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Birds of the Great Plains: Family Laridae (Gulls and Terns)

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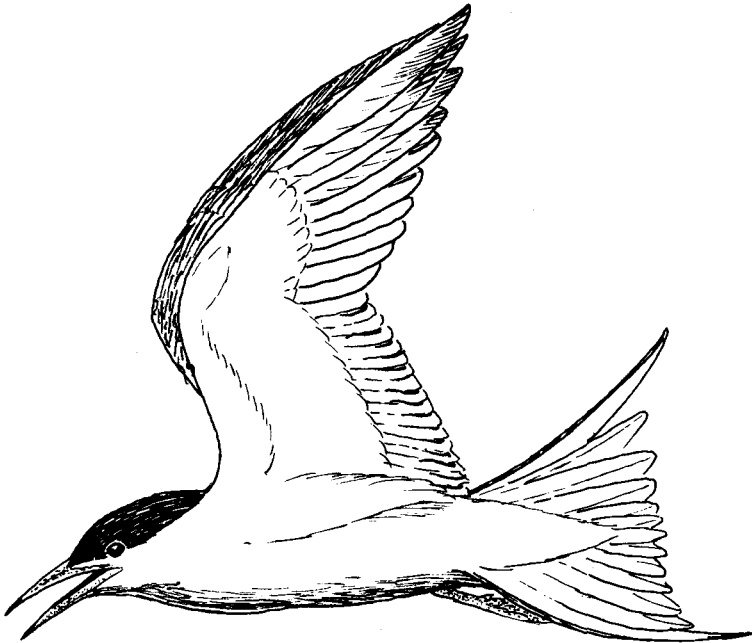
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FAMILY LARIDAE (GULLS AND TERNS)



Common Tern

California Gull *Larus californicus*

Breeding Status: Limited as a breeder to North Dakota, where it has bred in recent years in Stutsman, Kidder, Ramsey, McLean, and Divide counties. Also breeds just to the west of the limits of this book in Weld County, Colorado.

Breeding Habitat: In North Dakota, this species uses much the same habitat as does the ring-billed gull—barren islands on brackish or alkaline lakes—and the two species sometimes nest in mixed colonies.

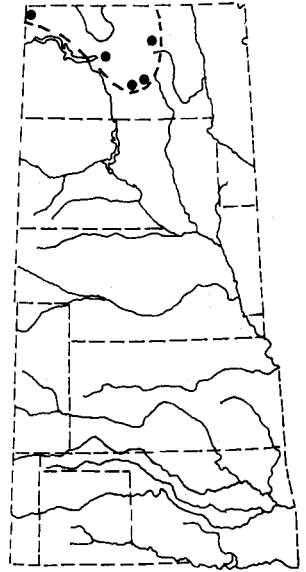
Nest Location: Nesting is colonial; individual nests consist of scrapes lined with grasses, sticks, or weeds. In one North Dakota colony, the California gulls nested in the more central and elevated parts of an island, while the ring-billed gulls occupied the area near the water's edge. Likewise in Alberta, California gulls tend to nest on elevated and boulder-strewn areas, while ring-billed gulls occupy more level terrain. Also, California gulls tend to space their nests almost randomly, while ring-billed gulls show a tendency to aggregate.

Clutch Size and Incubation Period: Usually 3 eggs, but 2-5 have been reported. The eggs are white to buffy with darker spotting. The incubation period is 23-27 days. Single-brooded.

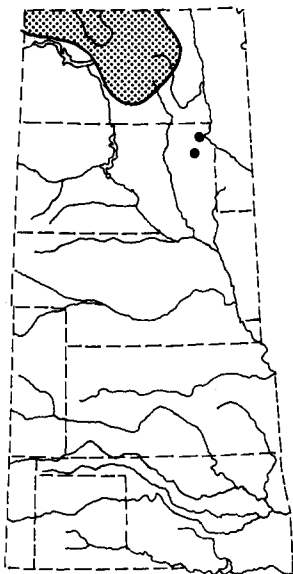
Time of Breeding: North Dakota egg dates are from May 3 to June 24, and flightless young have been seen from June 8 to July 28.

