Order Gruiformes, Rails and Cranes
A diverse order, variable in form and color, united by skeletal, muscular and palatal features. No crop present. Fly with neck out and feet trailing behind. Sexes usually alike. Young are downy and nidifugous. Primarily terrestrial, rarely land in trees. Most members are poorly studied except for cranes. This order contains a higher percentage of recently extinct forms and living forms on the verge of extinction than any other major order. Nine families, two presented here.

Family Rallidae, Rails, Coots, and Gallinules (34/143)

Distribution.— Cosmopolitan except for the polar regions. Many species are migratory despite weak flight.
Characteristics.— Small to medium sized (15–50 cm) wading birds. Bill variable, but usually long and strongly decurved or short, slightly decurved, and chicken-like; many species possess a red, yellow or white frontal plate on forehead above bill. Wings short, rounded; nestlings have a pronounced claw on first digit. Longish legs, many species with long, spreading toes (coots have short legs and short, lobate toes, an adaptation for swimming). Narrow bodied (laterally compressed), probably an adaptation for moving through dense emergent vegetation. Sexes similar.
Habitat.— Typically found in marshy habitat.
Habits.— Omnivorous wading and swimming birds. Generally secretive, many nocturnal. Many species bob their heads and flick their tails upward when walking. Songs most often given at dusk and after dark. Coots are gregarious and are good swimmers and divers, and must patter across the water’s surface to become airborne.
Breeding.— Monogamous. Solitary nesters. The nest is well concealed. Incubation is prolonged and shared by both sexes. Large clutches (6–16 eggs). Young highly precocial, with black or brown down.
Note.— Many rail species on islands evolved into a flightless condition and now are severely endangered or extinct due to depredation by humans or by introduced predators.

Illinois species:
- Yellow Rail (Coturnicops noveboracensis) Rare migrant
- Black Rail (Laterallus jamaicensis) Rare migrant
- King Rail (Rallus elegans) Occasional migrant and rare summer resident / Breeds (threatened) [M38]
- Virginia Rail (Rallus limicola) Fairly common migrant and summer resident (N) / Breeds [M39]
- Sora (Porzana carolina) Common migrant and fairly common summer resident (N) / Breeds [M40]
- Common Moorhen (Gallinula chloropus) Uncommon migrant, local summer resident (N) / Breeds (threatened) [M41]
- American Coot (Fulica americana) Abundant migrant, uncommon winter resident (S), common summer resident (N) / Breeds [M42]

Family Gruidae, Cranes (2/15)

Distribution.— Worldwide except arctic regions, South America, Malayan archipelago, Oceania and New Zealand. Northern species migratory.
Characteristics.— Very large birds with long necks and legs, elevated hallux, and long, straight bills. Their heads are often partially bare. Plumage generally gray, brown or white; filoplumes present in some species. Sexes alike. Lose ability to fly for 5–6 weeks during breeding season due to molt in which entire plumage is changed except primaries. Trachea elongate in males, coiled into hollow space in sternum (may contribute to loud resonant voice). Long lived, up to 43 years.
Habitat.— Prefer plains or marshy ground in open landscapes. Require remote areas, free of human disturbance, for nesting.
**Habits.**— Gregarious. Omnivorous. Spectacular, exuberant dancing not restricted to breeding season. In a typical dance, birds walk stiffly around each other with quick steps, wings half spread. Alternately, they leap into the air. Landing, they pick up sticks and pieces of grass, fling them into the air, and stab at them as they come down.

**Breeding.**— Pair bond for life. Nest on ground, usually of a mound of vegetation in a marshy area. Generally, 2 spotted eggs laid. Both sexes incubate and care for downy, precocious young. 

**Note.**— Many crane species are severely endangered. The International Crane Foundation, founded by George Archibald and headquartered in Bariboo, Wisconsin, has been instrumental in recent Crane conservation efforts around the world.

