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## Birds of the Great Plains: Family Charadriidae (Plovers, Turnstones, and Surfbirds)

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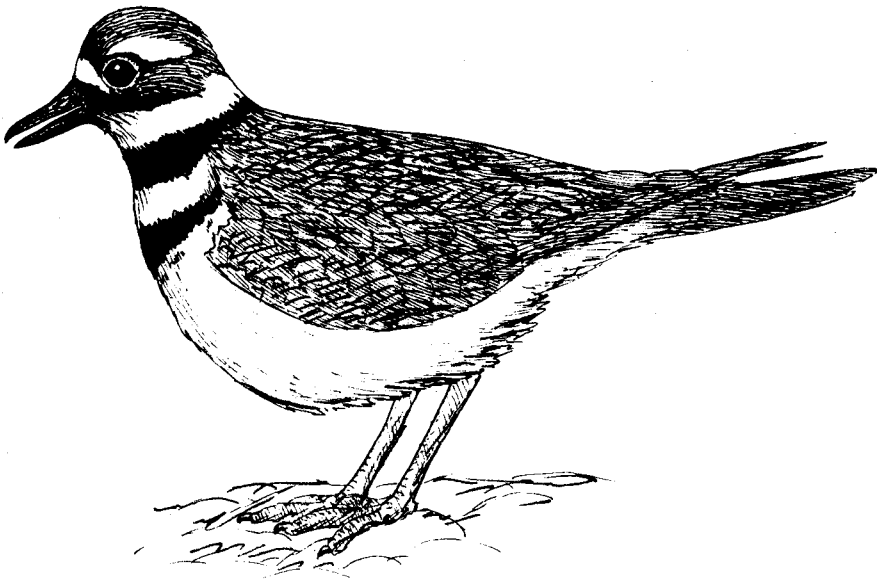
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FAMILY CHARADRIIDAE  
(PLOVERS AND LAP-  
WINGS)



Killdeer

## Piping Plover *Charadrius melodus*

**Breeding Status:** Breeds uncommonly and locally in North Dakota, mainly on the Missouri Coteau, sporadically in west-central Minnesota (Otter Tail and Douglas counties), occasionally in South Dakota (Union, Clay, Yankton, Hughes, and Codington counties), and rarely farther south. There are many old nesting records for Nebraska (Niobrara, Platte, Loup, and Missouri rivers), and recent ones for Douglas, Hall, Holt, Saunders, and Washington counties, as well as at Lake McConaughy, Keith County. There is also a 1949 breeding record for Washington County, Colorado, but no breeding records exist for Kansas or farther south.

**Breeding Habitat:** In North Dakota, piping plovers are associated with sparsely vegetated shorelines of shallow lakes and impoundments, especially those that have salt-encrusted areas of gravel, sand, or pebbly mud. Sand dunes with little or no vegetation are also used for nesting.

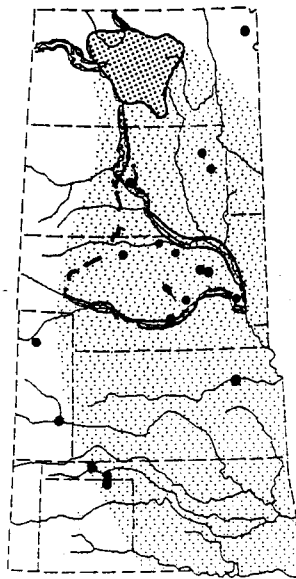
**Nest Location:** Nests are simply hollows in the sand, sometimes lined with pebbles, or scrapes in gravel or pebbly mud.

**Clutch Size and Incubation Period:** From 2 to 4 eggs (typically 4 in first clutches, sometimes 3 in renesting efforts). Eggs are buffy with dark brown spots. Incubation ranges from 27 to 29 days, starting with either the third or the last egg. Single-brooded, but renesting usually occurs if the clutch is lost in the first half of the breeding season.

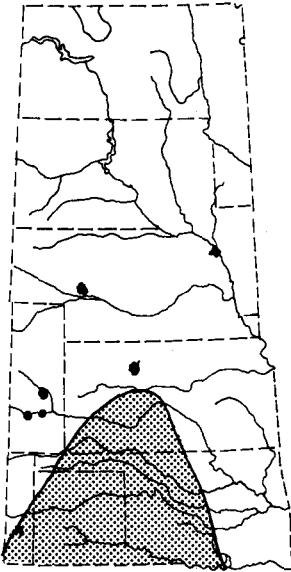
**Time of Breeding:** North Dakota egg dates range from May 19 to July 5, and dependent young have been seen from June 26 to July 27. Nebraska egg records are from June 10 to July 14.