Breeding Biology: California gulls arrive from their wintering grounds along the Pacific coast some weeks before the onset of nesting. Territorial establishment and courtship activities begin as soon as they arrive, even if the nesting areas are still covered by snow. Eggs are laid at an average interval of 2 days, so that most clutches are completed in 4-5 days. Egg-laying within colonies is highly synchronized, and in a sample of 100 nests nearly all the eggs were laid within 2 weeks. Incubation is performed by both sexes and averages about 26 days, with a range of 23 to 28. Although these gulls are serious egg predators for other species, relatively few eggs are eaten or disappear within the nesting colony, and hatching success is often high. The chicks are relatively precocial, and though they are usually raised in the close vicinity of their nest they are also well able to run and elude danger from an early age. They fledge at ages of from 36 to 44 days, averaging 40 days.

Suggested Reading: Vermeer 1970; Baird 1976.



Ring-billed Gull *Larus delawarensis*



Breeding Status: Limited as a regular breeding species to North Dakota, where it breeds or has recently bred in Burleigh, Kidder, Stutsman, McClean, Ramsey, McHenry, Rolette, Burke, and Divide counties. It has also bred in Roberts County, South Dakota, and still breeds at Bitter Lake, Day County. Nesting in Minnesota occurs east of the limits of this book.

Breeding Habitat: Breeding occurs in colonies on isolated and sparsely vegetated islands of lakes and impoundments, the colonies varying in size from a few birds to more than 1,000 pairs.

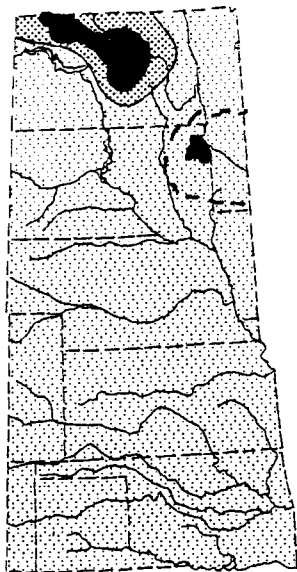
Nest Location: Nests are usually on gravel or in matted vegetation on a flat substrate and are simple scrapes lined with readily available sticks, weeds, or grasses. In dense colonies nests may be less than a yard apart, and they are typically closer together than would be expected from random nest selection.

Clutch Size and Incubation Period: Normally 3 eggs, sometimes 2 or 4. The eggs are buffy to whitish with darker brown markings. The incubation period averages 25 days. Single-brooded.

Time of Breeding: Egg dates in North Dakota extend from May 17 to June 27, and flightless young have been seen from June 8 to July 28. Fledged young have been seen as early as mid-July.

Breeding Biology: Ring-billed gulls arrive on their nesting grounds well before the nesting season and establish nesting territories as early as possible, at times occupying exactly the same territory as in the previous year. Such behavior probably helps to maintain pair bonds and also results in birds returning to areas where successful breeding has previously occurred. As in other gulls, most pair-forming behavior consists of hostile postures and calls associated with territoriality. Eggs are laid at 2-day intervals and, as in the California gull, egg-laying is highly synchronized within colonies. Incubation is by both sexes, and apparently a major source of egg mortality comes from chilling as a result of disturbance to the colony. Once the eggs hatch, most chick mortality evidently comes from pecking by neighboring adults when a chick wanders too far from its parents. The young birds fledge in an average of 37 days.

Suggested Reading: Vermeer 1970; Tinbergen 1959.



Franklin Gull *Larus pipixcan*

Breeding Status: Breeds in scattered colonies in central and eastern North Dakota, western Minnesota, and northeastern South Dakota. There is a single Iowa nesting record (3 nests) for Clay County and occasional records for Garden County, Nebraska (*Nebraska Bird Review* 34:63; 35:32).

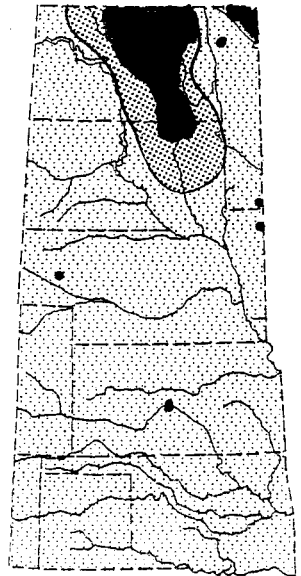
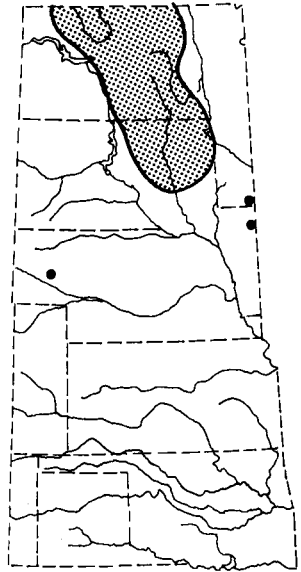
Breeding Habitat: Large, relatively permanent prairie marshes with extensive stands of semiopen emergent cover are the primary breeding habitat in North Dakota, with more limited usage of shallow river impoundments.