**Illinois species:**

- **Sandhill Crane** (*Grus canadensis*)  Uncommon migrant and very rare summer resident (N) / Breeds (endangered) [M43]

**Order Charadriiformes, Shorebirds and Gulls**

A large, diverse order, united by anatomical characteristics of the palate, syrinx, and muscles. Variable body size (12–80 cm) and bill shapes. Most have eleven primaries and an aftershaft on the contour feathers. Colors generally white, gray, brown and black. Sexes similar. Most are carnivorous or insectivorous and associated with water. Sixteen families, six presented here.

**Family Jacanidae, Jacanas (6/8)**

**Distribution.**— Pantropical.

**Characteristics.**— Exceedingly long toes and toenails (nails up to 10 cm long). Very light, slender build. Medium sized (15–35 cm in body length). Most have frontal plates and naked wattles. Wings broad with spurs at the wrist. Sexes similar, but females are larger.

**Habitat.**— Ponds and shallow lakes overgrown with lilies and other emergent vegetation.

**Habits.**— Nonmigratory. Walk on the surface of aquatic vegetation, feeding on insects and small mollusks. Somewhat gregarious, especially in winter. Swim well; dive to escape danger.

**Breeding.**— Polyandrous. Females have a more elaborate alternate plumage than do males. Females are highly territorial during the breeding season. Males build nest on floating vegetation, incubate the eggs, and care for the young. Young are downy, nidifugous, and precocial.

**Family Charadriidae, Plovers and Lapwings (11/66)**

**Distribution.**— Cosmopolitan except Antarctica.

**Characteristics.**— Medium sized, 15–40 cm, plump in appearance. Short, stout bill, swollen at the tip. Wings long, often with a bold pattern evident in flight. Some lapwings have spurs on their wings. Plumage often with a broad collar and/or a contrasting rump patch. Sexes alike or very similar. No true songs, calls are melodious whistles.

**Habitat.**— Plovers: ocean beaches, sand and mud flats, wet open fields, and tundra. Lapwings: open upland habitats and grassy fields.

**Habits.**— Most species are highly migratory and gregarious. Run swiftly and fly strongly. Feed mostly on a variety of invertebrates. Rarely wade when feeding.

**Breeding.**— Most species are monogamous. Eggs usually 4. Nest built on the ground with little or no lining. Both parents incubate and care for downy, nidifugous, precocial young. Many species perform “broken wing” distraction displays to lead predators away from nests and young.

**Illinois species:**

- **Black-bellied Plover** (*Pluvialis squatarola*) Common migrant along Lake Michigan, uncommon elsewhere.
- **American Golden-Plover** (*Pluvialis dominica*) Common migrant
- **Semipalmated Plover** (*Charadrius semipalmatus*) Common migrant
- **Piping Plover** (*Charadrius melodus*) Rare migrant, once bred along Lake Michigan / (Breeds?) (endangered)
- **Kildeer** (*Charadrius vociferus*) Common migrant and summer resident, rare winter resident / Breeds [M44]

**Family Recurvirostridae, Avocets and Stilts (4/11)**

**Distribution.**— Nearly cosmopolitan but absent from northern regions.

**Characteristics.**— Medium sized (30–50 cm). Bill very long and slender: straight in stilts, recurved in avocets. Head small, neck relatively long. Wings long and pointed. Legs very long and slender; feet semipalmate. Plumage primarily black, gray, brown and reddish. Sexes alike. Call notes are loud and harsh. Song is a soft, musical twittering.
Habitat.— Usually near water: marshes, lakes, wet grasslands, rivers, and estuaries.

Habits.— Northernmost populations are migratory. Gregarious. Avocets feed by wading in shallow water, sweeping the bill back and forth at the surface or near the bottom in a wide arc with the mandibles partly open. Stilts probe deeply into the mud. Diet of both groups consists primarily of crustaceans and insects.

Breeding.— Monogamous with elaborate courtship displays (e.g. postcopulatory display of avocet where the male keeps one wing stretched over the female’s back as both birds run forward with their bills crossed). Nest colonially, near water’s edge, often near other shorebirds. Incubation by both sexes. Eggs 4. Young are nidifugous, downy, and precocial; cared for by both parents. Adults perform a variety of predator distraction displays.

