

TABLE 1. Cowbird parasitism of three species of blackbirds in Colorado and Wyoming.

Species	No. nests parasitized
	No. nests found
Red-winged Blackbird	27/154 (17.5%)
Brewer's Blackbird	42/217 (19.4%)
Yellow-headed Blackbird	2/381 (0.5%)

cowbirds in semi-arid Colorado and Wyoming. Cowbirds preferentially parasitized nests of Brewer's Blackbirds that were close to water over those that were further away. Only 1 of 42 Brewer's Blackbird nests further than 300 m from permanent water contained a cowbird egg. Of those Brewer's Blackbird nests that I found within 300 m of permanent water (177), 41 (23.2%) were parasitized, containing 66 cowbird eggs. Ephemeral sources of water such as irrigation ditches were discounted. A chi-square goodness-of-fit test shows the distribution of parasitized Brewer's Blackbird nests with respect to proximity of permanent water to be significantly non-random ($\chi^2 = 7.20$; d.f. = 1; $P < 0.01$).

Most icterids feed insects to their young (Bent 1958, Orians 1966). Although frequency of brood parasitism may correlate with availability of water, the actual relation may be to insect production near the nest. Yellow-headed Blackbirds (*Xanthocephalus xanthocephalus*) have been found to be limited to the highly productive central portions of marshes (Willson and Orians 1963, Orians 1966, Miller 1968), leaving the less productive peripheral areas to the subordinate Red-winged Blackbird (Miller 1968). It is possible that the demands of raising the larger cowbird young may prove excessive for smaller upland-nesting birds, resulting in more frequent nest failure. Cowbirds parasitizing larger birds near water, then, would be favored reproductively. The Brown-headed Cowbird is a recent invader parasitizing Brewer's Blackbirds around sloughs (Furrer, in Friedmann et al. 1977) in arid eastern Washington.

The rapid recent population growth of the cowbird following invasion of the East and far West may be a result of having more host species available. If small

birds are capable of raising cowbird young in the new ranges and not in the western plains, then selection against parasitism would be diminished there. A habit of parasitizing a wider variety of nests might be favored. Total cowbird reproduction may not be hurt by parasitizing a few individuals who reject their eggs, if in so doing they succeed in increasing the number of available hosts.

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STARLINGS BECOME ESTABLISHED AT FAIRBANKS, ALASKA

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Eighty-eight years after its first successful establishment in North America, in New York City in 1890 (Chapman 1906), the Starling (*Sturnus vulgaris*) established itself across the continent at Fairbanks, Alaska (64°51'N, 147°43'W)—a straightline distance of 5,250 km. In 1978 a dramatic change in the status of the Starling in interior Alaska occurred, including the apparent establishment of a regular breeding population at Fairbanks.

The Starling was first recorded at Fairbanks in 1960, when a single spring migrant was sighted on 4 May (Kessel 1960). During the ensuing years, individuals

or groups of two or three Starlings have been seen almost annually east of 152°W in interior Alaska (Kessel and Springer 1966, Kessel and Gibson 1978, unpubl. records). In recent years, the species has become a regular summer resident in small numbers between Delta Junction (64°02'N, 145°44'W) and the Alaska-Canada border. Prior to 1978, maximum numbers had been flocks of 16 and 17 Starlings, which were present about a farm at Delta Junction on 28 September 1976 and 11-20 September 1977, respectively. Nesting had been recorded in western Yukon Territory (Canada Department of Agriculture Experimental Farm, near Haines Junction, in 1966 [fide R. B. Weeden, Univ. Alaska]), and four times in interior Alaska, including a successful nest at Fairbanks in 1968 (Kessel and Gibson 1978).

In 1978 Starlings arrived earlier in interior Alaska—one on 27 April at George Lake Lodge, Mile 1385 Alaska Highway, and one on 29 April at Delta Junction—and were present in greater numbers than ever before. Just west of Fairbanks, a flock varying from 6 to 26 non-breeders frequented farms and other open areas

and a marshy lake margin between 14 June and 8 July (a number of these birds had largely dark bills on 25 June, indicating a lack of androgens [see Witschi and Miller 1938], and several were seen well enough to distinguish the characteristics of first-year males, which usually do not breed [see Kessel 1957]). Six successful nestings were recorded, with another three nestings suspected on the basis of the presence of paired birds and birds carrying nesting material.