**Breeding Biology:** Piping plovers are monogamous, but mate-changing in successive breeding seasons is fairly frequent, even when the original mate is still available. Eggs are laid every other day, and incubation responsibilities are about equally divided by the two sexes. In most nests the eggs all hatch on the same day, and within 2-3 hours the young have dried off and are able to leave the nest. They are brooded by the adults until they are about 20 days old, and although they can run very well they tend to crouch and freeze when approached. Adults of both sexes feign injury when their brood is threatened. Until they fledge at 30-35 days of age, the young remain within 400-500 feet of the nest.

**Suggested Reading:** Wilcox 1959; Stout 1967.



Snowy Plover  
*Charadrius alexandrinus*



**Breeding Status:** A local summer resident in central Oklahoma, the Texas panhandle, and south-central to southwestern Kansas, largely limited to saline flats and sandy riverbeds. There are two nesting records for eastern Colorado (Kiowa County, 1939), and the species also nests in the vicinity of Roswell, New Mexico.

**Breeding Habitat:** The barren salt plains area of northern Oklahoma represents prime breeding habitat for this arid-adapted species, and sandy riverbeds or barren shorelines of reservoirs are used secondarily.

**Nest Location:** Nests are on rock, gravel, or sandy substrates and consist of a slight hollow lined with bits of debris. Occasionally the nests are clustered in loose colonies, and the birds sometimes nest near tern colonies.

**Clutch Size and Incubation Period:** Usually 3 eggs, sometimes 2. The eggs are sand-colored or buffy with small black spots or lines. Incubation lasts 23–29 days, averaging 26 days. Possibly double-brooded.

**Time of Breeding:** Kansas egg dates range from May 25 to June 20, with a peak of laying about June 10. Oklahoma egg records are from April 29 to July 11.

**Breeding Biology:** After arriving on their breeding areas and establishing territories, males begin to advertise with various calls and displays including “scraping,” a ritualized nest-building behavior. One of the other male displays is a slow “butterfly flight” with a trilling call. Although the birds commonly breed around salt water, they can drink no more saline water than other shorebirds and must obtain liquid by eating insects or other succulent foods. Thermal extremes are also common in their often vegetationless and highly reflective environment. Thus, during hot weather parental activity increases, the birds spending most of their time standing over the eggs rather than sitting on them. Both sexes incubate. The eggs are laid about 3 days apart, but hatching is synchronous. Both sexes also defend the eggs and young, performing effective “broken-wing” behavior. In one study the young fledged within 41 days.

**Suggested Reading:** Purdue 1976; Boyd 1972.

Killdeer  
*Charadrius vociferus*

**Breeding Status:** A pandemic summer resident throughout the region, locally common around marshes, streams, and other water areas.

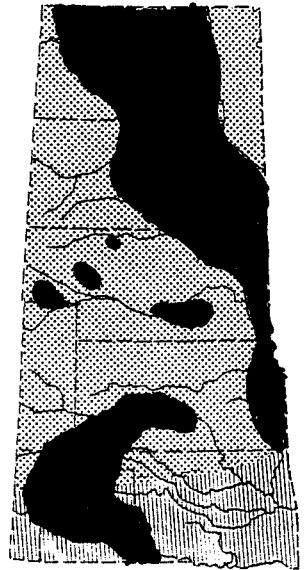
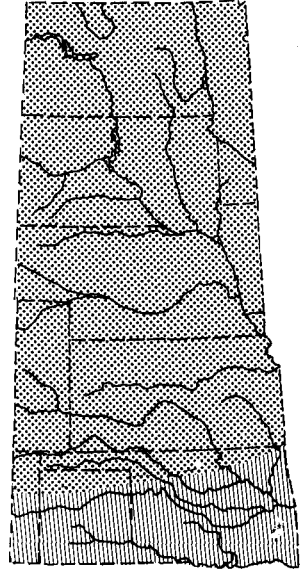
**Breeding Habitat:** Killdeers breed wherever there are wetlands that either have exposed ground nearby or have ground with very little vegetative cover. They seem to prefer gravelly, stony, or sandy areas over muddy or silty substrates, probably because they offer camouflage for the eggs and the incubating bird.

**Nest Location:** Nests are often some distance from water, in a surprising variety of locations. Of 13 North Dakota nests, 3 were on garden plots, 2 on bare fields, 2 on heavily grazed native prairie, 2 on exposed sand or gravel, 2 on bare lake shorelines, and 1 each in a stubble field and an abandoned farmyard.

