2009

Birds of the Great Plains: Family Rallidae (Rails, Gallinules, and Coots)

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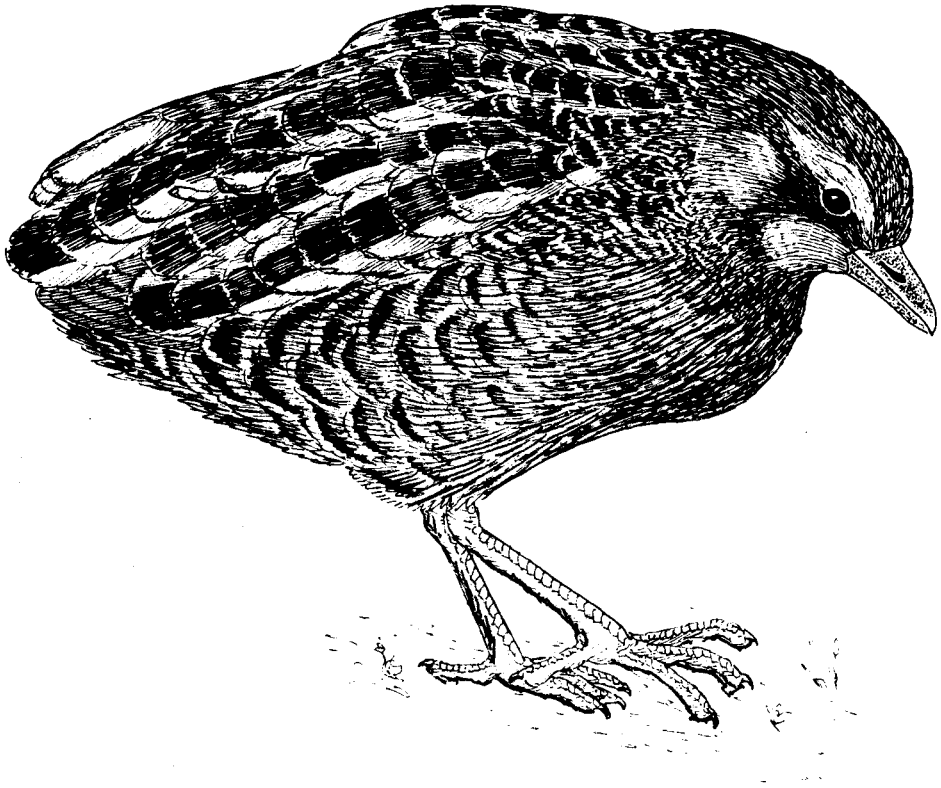
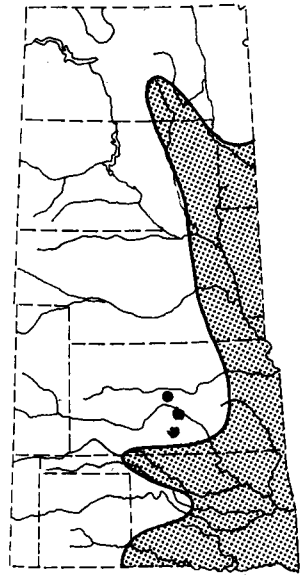
FAMILY RALLIDAE (RAILS, GALLINULES, AND COOTS)



Yellow Rail

King Rail
Rallus elegans



Breeding Status: Breeds in southwestern Minnesota and adjacent South Dakota (possibly to southeastern North Dakota), southward through eastern Nebraska (where rare), western Iowa (generally rare), northwestern Missouri (uncommon), eastern Kansas (locally common), Oklahoma (rare to uncommon), and adjacent Texas.

Breeding Habitat: In our region the king rail is generally associated with freshwater marshes. In an Iowa study the birds were found on shallow marshes up to 4 feet deep, with abundant shoreline and emergent vegetation of grasses and sedges. They are often associated with muskrats, whose runs open up the vegetation and provide passageways for the rails.

Nest Location: Nests are in rather dense emergent vegetation. In Iowa, 6 nests were in such vegetation, including 4 in lake sedges and 2 in river bulrushes, and all were in water 4–18 inches deep. The nests are basketlike structures of dead herbaceous vegetation, with an overhead canopy of emergent plants.

