

Bird, Nest & Egg

ART Joris De Raedt

WORDS Walter De Raedt

# Bird, Nest & Egg



The homes of forty  
extraordinary species

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RIZZOLI  
NEW YORK



## A gallery of nests

The bird nest is one of nature's most ingenious architectural feats, tailored to protect eggs and chicks from predators, weather, and other challenges. It plays a crucial role in shielding eggs and hatchlings from temperature fluctuations, predators, and parasites. A temporary structure, it is meticulously crafted to meet the needs of both parents and offspring, and can vary enormously in size, shape, material, and location. It reflects each species' unique lifestyle and environment. While many birds construct nests, some species, like common murrens or emperor penguins, rely on bare ground or ice, forgoing traditional nests altogether.

Nest types are also influenced by the developmental stage of chicks at hatching. Precocial chicks, like those of ducks or shorebirds, are well-developed when they hatch, with feathers and the ability to walk and feed soon after birth. Altricial chicks, like songbirds, hatch naked, blind, and dependent on their parents, requiring well-protected nests.

The location of a nest is vital for survival. Birds may choose tall trees, cliffs, or dense shrubs to avoid ground predators, while others opt for ground-level sites, relying on camouflage. Nest placement considerations also include temperature, shade, and proximity to food sources.

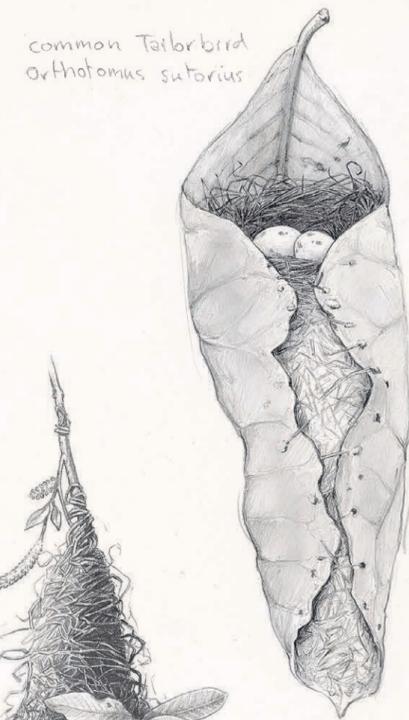
Cleanliness is also critical. Parents remove eggshells, food scraps, and fecal sacs to prevent bacterial buildup and to avoid attracting predators. Some birds, like white storks, go one step further, defecating outside the nest to keep it clean.

Many birds also add aromatic herbs, oils, or fresh green vegetation to their nests to ward off parasites; for example, European starlings have been observed lining their nests with wild carrot and yarrow, which release compounds that repel mites and lice.

In every detail, bird nests reveal the extraordinary adaptability and resourcefulness of their builders, showcasing the marvels of evolution in action.



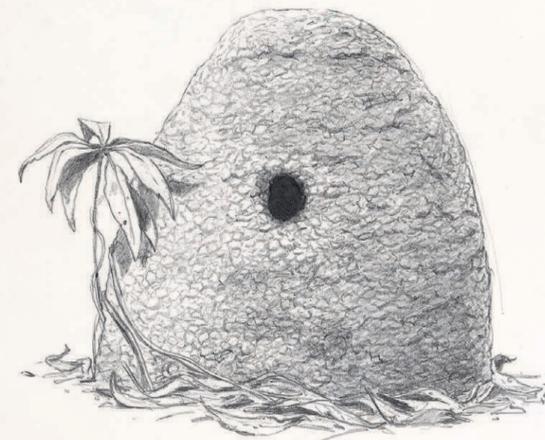
Calliope Hummingbird  
*Selasphorus calliope*



Common Tailorbird  
*Orthotomus sutorius*



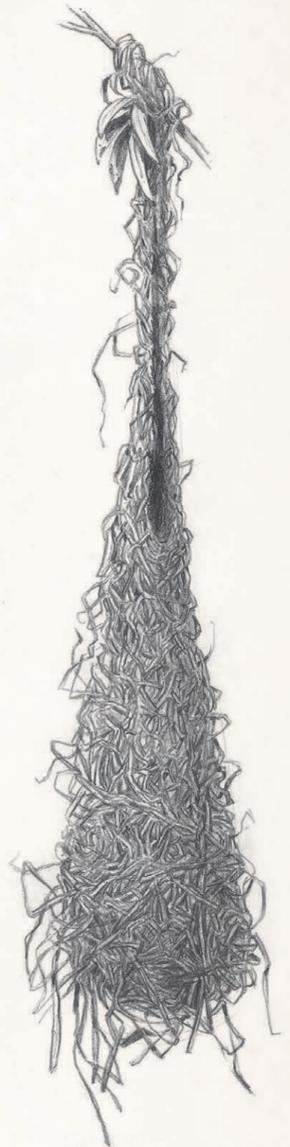
Eurasian Golden Oriole  
*Oriolus oriolus*