Nest Location: Nests are usually in emergent vegetation such as cattails, bulrushes, phragmites, and whitetop, in water as deep as 4-5 feet, and frequently among nesting black-crowned night herons. Emergent stands that are not extremely dense and that are close to open water are preferred. The nest is a floating mass of dead vegetation, anchored to live plants and with a well-formed cup.

Clutch Size and Incubation Period: From 2 to 4 eggs, usually 3. The eggs are mostly brown to greenish brown with darker brown blotching or scrawling. The incubation period has been estimated at 18-20 days. Single-brooded.

Time of Nesting: North Dakota egg records extend from May 23 to June 26, and young have been seen as early as June 11. Fledged young have been reported as early as July 11.

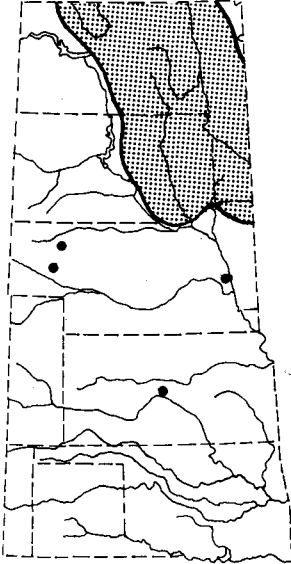
Breeding Biology: Franklin gulls nest in colonies, and after they arrive in their nesting grounds in spring they display on the previous year's nesting site, though they often shift to a new colony before the start of nest-building. Pairs apparently pick their nest sites on the basis of horizontal visibility and relative aggression. Where emergent vegetation is thick, reducing visibility, nests are closer together than where vegetation is less dense, and aggressive interaction between adjacent pairs is reduced. Both members of the pair assist in incubation, and they continue to add materials to the nest through the breeding period, presumably because of its floating nature. Unlike many gull species, Franklin gulls do not eat the eggs or young of their own species, but minks, great horned owls, and marsh hawks are major predators of young gulls as well as of adults. After hatching, the young remain on their nesting platform until they are 25-30 days old, and they do not learn to distinguish their own parents from other adult gulls until they are more than 2 weeks old. Likewise, parents will accept alien chicks less than about 2 weeks old, both of which suggest a slower development of parental and offspring



recognition than is typical of ground-nesting gulls. Fledging occurs at 28-33 days.

Suggested Reading: Burger 1974.

Forster Tern *Sterna forsteri*



Breeding Status: Breeds uncommonly and locally in North Dakota east of the Missouri River, in western Minnesota, in eastern South Dakota and northwestern Iowa (Clay, Emmet, and Palo Alto counties). It is apparently only a local but regular breeder in Nebraska (Garden and Sheridan counties). Likewise, in Kansas breeding has only been reported from Barton County, in 1962.

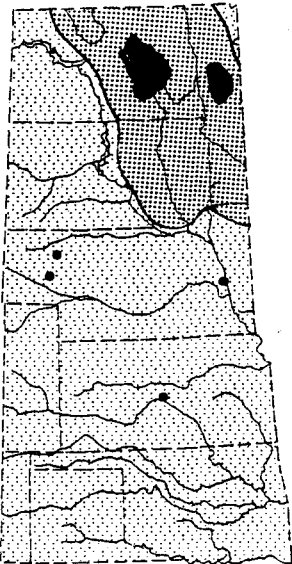
Breeding Habitat: Large marshes with extensive areas of emergent vegetation or muskrat houses for nest sites are favored habitats of this species. It is also found around lakes, salt marshes, and coastlines but is more of a marshland species than the common tern. Small marshes seem to be avoided.

Nest Location: Nests are typically in or near water, usually on floating vegetational debris, but at times they are in a depression in sand or mud. The birds sometimes nest on small islands like common terns, but the two species rarely nest together. Studies in Iowa indicate that large muskrat houses are favored nest sites, especially when they are near the edges of open pools of water.