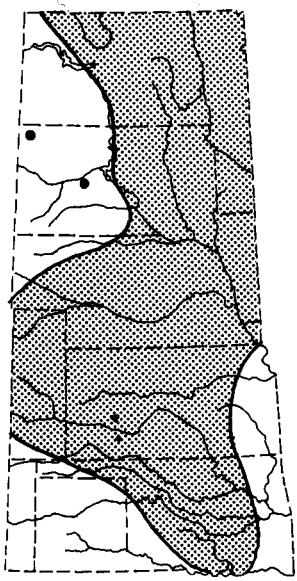
Clutch Size and Incubation Period: From 8 to 14 eggs (34 Ohio nests averaged 10.9). Eggs are pale buff with a few darker brown spots. The incubation period is 21–22 days, starting near the end of the clutch. Apparently single-brooded, except perhaps in the Deep South. Renesting probably occurs frequently after nest loss.

Time of Breeding: Egg records for northwestern Iowa are from May 13 to June 23. Kansas nesting records are from May 1 to July 20, with most eggs laid in early June. Oklahoma egg records are from April 29 to July 6, and Texas egg records are from February 6 to August 12.

Breeding Biology: The onset of the breeding season in king rails is marked by the males establishing territories and beginning their low-pitched mating call, *chuck-chuck-chuck*, which attracts unmated females. Males evict other male rails, even of such small species as soras, from their territories. They also choose the nest site and do most of the nest-building. Usually several brood nests are also built and later are used for brooding the chicks. Both sexes incubate, with most of the young hatching simultaneously. The young grow rather slowly and remain close to their parents for more than a month. They do not fledge until they are 9–10 weeks old, and during this fledging period the adults molt and become flightless for a time.

Suggested Reading: Meanley 1969; Tanner and Hendrickson 1956.

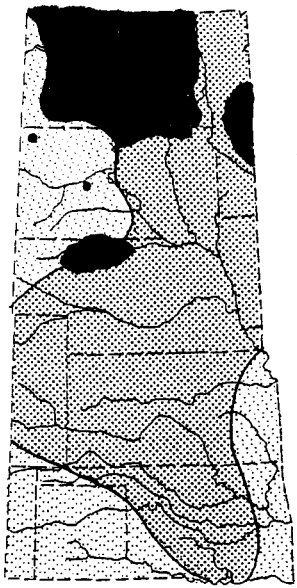
Virginia Rail
Rallus limicola



Breeding Status: Although rather elusive, this species is evidently a fairly common breeder in wetlands throughout most of the region concerned, with the probable exception of the Texas panhandle and adjacent New Mexico.

Breeding Habitat: Marshes with extensive stands of emergent vegetation such as taller grasses (cattails, phragmites), bulrushes, and sedges are the primary breeding habitat of this species. Habitat needs of Virginia rails and soras appear to be virtually identical. However, at least in Iowa, Virginia rails tend to nest in cattails and eat more insects and duckweeds, while soras favor whitetop or sedges for nesting and include a larger proportion of seeds in their diets.

Nest Location: Nests are built over wet ground or shallow water in stands of emergent vegetation. When nests are built over water, the water is rarely more than 10 inches deep. In Minnesota, all of 17 nests found in one study were in cattails, usually within 20-30 feet of open water or other vegetational edges. In Iowa, lake sedge was found to be the most important cover for 27 nests, and a Virginia study also indicated a preference for sedges and grasses over cattails for nesting. The nest is typically lined with fine grassy material and has an overhead canopy of live emergent plants.



Clutch Size and Incubation Period: From 6 to 13 eggs (28 Iowa clutches averaged about 8). Eggs are buffy to white with a few brown spots near the larger end. The incubation period lasts 17-20 days, with an average spread of 3.3 days between the hatching of the first and last egg. Probably single-brooded, but some renestings have been reported.

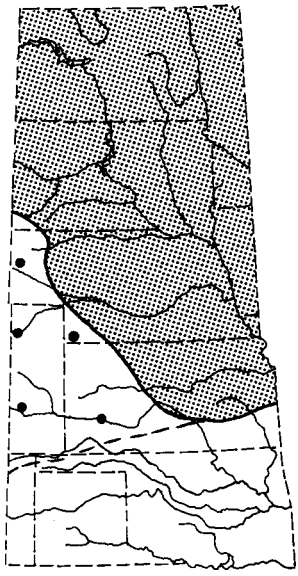
Time of Breeding: North Dakota egg dates are from June 12 to August 1. In northwestern Iowa the eggs are found over a period of about 50-60 days, with most hatching between June 6 and July 12. In Kansas, eggs are evidently laid in May and June, and in Oklahoma eggs (or females about to lay eggs) have been reported from late April to June 13.