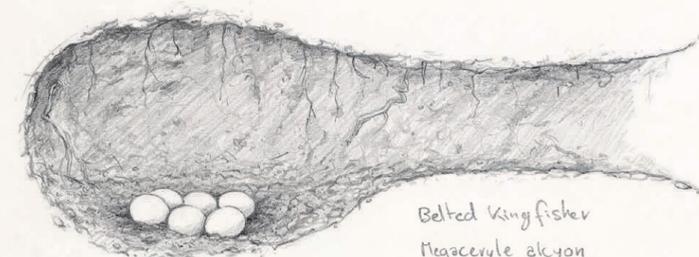
Buff-breasted Paradise Kingfisher  
*Tanysiptera sylvia*



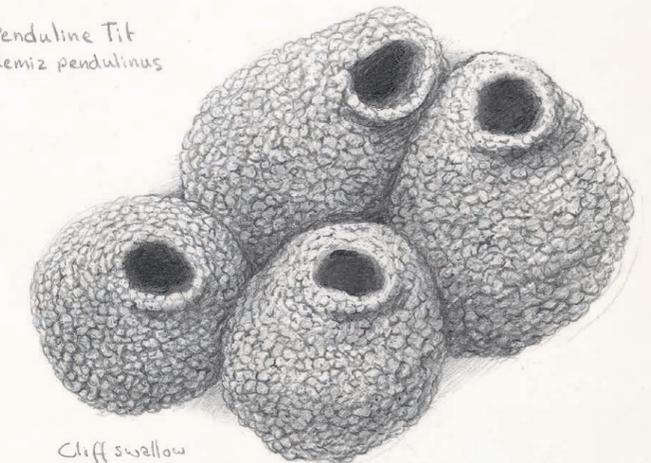
Penduline Tit  
*Remiz pendulinus*



Crested Oropendola  
*Psarocolius decumanus*



Belted Kingfisher  
*Megasceryle alcyon*



Cliff Swallow  
*Petrochelidon pyrrhonota*

# Peregrine Falcon

*Falco peregrinus*

The peregrine falcon, meaning “wanderer,” is the world’s most widespread bird of prey and the fastest animal on Earth. To catch prey, they dive, or stoop, typically at over 200 miles per hour (320 km/h), with recorded speeds of up to 238 miles per hour (383 km/h). Cruising speeds range from 24 to 33 miles per hour (40 to 53 km/h), increasing to 67 miles per hour (108 km/h) when chasing prey. During dives, they can endure forces up to 18 g, thanks to specialized anatomy. For comparison, fighter pilots wearing specially designed suits can typically tolerate up to 9 g of acceleration before losing consciousness.

Peregrines are also remarkable travelers. While equatorial populations are stationary, northern ones migrate over 20,000 miles (32,000 km) annually, from the Arctic almost to Antarctica. Historically revered, they are iconic in falconry and were once symbols of royalty.

Peregrines typically nest on cliff ledges or tall man-made structures, such as skyscrapers and bridges. They choose cliffs or buildings whose overall height ranges from about 25 to 1,300 feet (8 to 396 meters) above ground level, usually positioning their nest ledge roughly one-third of the way down from the top. Males select potential nest ledges each season, and the female chooses one. They create a 9-inch-wide (23 cm), 2-inch-deep (5 cm) scrape—shallow depressions in the sand, gravel, or substrate—but perform no further nest building. They reuse sites yearly. Mated pairs bond for life, with the female incubating the eggs while the male provides food.

Fiercely territorial during nesting, peregrines aggressively defend young against intruders. The female lays three to five speckled eggs, whitish to pale russet-brown and heavily marked with warm brown, which are incubated for about thirty-four days. Peregrine chicks grow quickly, starting as fluffy white hatchlings with oversize feet. Within five to six weeks, they’re fully feathered and ready to fly.