Clutch Size and Incubation Period: From 1 to 4 eggs (92 Iowa clutches averaged 2.5). The eggs are buffy to buffy olive with dark brown spotting. The incubation period averages 24 days. Single-brooded, but probable renesting has been reported.

Time of Breeding: The probable period of breeding in North Dakota is late May to late July, with newly hatched young recorded in late June and early July. Minnesota egg dates are from May 25 to June 24, with hatching reported as early as June 10. Iowa egg dates extend from the last week of May until the end of June.

Breeding Biology: Shortly after they arrive on their nesting marshes, Forster tern pairs begin to seek out nest sites. They are relatively colonial, and as many as five nests may be placed on a favorable site, such as a large muskrat house. The floating root-stalks of cattails may also serve as a nest site, but such locations are more often used by black terns. Nest-building is initiated almost simultaneously by all members of a colony, and both sexes incubate. Wind and wave action, house-building by muskrats,



and possibly intraspecific hostility are probably major causes of egg loss, which seems to be relatively high in this species. Little information is available on the growth of the young, but presumably they fledge in about a month, as is typical of the common tern.

Suggested Reading: Bergman, Swain, and Weller 1970; McNicholl 1971.

Common Tern *Sterna hirundo*

Breeding Status: Breeds locally in central and eastern North Dakota between the Missouri and Red River valleys, in Minnesota east of the Red River Valley, and in northeastern South Dakota.

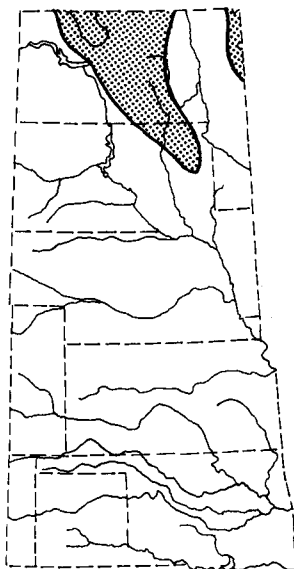
Breeding Habitat: In our region breeding occurs on islands in large lakes or reservoirs. The species also breeds along coastlines on sandy beaches.

Nest Location: Sparsely vegetated islands are preferred nesting habitats in the Great Plains; grassy uplands and sandy beach areas are used in coastal regions. Nesting is in colonies, and nests are simple scrapes, often with little or no lining. Nest sites are usually near vegetation or other upright objects and are very often in previous nest hollows or natural depressions.

Clutch Size and Incubation Period: From 2 to 4 eggs, usually 3 (93 North Dakota nests averaged 2.8). The eggs are buffy to cinnamon, with dark brown spotting, especially at the larger end. The incubation period is usually 24-26 days, rarely as little as 21. Single-brooded, with renesting typical only when the first clutch is lost very early.

Time of Breeding: Egg dates in North Dakota range from June 8 to July 28, and dependent young have been seen from June 22 to July 31. The few available dates for Minnesota and South Dakota fall within these extremes.

Breeding Biology: As terns arrive on their nesting grounds, the first birds are those that have nested there formerly, and males soon begin to establish and occupy territories. In early aerial displays, or "fish flights," small fish are exchanged among the participants, but little or no sexual recognition is likely at this stage. After sexual recognition the true courtship is under way; aerial glides replace the typical fish flights, and terrestrial displays such as parading around the potential mate or incipient nest-building or scrape-digging are typical. Copulation begins at about

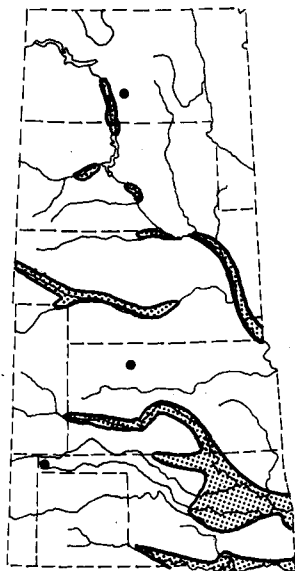


the time of scrape-making, and egg-laying soon follows. The egg-laying rate is rather variable, and incubation begins immediately, so that hatching is staggered. Both sexes incubate, but the females do so much more intensively and perform about three-fourths of the total incubation. The young are precocial and may leave the nest by the second day after hatching. Adults learn to recognize their young by the time they are 5 days old, but chickless adults sometimes adopt orphan young and care for them as their own. Young birds reach flight stage at an average age of 30 days but continue to beg food for several weeks thereafter. After the young birds leave the ternery they typically do not return for 3 years, until they are sexually mature.