Breeding Biology: Shortly after returning to their breeding grounds, males establish territories, which they proclaim by uttering their distinctive *ticket, ticket* calls and maintain by evicting other male Virginia rails, though they reportedly tolerate sora rails. They probably construct their nests in a few days, but like other rails they may also build several "dummy nests" that are later used as brood nests. Males perform bill-nibbling and courtship feeding of their mates and perhaps do most of the nest-building as well. Eggs are laid approximately daily, and incubation (by both sexes) begins near the end of the clutch, resulting in a slight scattering of hatching periods. The young leave the original nest

soon after hatching and can fly in 6-7 weeks. When they are about 60 days old the parents begin to peck at them and evict them from their territories.

Suggested Reading: Tanner and Hendrickson 1954; Kaufmann 1971.

Sora
Porzana carolina



Breeding Status: Locally common in marshes over nearly all of North Dakota, western Minnesota, and western Iowa and the eastern portions of South Dakota and Nebraska. Local and uncommon in Kansas and northwestern Missouri and apparently only a migrant in Oklahoma and northern Texas. The southern and western breeding limits are uncertain; some reportedly occur in the Wyoming and Colorado plains, but there is no good evidence that the species breeds in western Kansas.

Breeding Habitat: Much like the Virginia rail, the sora prefers marshlands that have extensive stands of dense emergent vegetation, especially tall grasses and grasslike plants, and fresh to slightly saline waters. The birds feed mostly at the surface on plant seeds rather than probing for invertebrates as is typical of Virginia rails.

Nest Location: Where Virginia and sora rails nest in the same marshes, sora nests tend to be in deeper water, averaging from about 9 to 12 inches in depth. The nest is elevated several inches above the water level and is often hidden in cattails, bulrushes, or sedges. It is basketlike, with a deep cup and sometimes a lateral runway to water.

Clutch Size and Incubation Period: From 6 to 13 eggs (29 Minnesota nests averaged 9.9). Eggs are a rich buffy color with some darker spotting and are darker overall than those of Virginia rails. They are laid daily, and incubation begins at varied stages of clutch completion. The incubation period averages about 19 days, but the spread of hatching is from 3 to 13 days, averaging about 7. Considered single-brooded, but there is some evidence of double-brooding.

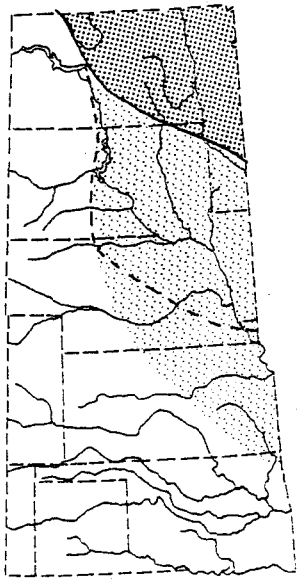
Time of Breeding: North Dakota egg dates are from May 20 to July 30, and Minnesota records extend from about May 10 to July 10. Both ranges indicate a long nesting period and suggest renesting or double-brooding.

Breeding Biology: Territorial male soras are more aggressive than Virginia rails, evicting individuals of that species as well as of their own. The *whinney* is the male advertisement call and peaks

at the time egg-laying gets under way. Nest-building is probably by both sexes, and several "dummy nests" are usually constructed near the primary nest. Both sexes incubate, and as the first chicks hatch they are tended by one parent while the other incubates the remaining eggs. Compared with Virginia rail young, soras are fed and brooded for a relatively short time, which perhaps facilitates second broods in some circumstances. The young attain their full juvenile plumage by 6 weeks and can fly when only about 36 days old. By this time in late July the adults have become flightless and are replacing their wing and tail feathers.

Suggested Reading: Pospichal and Marshall 1954; Tanner and Hendrickson 1956.

Yellow Rail
Coturnicops noveboracensis



Breeding Status: A local and elusive species, with few known nesting records in north-central North Dakota (Benson County, scattered summer records for Bottineau, McLean, and Mountrail counties), and southwestern Minnesota (breeding records from Becker, Mahnomen, and Murray counties, and several other summer records). It probably also breeds in southeastern South Dakota, and it possibly breeds in Nebraska, where there are two summer records (*Nebraska Bird Review* 41:24).

