchie *In* Gibson 1980). The only previous record for east-central Alaska was made near

Tetlin Lake, where at least two birds were heard calling and an adult male was collected in early July, 1961 (Kessel and Springer 1966).

SEVEN ADULT AND SIX downy young American Coots (*Fulica americana*) were observed at Yarger Lake (62°58'N, 141°39'W), located about 9 km southeast of Northway Junction, in extreme east-central Alaska July 4-5, 1980, by the Tanses. The young were distributed in three broods. Ten adults and 12 downy young were observed at the same location July 22-24, by Trapp. At that time there appeared to be six broods. In addition, Trapp counted 10 adults and one downy young at Gasoline Lake (63°06'N, 142°33'W), located 50 km northwest of Yarger Lake near the village of Tetlin. These observations constitute the first documented evidence of nesting in Alaska by the American Coot. The previous maximum daily count in the Tetlin-Northway area was four adults in 1968 and again in 1977 (Kessel and Gibson 1978).

Kessel and Gibson (1978) considered the American Coot to be a rare migrant and summer visitant in central Alaska, a rare fall migrant and winter visitant in southeastern Alaska, a casual migrant in southcoastal Alaska, and accidental in northern and southwestern Alaska. The nearest known breeding locality is the Vanderhoof and Peace river districts of northern British Columbia (A.O.U. 1957, Godfrey 1966). The Yarger and Gasoline lakes records extend the breeding range of the American Coot about 1000 km to the northwest. The Laird, Pelly and Yukon rivers of western Canada, and their major tributaries and associated wetlands, provide a nat-

ural corridor which is effective in funneling displaced waterbirds from more southern latitudes into the taiga wetlands of east-central Alaska.

WHAT PHENOMENON might account for the simultaneous first breeding records of Sora and American Coot in Alaska in 1980? Drought displacement of ducks from prairie and parkland potholes to arctic wetlands is well-documented (Hansen 1960, Hansen and McKnight 1964, Smith 1970, Henny 1973, Derksen and Eldridge 1980). Smith (1970) demonstrated a significant inverse relationship between numbers of water areas on the prairies of Alberta and Saskatchewan and the proportion of the Pintail (*Anas acuta*) population moving north of the prairies and parklands. Other species of prairie-nesting ducks exhibit similar behavior in response to drought conditions (Hansen 1960, Hansen and McKnight 1964).

We suggest that Soras and American Coots, both of which reach their greatest breeding densities in the prairie pothole region of Canada and the United States, respond to drought conditions in a similar fashion. From 1965 through 1980 there were six years (1968, 1973-74, 1977-78, 1980) in which the Alaska duck population index exceeded the 16-year (1965-1980) average (data from King and Timm 1974, King and Conant 1980). We assume that influxes of large numbers of ducks into Alaska reflect poor nesting conditions on the southern breeding grounds. If Soras and American Coots do in fact overfly their normal breeding ranges under drought conditions, their occurrence in Alaska should correspond closely to years of high duck populations.



Figure 1. Nest and eggs of a Sora, Farm Island, Stikine River delta, Alaska, July 11, 1980. Photo/M. A. Robus.

Most observations of coots in east-central Alaska are of single birds (Kessel and Gibson 1978); exceptions occurred in 1968 (four adults), 1977 (four adults) and 1980 (20 adults, 13 young). The duck population indices for these years were the three highest recorded during the 16-year period. For example, duck populations in Alaska in 1980 were 70% above the 16-year average, with dabbling ducks up 92% and diving ducks up 42% (King and Conant 1980). Similarly, during this same period, mid-summer records of Soras in southeastern Alaska were made only in 1973, 1977 and 1980, all years of large influxes of ducks into Alaska. The apparent correlation between populations of ducks and the occurrence of Soras and American Coots in Alaska seems highly significant. Ripley (1977) discussed the irregular and irruptive patterns of migration typical of rails and noted that the phenomenon of dispersal to islands or continental habitats far from their home ranges is widespread. He did not, however, relate these irruptions and dispersals to drought displacement.

A perusal of nesting season reports in *American Birds* provides additional evidence of widespread movements of Soras and American Coots in response to drought conditions on their main nesting areas in 1980. Soras were

significantly more numerous than usual at Churchill, Manitoba (B.A. Chartier *In* Gollop 1980); an estimated 25 birds were seen in 8 km of marsh near Warburg, Alberta where there had been no more than two in 1979 (Gollop 1980); one was seen in the Algonquin area, Ontario, where it is rare (J. Mountjoy, A. Mills and G. Henson *In* Goodwin 1980); and three nests at Oak Beach Marsh, Long Island, New York were the first there since 1935 (J. Greenlaw *In* Boyle *et al.* 1980). American Coots produced two broods at Churchill, Manitoba, more than 400 km N of their main breeding range (B.A. Chartier *In* Gollop 1980); one at Port-Menier, Anticosti Island, Québec provided the first local occurrence in over 60 years (M. Bergeron *In* Gosselin and David 1980); and two young at Deal Island, Maryland represented one of the few breeding records from that state (R. F. Ringler and R. Bloom *In* Armistead 1980).

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