Suggested Reading: Palmer 1941.

Least Tern (Little Tern)

Sterna albifrons



Breeding Status: Breeds locally and irregularly in the Missouri Valley from central North Dakota southward, in the Platte and Niobrara valleys of Nebraska, the Arkansas Valley of Kansas, and most of the larger river valleys of Oklahoma.

Nesting Habitat: In our region nearly all nesting occurs on river sandbars or islands, but in coastal areas nesting is also common on broad areas of sand or gravel beaches, on islands, and sometimes on newly cleared land. Gravel or pebble substrates are preferred over sandy ones. In Oklahoma nesting also occurs on salt plains, in habitats similar to those used by snowy plovers.

Nest Location: Nests are usually in colonies and consist of a simply scrape in sand or gravel, with little or no lining. Solitary nesting is frequent in the Great Plains.

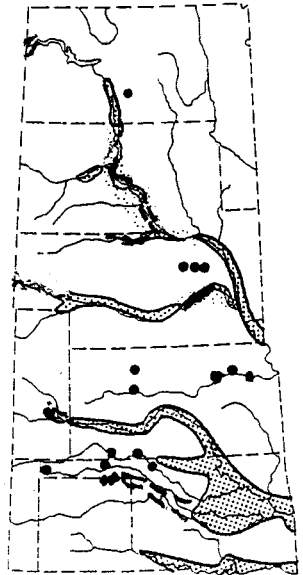
Clutch Size and Incubation Period: From 2 to 4 eggs, but typically 2. The eggs are pale buffy with darker brown spotting. The incubation period is 20–21 days. Apparently single-brooded, but renesting has been reported in coastal areas.

Time of Breeding: A few North Dakota egg records are from July 2 to July 21. A larger series from Kansas are from May 21 to June 30, with the modal date of egg-laying June 5. Oklahoma egg dates are from May 31 to July 10, and chicks have been reported from June 23 to August 13.

Breeding Biology: In the Mississippi and Missouri valleys, least terns usually arrive in May, sometimes before sandbars suitable for nesting have been exposed by declining river levels. The exposure of these bars sets nesting in motion and thus synchro-

nizes the breeding cycles of each nesting colony. During courtship a bird may make aerial glides while carrying fish, then alight and offer the fish to another bird. Sex recognition may be achieved in this way, since if a male is offered a fish it responds by attacking. Incipient nest-building by the male may stimulate the female to begin the actual nest, which is a simple scrape in the sand. Nest sites are usually widely spaced, lessening antagonism between nesting pairs. The eggs are laid on consecutive days or at 2-day intervals, and incubation probably begins with the first egg. At first the female incubates alone, but gradually the male assumes part of this duty. The eggs typically hatch on consecutive days, and the female does most of the brooding. Within a day the chick and parent have learned to recognize each other, and thus the parents feed no young other than their own. Within 2 days after hatching the young begin to wander away from the nest and usually do not return. They fledge on about the 20th day after hatching, and the colony is gradually deserted.

Suggested Reading: Hardy 1957; Tompkins 1959.



Caspian Tern

Sterna caspia (*Hydroprogne caspia*)

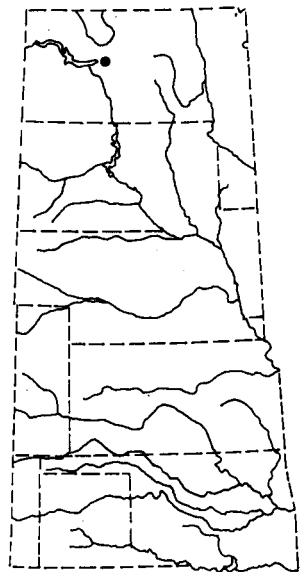
Breeding Status: Accidental. The only breeding record for the region is of a pair with two young, seen June 28, 1977 on Lake Williams, McLean County, North Dakota (*Prairie Naturalist* 10:23).

Breeding Habitat: Most breeding is near the coastline, usually on sandy or stony beaches, but breeding also occurs on offshore islands and sometimes on the shorelines of large inland lakes.