Breeding Habitat: In North Dakota, yellow rails are limited to fenlike areas or boggy swales associated with springs. Often they are quaking surface mats of emergent vegetation such as cattails, bulrushes, sedges, and associated species. Yellow rails sometimes nest in the same marshes as sora and Virginia rails but occupy the densest areas of sedges, while the other species occupy cattails and bulrushes.

Nest Location: Nests may be built over wet ground or over water up to 4 inches deep, usually in dense emergent vegetation consisting of grasses and grasslike plants. The nest is usually under a canopy of dead grass and fairly close to a spring-fed brook. It is a coiled cup of dead grass lined with bits of grasses, sedges, and mosses.

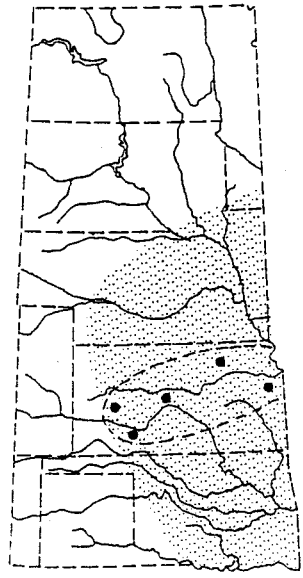
Clutch Size and Incubation Period: From 8 to 10 eggs (5 North Dakota nests averaged 9.4). Eggs are buffy to pinkish with numerous small brown spots. The incubation period is 17 days, beginning with the last egg.

Time of Breeding: Egg dates in North Dakota are from May 25 to June 19, with most egg-laying probably occurring in the first 10 days of June, and hatched eggs have been seen as early as June 16.

Breeding Biology: During spring, males establish territories in dense marshes, patrolling them frequently and uttering their distinctive clicking notes (*tic-tic, tic-tic-tic*). Males are immediately evicted, but females are approached with a wing-spreading display. After pair bonds are formed, the mates preen each other and copulations are frequent. Nest-building begins nearly a month before incubation, with both sexes participating, and several extra brood nests are often constructed. The female does the final lining of the nest and apparently performs all the incubation, leaving the nest only to feed for brief periods. She also finishes building a brood nest after the clutch hatches; the chicks hatch nearly synchronously. The female broods and feeds her young both in and out of the nest for about 17 days, after which they are brooded only at night. They are nearly independent by their 3rd week of life but do not fledge until they are about 35 days old. Evidently the male plays no active role in defending or caring for the brood.

Suggested Reading: Stalheim 1975; Terrill 1943.

Black Rail
Laterallus jamaicensis



Breeding Status: The breeding range of this tiny and elusive species is most uncertain. It is considered hypothetical in North Dakota, an accidental migrant in Minnesota (no summer records), a rare migrant in Iowa and South Dakota, a rare migrant and summer resident in Nebraska, an uncommon summer resident in Kansas, and a rare migrant and possible breeder in Oklahoma. There is one summer record from the Texas panhandle. Thus only Kansas (Finney, Meade, Riley, Barton, and Franklin counties) can be definitely considered breeding range for this region on the basis of current evidence.

Breeding Habitat: Marshy meadows, heavily overgrown with sedges and grasses, are the breeding habitat of this species in the interior, although it also nests in salt-grass marshes just above the tideline of coastal areas.

Nest Location: Nests are on damp ground, in dense grass or sedge vegetation, or above water on a mat of grasses. The nest is typically arched over with interwoven grasses and has a lateral entrance. The surrounding vegetation is usually 18-24 inches high, and the deep nest cup sometimes contains a few black feathers.

Clutch Size and Incubation Period: From 6 to 13 eggs, probably averaging about 8. The eggs are creamy to buffy with large reddish spots at the larger end. The eggs are laid daily, but the

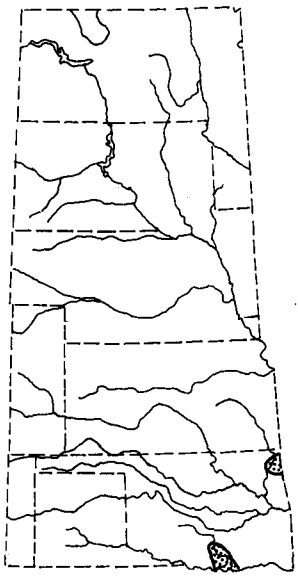
incubation period is unknown. Hatching reportedly is synchronous, and the young have been reported to leave the nest the day they hatch. Probably single-brooded.