Nesting sites were typical of those used by Starlings elsewhere (see Kessel 1957): an old Common Flicker (*Colaptes auratus*) hole near the top of an 8-m stub of balsam poplar (*Populus balsamifera*); a burned-out knothole 6 m up in a fire-killed paper birch (*Betula papyrifera*); a bird nest-box; and under the upturned lip of metal barn roofing.

The first fledgling in 1978 was seen on 25 June; on this same day, another family of nearly-fledged young was seen in their nest entrance hole. On 9 July, while one nest in a barn still contained young, three adults and 11 juvenals were perched in a tree beside a nearby field.

A mixed flock of Rusty Blackbirds (*Euphagus carolinus*) and Starlings fed in a harvested field of barley (*Hordeum vulgare*) at Delta Junction during September 1978. Peak numbers occurred on 12 September, when 200 to 250 Starlings flocked with about 2,000 blackbirds. The flock included young Starlings that still retained juvenal head feathers. This flock had diminished to about 20 blackbirds and 12 Starlings by 26 September.

Starlings began feeding on the Fairbanks city dump in October 1978. Thirty Starlings and 10 Rusty Blackbirds were there on 7 October and throughout most of the month; 13 Starlings remained through November; and the last 8 Starlings and 3 blackbirds disappeared in early February 1979, during a seven-day period averaging -40°C —the only severe cold of the 1978–79 winter.

Summering and breeding populations of the Starling will undoubtedly continue to increase in interior Alaska, particularly in agriculturally developed areas. A few Starlings may manage to survive the winter in the vicinity of dumps or other sources of food, especially during mild winters, as have some Rusty Blackbirds. Most, however, will probably migrate. Thus far, the presence of Starlings has been seasonal, with a spring influx in early May and an autumnal exodus during the last half of September. Already, Starlings have been found in winter along the coast of southern Alaska, at Cordova, Valdez, Seward, Homer, and Kodiak, where

they have not yet been recorded as summer visitants or breeders (Kessel and Gibson 1978).

As Starlings increase in interior Alaska, there will be some competition with local birds, primarily for nest sites. Most pressure will probably be on the Common Flicker, the only local nesting woodpecker of the open forest. Swallow nest sites may also be usurped by Starlings. Some Violet-green and Tree Swallows (*Tachycineta thalassina* and *Iridoprocne bicolor*) use bird nest-boxes with holes large enough for Starlings, and Tree Swallows nest in holes in trees and in the rotted tops of telephone poles, where Starlings also nest. On 25 June 1978 I witnessed severe damage to an 18-nest Cliff Swallow (*Petrochelidon pyrrhonota*) colony caused by a group of roosting, non-breeding Starlings. The colony was under the gable of an open hay shed. In addition to roosting along inside beams, Starlings were using some incomplete or broken mud swallow nests as roost sites. Twenty-six eggs or their remains were on the ground below the colony, clearly thrown out of the swallow nests by the Starlings.

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FIRST NESTING RECORD OF GRAY-HOODED GULL FROM ECUADOR

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The Gray-hooded Gull (*Larus cirrocephalus*) has previously been found breeding in only one area on the west coast of South America: at two sites in the vicinity

of the Paracas Peninsula, Department of Ica, Peru (Tovar and Ashmole 1970, Duffy and Atkins 1979). We report here the discovery of a nesting colony on the coast of southwestern Ecuador near the tip of the Santa Elena Peninsula, almost 1,500 km north of the Paracas region.

Although first definitely recorded in Ecuador only in 1938 (Quäbicker 1939), *L. cirrocephalus* has since become fairly common in the Gulf of Guayaquil area, particularly in the estuary of the Guayas River (Lévesque 1964, Mills 1967, pers. observ.). Even though the species is resident in this area and birds in breeding plumage have been seen frequently, to date no nesting colony has been found.

In contrast with its relative abundance around the