After fledging, they stay with their parents for months, learning to hunt and survive. Their adaptability has allowed them to thrive in cities, preying on birds like pigeons and starlings. In New York City, they even hunt bats, because the light pollution enables them to be active at night.



Belted Kingfisher  
*Megasceryle alcyon*



# Belted Kingfisher

*Megasceryle alcyon*

The belted kingfisher can often be found perched on trees, posts, or similar vantage points near water, ready to plunge in headfirst in search of fish. Its diet also includes amphibians, mollusks, crustaceans, insects, small mammals, birds, reptiles, and berries.

Belted kingfishers are solitary outside the breeding season, forming new monogamous pairs each year. Territories, established by males, follow the shape of streams or shorelines. During courtship, males feed females. Both sexes fiercely defend their territory with loud rattle calls.

Nest sites are typically chosen during courtship, ideally near water and high on the bank to avoid flooding. Kingfishers occasionally nest near bank swallows and rough-winged swallows, but drive them away from burrow entrances. They usually avoid areas with vegetation, particularly tree roots, and may also use ditches, roadcuts, landfills, or gravel pits far from water.

While courting, the male probes the bank with his bill, while the female calls from a nearby perch. Once a site is chosen, both sexes dig the burrow, with males working twice as much as females. This typically takes three to seven days but can last up to three weeks.

Nesting burrows usually extend 3 to 6 feet (0.9 to 1.8 m) into sandy banks but can sometimes reach lengths of up to 15 feet (4.6 m). They slope upward to prevent flooding, and end in a chamber 8 to 12 inches (20 to 30 cm) wide and 6 to 7 inches (15 to 18 cm) high. Layers of undigested fish bones and scales accumulate in the chamber, offering some insulation.

The clutch size is typically six to seven eggs, occasionally five to eight. Both sexes incubate for twenty-two to twenty-four days. The female incubates at night, while the male takes over in the morning, sometimes contributing less than the female. Typically, they produce one brood per year, occasionally two in southern regions.

Both parents feed the young, initially providing partially digested fish and later whole fish. Chicks leave the nest twenty-seven to twenty-nine days after hatching and are fed by parents for another three weeks.

# Pileated Woodpecker

*Dryocopus pileatus*

The third-largest woodpecker in the world, the pileated woodpecker is named for its prominent red crest (*pileatus* in Latin means “capped”). These birds inhabit mature forests and heavily wooded parks, preferring mesic habitats with large, mature hardwood trees. They are primarily insectivorous, foraging in dead wood for carpenter ants, their main prey, along with wood-boring beetle larvae and termites.