Time of Breeding: In Kansas, eggs are laid at least during June, and the species is present in the state between March 18 and September 26. Texas egg dates are May 9 and June 5.

Breeding Biology: Very little is known of the breeding biology of this species. The male's best-known call is a metallic *kik-kik-kik-ker* or *kik-kik-ker*, while the female is said to use a more cuckoo-like *croo* note in response to her mate. Virtually nothing is known of the specific aspects of behavior associated with nesting, but presumably they are much like those of the yellow rail.

Suggested Reading: Bent 1926; Todd 1977.

Purple Gallinule
Porphyrula martinica



Breeding Status: Breeds locally in Oklahoma, at least in Bryan County, and possibly also in Marshall, Johnston, Carter, Delaware, and Grady counties.

Breeding Habitats: In our region this species is limited to marshes with extensive growth of water lilies, lotus, and other aquatic vegetation. It also occurs in tropical swamps, rivers, lagoons, rice plantations, and similar habitats through much of the western hemisphere.

Nest Location: Nests are built over relatively deep water, sometimes on floating islands, in pickerelweed, or in woody vegetation. The nest is well concealed from above by arched-over vegetation and has a flat lateral runway leading downward to the water.

Clutch Size and Incubation Period: From 5 to 10 eggs, usually 6-8. The eggs are pale buff with a few small brown spots. The incubation period is 20-23 days, starting before the clutch is completed. Probably double-brooded in our area.

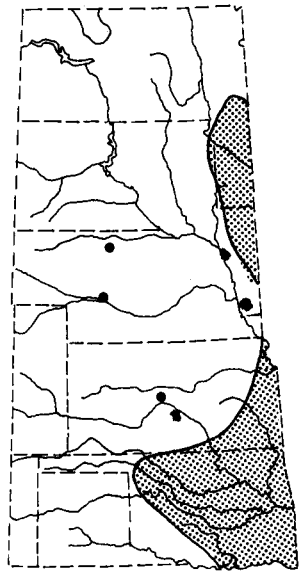
Time of Breeding: In Oklahoma, eggs have been seen from May 15 to July 18 and young recorded from May 15 to August 18. In Texas, egg dates are from April 9 to August 12, and barely fledged young have been seen as late as September.

Breeding Biology: Few studies have been done on the behavior and biology of this species, but it resembles the common gallinule in being highly territorial and in advertising courtship and feeding territories with repeated *kuk* or *keek* notes. Nest-building begins

a few weeks after the birds arrive and establish territories; the male probably does most of the nest-building. Both sexes incubate, and mates perform a nest-relief ceremony of presenting a leaf to the incubating bird, which incorporates it into the nest before departing. The young hatch over a period of about 4 days and are brooded actively for about a week, after which they are brooded only at night. One or more brood nests is typically present. The fledging period is uncertain but is probably about 6–7 weeks, and adults also apparently undergo a flightless period during late summer.

Suggested Reading: Meanley 1963; Trautman and Glines 1964.

Common Gallinule (Moorhen)
Gallinula chloropus



Breeding Status: Breeds in west-central and southwestern Minnesota, northwestern Iowa, eastern Kansas, and the eastern half of Oklahoma. It is an occasional summer resident in northwestern Missouri and rare in Nebraska, with several breeding records, but its range limits are not certain.

Breeding Habitat: The favored habitat of this species is freshwater ponds and marshes with an abundance of emergent vegetation. Unlike the purple gallinule, it does not need floating vegetation.

Nest Location: Nests are in water, suspended above water, or on land surrounded by water. Deepwater nests usually have a ramp up the side, whereas those in shallow water or on land do not. In Iowa, 17 of 19 nests were in cattails, the others in bulrushes. The nest is constructed of emergent and aquatic plants and has a well-developed cup of finer vegetation.

Clutch Size and Incubation Period: From 5 to 10 eggs (13 Iowa clutches averaged 7.1; in England first clutches average about 6 eggs, and renests or second clutches are somewhat smaller). The eggs are buffy with small brown dots or spots. The incubation period is 21–22 days, starting (in first clutches) with the next-to-last egg, or (in later clutches) midway through the laying period. A regular renester and sometimes double-brooded.