**Clutch Size and Incubation Period:** Nearly always 4 eggs, rarely 3 or 5. The eggs are buffy with extensive black or dark brownish spotting and blotching. The incubation period is 24–26 days, starting with the laying of the last egg. Sometimes double-brooded, especially toward the south.

**Time of Breeding:** North Dakota egg dates range from April 18 to June 21, and dependent young have been seen from May 19 to July 25. In Kansas, egg dates are from March 21 to June 30, with a double peak of nest dates suggesting double-brooding. Oklahoma egg dates are from March 30 to July 28, and dependent young have been seen from April 16 to September 19, also indicating double-brooding. Texas egg dates are from March 3 to July 17.

**Breeding Biology:** Although some birds are paired at the time they arrive on their nesting areas in southern Canada, most arrive unpaired. Males advertise their territories in a variety of ways, such as uttering the familiar *killdeer* calls while flying with slow, deep wingbeats, and by sham-nesting or “scraping” displays resembling nest-building behavior. Such scraping displays are performed not only by unmated males but also before copulation, during hostile encounters, and during actual nest construction. Once pair bonds are formed, the pair remains together and both sexes defend their territory, although they may do some foraging outside the defended area. Both sexes also incubate the eggs and care for their young, but males tend to be more aggressive toward humans, while females vigorously evict other killdeers from the nest vicinity. The familiar injury-feigning display, or “broken-wing act,” is primarily directed toward potential mammalian predators; large grazing mammals such as horses and cattle are more likely to be threatened or even attacked. Evidently the male undertakes most of the brooding duties, which last

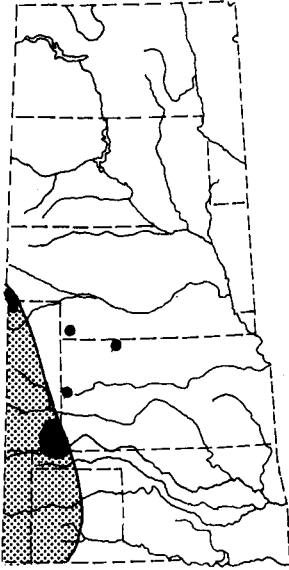


about 3 weeks. Fledging occurs by the time the young are 40 days old.

**Suggested Reading:** Phillips 1972; Bunni 1959.

## Mountain Plover

### *Eupoda montana* (*Charadrius montanus*)



**Breeding Status:** Summer resident from extreme southwestern Nebraska (nested 1974, Kimball County) southward through eastern Colorado, possibly extreme western Kansas (early nesting records for Greeley and Decatur counties, possibly nested in Hamilton County in 1964), extreme western Oklahoma (Cimarron County), the western panhandle of Texas (breeding record for Swisher County), and adjacent New Mexico.

**Breeding Habitat:** Mountain plovers are essentially limited to the short-grass plains but at times occur on sandy semiarid flats supporting some brush and cacti. In northeastern Colorado they are restricted to flat, heavily grazed areas dominated by grama grass, buffalo grass, and similar plains vegetation.

**Nest Location:** The nest is simple and initially consists of a scrape on bare ground, often fairly close to roadways, placed in the open rather than under vegetation. A simple lining of dried grass or other debris may be added as the clutch is completed, but this may be deposited by wind rather than purposely added by the bird.

**Clutch Size and Incubation Period:** From 2 to 4 eggs (105 of 133 Colorado nests had 3 eggs). Eggs are dark greenish buff with black spots and lines. The incubation period is about 25 days. Multiple-brooded, the female sometimes changing mates between clutches.

**Time of Breeding:** Oklahoma egg dates are for May 17 and June 30, and in Texas eggs or downy young have been seen in late May. Colorado egg dates extend from April 17 to June 15, and young have been reported from June 16 to July 23.

**Breeding Biology:** In northeastern Colorado, mountain plovers arrive in late March and soon disperse over their breeding grounds. Males commonly reestablish their old territories, whereas females also return to the same general area but may visit several territories before choosing mates. Territorial males advertise with calls and an aerial "falling-leaf" display, and occasionally with a slow "butterfly flight." As in other plovers, "scraping" is the most frequent courtship display of the male, which produces several potential nest sites throughout his territory.

Although monogamous pair bonds are soon formed, social relationships become complex when egg-laying begins. At least some females begin a second clutch with new mates within about 2 weeks of completing their first clutches, leaving their first mates to attend to the original clutches. Evidently the female often incubates the second clutch herself, but current evidence indicates that only one sex is involved in incubation and brooding duties for each clutch and brood.

**Suggested Reading:** Graul 1974; Laun 1957.