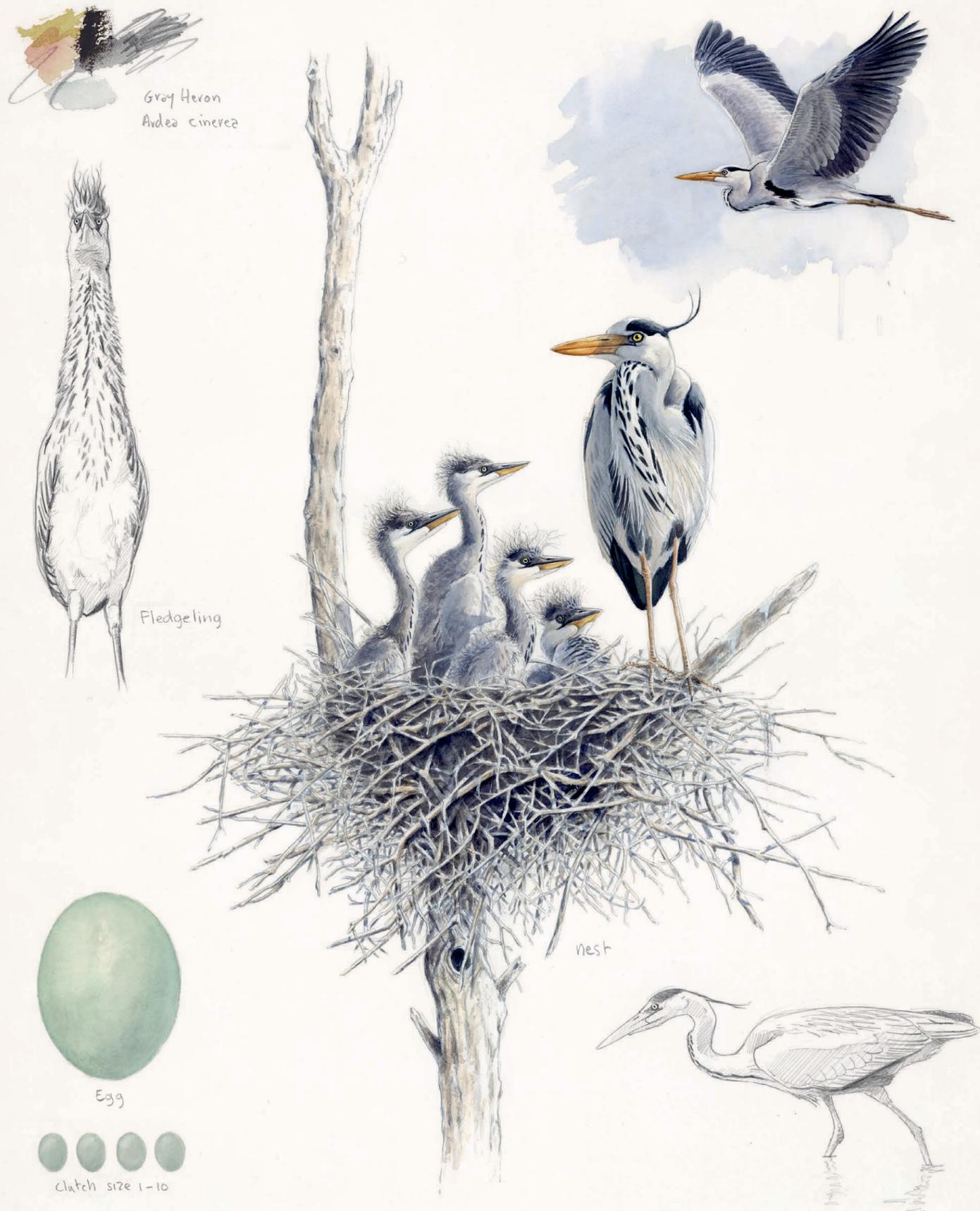
Pileated woodpeckers form long-term pair bonds that usually last beyond a single breeding season—often for life. Once a mated pair establishes and defends its territory, they typically remain together year after year. They protect their territory with loud drumming and calls. Courtship displays include wing spreading, crest raising, and gliding flights.

Using their powerful beaks, pileated woodpeckers excavate impressive rectangular cavities in dead trees to access insects and build their nests. The male primarily excavates the nest, while the female assists. The entrance hole is oblong, unlike the circular holes of most woodpeckers. Nests are typically unlined, with leftover wood chips as the only bedding. Nest construction takes three to six weeks, and nests are rarely reused. However, these cavities go on to play a crucial role in the forest ecosystem, providing homes for various other birds, including other woodpecker species and owls, as well as mammals like raccoons.

Both parents incubate the three to five eggs, and raise the chicks together. Chicks fledge in the spring, twenty-six to twenty-eight days after hatching, and may remain with parents for several months.

Pileated Woodpecker  
*Dryocopus pileatus*





# Gray Heron

*Ardea cinerea*

During the breeding season, gray herons develop striking black crest plumes and long white plumes on the back, lower foreneck, and breast. Their iris, bill, and legs flush deep orange to red, with some color persisting until after their eggs have hatched.

Courtship begins when a female approaches a male, who initially reacts aggressively. Both birds then engage in a stretching display, extending and retracting their necks while flexing their legs. As the pair bond strengthens, displays diminish. Copulation occurs with the female standing and continues into egg laying. Pairs typically remain together for a single season, though extra-pair copulations can occur in large colonies.

The gray heron nests in small colonies of two to ten nests, called heronries. They nest in isolated patches of trees or sometimes on cliffs or the ground, preferring sites that offer privacy and protection. Males arrive first at the nesting site, claiming an advertising perch or an old nest, if available. When one bird arrives at the nest, both partners engage in a greeting display, raising and lowering their wings and plumes.

New nests are often flimsy, with visible eggs, but older nests are reused and reinforced annually, becoming large, bulky structures. Nest materials include a twig platform lined with herbaceous plants and seagrass. Males primarily gather sticks, while females handle most of the construction.