Nest Location: Nests are on the ground, on sand, shingle, or shell beaches. The nest is a shallow hollow, usually unlined but sometimes with a slight accumulation of plant debris. Nesting usually occurs in colonies, but at times single pairs are found in the vicinity of other tern species.

Clutch Size and Incubation Period: Usually 2 eggs, sometimes 3, rarely 1. The eggs are creamy to creamy buff with dark specks, spots, and blotches that tend to be small and rather evenly distributed. The incubation period is about 26 days and begins with the first egg; some references indicate an incubation period of 20–22 days. Single-brooded, but probable replacement clutches have been noted.

Time of Breeding: In the case of the North Dakota nesting, the young were still mostly downy when seen on June 28 but had

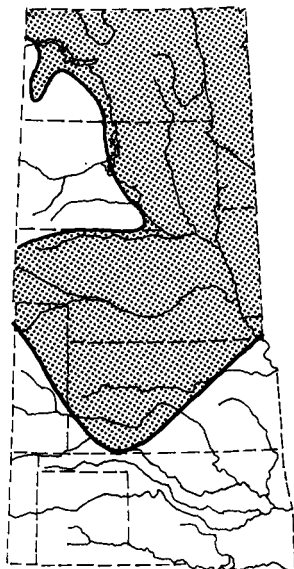


evidently fledged by July 12. The only definite Minnesota breeding is from Leech Lake, where two nests with eggs were found on July 9, 1969 (*Loon* 41:83-84).

Breeding Biology: Nesting colonies of this species on islands in northern Lake Michigan and Lake Huron tend to be rather large, averaging about 150 pairs and sometimes going as high as 500 pairs. The colonies are also densely packed, with territories averaging less than 2 square yards, and the centers of adjacent nests may be as little as 21 inches apart. Incubation is by both sexes, and both parents tend the young. The fledging period has been estimated to be as little as 4 weeks by some authorities and as long as 6-8 weeks by others. After fledging, the juveniles rapidly disperse and gradually work their way to coastal wintering grounds. Immature birds are very sedentary and may spend a full year on the wintering grounds. The birds become adult toward the end of their third year of life.

Suggested Reading: Ludwig 1965; Bent 1921.

Black Tern *Chlidonias niger*



Breeding Status: Breeds locally over most of North Dakota except the extreme southwest, all of the included portions of Minnesota and Iowa, eastern South Dakota, and Sandhills and other wetlands of Nebraska and extreme northwestern Missouri. The species apparently breeds locally in eastern Colorado, but there are few published nesting records. There is only one definite nesting record for Kansas (Barton County), although summering birds and immatures have been seen in several other western counties (Finney, Seward, and Meade).

Breeding Habitat: Favored breeding habitats are small to large marsh areas containing both extensive stands of emergent vegetation and areas of open water. Unlike common and Forster terns, this species feeds predominantly on insects and thus does not compete strongly with fish-eating species.

Nest Location: Nesting is semicolonial in water from less than a foot deep to about 3 feet, usually on floating emergent vegetation, particularly cattail rootstalks. Muskrat houses are sometimes used, but nest substrates tend to be smaller and lower than those used by Forster terns.

Clutch Size and Incubation Period: From 2 to 4 eggs (151 Iowa clutches averaged 2.6). The eggs are buffy to olive with extensive blackish spotting. The incubation period is 21-24 days, usually

about 21 days. Single-brooded, at least in this region, but probable renesting has been reported.

Time of Breeding: North Dakota egg dates are from May 28 to July 24, and flightless young have been seen from June 21 to July 25. Iowa egg dates are from the last week of May to early July. In Kansas, complete sets of eggs have been seen between June 11 and July 12.

Breeding Biology: Prenesting behavior in black terns is marked by two types of display flights, including “fish flights” (the birds usually carry insects rather than fish), normally performed by two birds, and “flock flights” involving most or all of the birds of an entire nesting area. In the courtship phase one bird (probably the male) postures and calls while standing on a potential nest site. Also, the two birds make an aerial glide downward from several hundred feet while maintaining a fixed position relative to each other. Nesting sites of the previous year apparently are not reused. The nests seem to be built from materials gathered in the immediate vicinity of the nest rather than carried in. Both sexes assist in incubation, and both brood the young for at least 8 days after hatching. Little brooding is done after that time, though the chicks are unable to fly until they are more than 20 days old. Young birds are fed almost exclusively with insects and continue to feed on them for a time after they fledge.

Suggested Reading: Goodwin 1960; Bailey 1977.