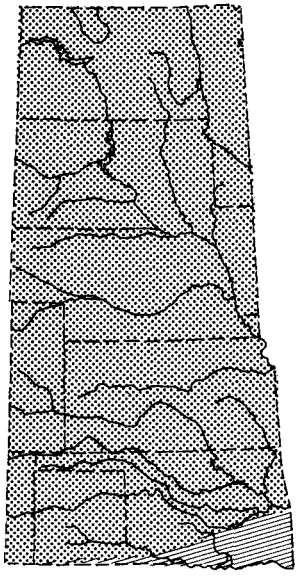
Time of Breeding: In Kansas eggs are laid in May and June, and in Iowa nests are also initiated between mid-May and late June. Oklahoma egg dates are from May 15 to July 18, and young have been seen from July 2 to August 8.

Breeding Biology: Common gallinules are highly territorial birds and in some areas maintain winter core-areas that later expand to

become breeding territories. Within the territories the birds build three kinds of structures: display platforms, egg nests, and brood nests. Up to five temporary display platforms are built early in the breeding season, and one or two egg nests are constructed a week or two before egg-laying. The male gathers most of the nest materials, and the female incorporates them into the nest. Eggs are laid daily, and both sexes incubate. The young of the first brood hatch nearly synchronously and are fed by their parents within an hour after hatching. Up to 5 brood nests are built after the brood hatches. The young are tended by both parents for varying periods; in one case a pair began a new nest only 26 days after hatching their first brood. The chicks fledge at 60–65 days of age and tend to disperse soon afterward.

Suggested Reading: Frederickson 1971; Wood 1974.

American Coot
Fulica americana



Breeding Status: Pandemic throughout region. A common to abundant breeder in the Dakotas, Minnesota, western Iowa, and Nebraska, becoming more uncommon and local in Kansas and Oklahoma and occasional to rare in the Texas panhandle.

Breeding Habitat: Wetlands with open water and emergent vegetation interspersed are favored, especially those that are fairly shallow and rich in submerged aquatic plants. Coots sometimes also forage in wet meadows and on grassy shorelines of lakes or ponds.

Nest Location: In North Dakota, hardstem bulrush is the predominant species of emergent vegetation used for nesting cover. Cattails and other bulrush species are also frequently used, and in an Iowa study cattail cover accounted for more than 250 of 320 nests studied. Nests are built over water ranging from 5 to nearly 60 inches deep and are floating platforms anchored to the surrounding vegetation.

Clutch Size and Incubation Period: From 5 to 15 eggs (502 North Dakota nests averaged 8.8, and 281 Iowa nests averaged 9.0). The eggs are buffy with small brown spots. The incubation period is 23–27 days, with onset of incubation ranging from the first egg to the last egg, and hatching of the young is usually staggered. Usually single-brooded, but renesting is frequent and double-brooding has been reported in Utah and California.

Time of Breeding: North Dakota egg dates are from April 29 to August 13, and young have been seen from May 22 to September 15. Nest initiation in an Iowa study ranged from early May to late

June, and Kansas egg records span the period May 11 to June 30, with a peak in late May. Oklahoma egg dates are from May 15 to June 23, with young seen as late as July 15.

Breeding Biology: Coots are monogamous, with a potential life-long pair bond, and spend much of their time in advertising and defending territories. These are established soon after arrival on the breeding grounds, and although the male patrols the territory at first, later it is defended by both members of the pair. Pairs also construct display platforms for copulation and, as the egg-laying period approaches, construct one or more egg nests as well as brood nests later on. Both sexes participate in incubation, with the male most often incubating at night. Unlike gallinules, coots seem to have no specific nest-relief ceremony. Hatching is typically staggered over several days. Apparently the male takes the major responsibility for brooding the young birds, although the female may take the first-hatched chicks and leave the male to incubate and tend the later hatchlings. The young begin to beg shortly after hatching and soon begin to follow the adults during their foraging. After a month or so they are nearly independent, but they beg occasionally almost to the time they fledge, at about 75 days of age. If the adults begin a second clutch they may expel the young of the first brood from the area while they are still fairly young.

Suggested Reading: Fredrickson 1970; Gullion 1954.