Females lay pale blue-green eggs asynchronously, every two or more days, with incubation lasting twenty-three to twenty-eight days. The eggs vary in size, and clutch size differs by latitude but is typically one to ten eggs. Occasionally, multiple gray heron females lay in the same nest before incubation, producing clutch sizes larger than the typical range. Only one female incubates, and all the eggs are brooded by the primary pair, boosting overall brood size.

Both parents incubate and feed the chicks. Older chicks dominate feeding, leading to differential survival, especially when there are food shortages. Chicks fledge at about fifty days and become independent at sixty to seventy days. Parents forage intensively during breeding, sometimes traveling up to 24 miles (39 km) and spending twenty-three hours per day searching for food.

# Calliope Hummingbird

*Selasphorus calliope*

The calliope hummingbird is the smallest bird in North America, measuring just 3 inches (8 cm) long and weighing about 0.1 ounce (about 3 g). Despite their size, these birds survive cold summer nights at high elevations in the northern Rockies and migrate annually from Canada to southern Mexico.

The breeding season lasts from late April to late June. Males court females with spectacular displays, including hovering with iridescent throat feathers flared in a starburst, producing loud buzzing noises, and performing dramatic 33- to 98-foot (10 to 30 m) dives. Territorial males also engage in circle dances with females, clashing bills in midair. When intruders enter their territories, males chase them off aggressively, often vocalizing with chatters.

On breeding grounds, males spend over half their time perched on exposed willow and alder branches, defending their territories. Despite their tiny size, calliope hummingbirds are feisty and resourceful, making them remarkable birds of the high-altitude forests. Calliope hummingbirds are polygynous, meaning one male mates with multiple females.

Females build well-insulated, cup-shaped nests on horizontal evergreen branches—typically lodgepole pine, Douglas fir, or western red cedar—often where an old pine cone once grew, making the nest resemble a cone. Nests are camouflaged with lichen, moss, or bark and bound with spiderwebs. Measuring 1.5 to 1.8 inches (3.8 to 4.6 cm) wide and just over 1 inch (2.5 cm) tall, the interior is 0.8 inch (2 cm) wide and 0.6 inch (1.5 cm) deep. Nest height ranges from 6 to 39 feet (1.8 to 12 m) above the ground. Females may reuse or build upon older nests.

Females lay two eggs per clutch, incubating them for fifteen to sixteen days. However, there are reports of females caring for four young in two different nests. Only females care for the young, feeding them, brooding them to keep them warm between feeding bouts and at night, as well as removing waste to keep the nest clean. Chicks remain in the nest for eighteen to twenty-one days before fledging. The entire nesting process, from building to fledging, takes about thirty-four to thirty-eight days.





Penduline Tit  
*Remiz pendulinus*

# Penduline Tit

*Remiz pendulinus*

Penduline tits are closely related to true tits. The species exhibits both polygamous and polyandrous behavior, meaning that a female may breed with multiple males during a season and a male may breed with multiple females.

These birds are famous for their intricate, pale-colored nests, which are suspended from thin branches of trees like willow, elm, or birch, often over water. Nests can also hang between reeds or in thorny shrubs, typically 3.3 to 23 feet (1 to 7 m) above the ground. Males start the multistage building process, with females attracted to the nests about halfway through. After this, both sexes complete the structure.

The nest itself is a free-hanging, pouch-like structure, about 2.4 to 3.2 inches (6 to 8 cm) wide and 5.1 to 6.7 inches (13 to 17 cm) high, made from cobwebs, plant fibers, and fluff from reeds and poplars. The cobwebs add tensile strength and help bind the materials. The birds achieve the nest's felted texture by repeatedly teasing and interlocking the fibers.

The nest also features a clever defense: a false entrance designed to mislead predators. The real entrance is hidden and can be sealed shut by the bird using its bill or head. The inner chamber is accessed via a narrow, downward-angled spout. The nest is remarkably strong and weatherproof, with thick outer walls.

Egg laying begins only once their nest is nearly complete, usually in the final days of construction. From late April through early July, a female will deposit one egg per day until her clutch of six to eight eggs is complete. She then starts incubating all of them together. Incubation lasts about fourteen days, and all the eggs hatch at roughly the same time.

Once the eggs are hatched, either the male or female—rarely both—cares for the chicks, feeding them larval insects and spiders. Nestlings fledge around twenty-two days old. Although parents may attempt a second brood, success rates are low, and deserted nests are not reused.