Family Scolopacidae, Sandpipers and Allies (21/85)
Small to moderately large ground dwelling or wading birds with long wings and short tails. Bill long and slender in most species. Upperparts cryptically colored, underparts pale. Sexes similar. Strong flyers. Gregarious.

Subfamily Scolopacinae, Sandpipers (19/85)

Distribution.— Worldwide except Antarctica, Australia, and the South pacific. Most species breed in the Northern Hemisphere, especially in arctic and subarctic regions.

Characteristics.— Small to moderate sized (12–65 cm). Long wings and legs. Bill morphology is variable, but sandpiper bills are generally quite long and slender, and may be straight, decurved or recurved. Basic and alternate plumages are often strikingly different in both sexes. Calls are highly variable. Woodcocks have eyes set on the sides of the head, providing vision to the rear and above when the bill is pointed downward (e.g. when foraging).

Habitat.— Coastal beaches and marshes, open inland areas near water; a few species are found in swamps or woodlands.

Habits.— Most species are migratory and gregarious. Diet consists mostly of invertebrates obtained by wading and probing. Woodcocks have flexible mandible tips that can be used to grasp prey (mostly earthworms) below ground.

Breeding.— Behavior is highly variable: while most species are monogamous, the Ruff is a lekking species and Spotted Sandpipers are polyandrous. Many species have elaborate courtship flight displays. The nest is a scrape on the ground. Eggs usually 4. While in most species both the female and male incubate, parental care patterns are variable. Most species breed on the tundra at high latitudes. Young are downy, nidifugous, and precocial.

Notes.— Because they are extremely gregarious during migration and depend on critical migratory staging areas where huge concentrations of birds stop to feed, concern is mounting about the safety of many populations of sandpipers. International efforts directed toward preserving and protecting these stopover sites are gaining momentum.

Illinois Species:

- Greater Yellowlegs (Tringa melanoleuca) Fairly common migrant
- Lesser Yellowlegs (Tringa flavipes) Common migrant
- Solitary Sandpiper (Tringa solitaria) Common migrant
- Spotted Sandpiper (Actitis macularia) Common migrant, fairly common summer resident decreasing southward / Breeds M45
- Upland Sandpiper (Bartramia longicauda) Uncommon migrant, local summer resident / Breeds (endangered) M46
- Semipalmated Sandpiper (Calidris pusilla) Common migrant
- Western Sandpiper (Calidris mauri) Occasional migrant
- Least Sandpiper (Calidris minutilla) Common migrant
- White-rumped Sandpiper (Calidris fuscicollis) Uncommon migrant
- Baird’s Sandpiper (Calidris bairdii) Occasional migrant
- Pectoral Sandpiper (Calidris melanotos) Common migrant
- Common Snipe (Gallinago gallinago) Common migrant, rare summer resident, uncommon winter resident (S) / Breeds M47
- American Woodcock (Scolopax minor) Common migrant, uncommon summer resident, rare winter resident (S) / Breeds M48
**Subfamily Phalaropodinae, Phalaropes (2/3)**

**Distribution.**—Primarily northern regions of the Northern Hemisphere.

**Characteristics.**—Small (18–25 cm). Females larger than males. Long, thin, straight bill and long pointed wings. Toes are lobate-webbed. Basic plumage is gray above and white below. Alternate plumage is patterned with reds, browns and blue-grays. Females are brighter than males. Because their plumage is very buoyant phalaropes ride high in the water.

**Habitat.**—Winter largely at sea in northern temperate and tropical latitudes (except Wilson’s Phalarope on the Altiplano of South America). Most breed near freshwater ponds on the tundra, but Wilson’s Phalarope breeds inland in southern and central parts of North America.

**Habits.**—Migratory and somewhat gregarious. Phalaropes are the only oceanic shorebirds, and are the most aquatic of the family, swimming well. Their unique foraging behavior involves spinning like a top (up to 40 rpm) in shallow water stirring the bottom and causing food items to rise to the surface from the substrate. Wilson’s Phalarope often feeds in association with avocets and shovellers. Foraging success has been shown to increase during commensal feeding.

**Breeding.**—Polyandrous. Females defend territories and solicit males. Males build the nest, incubate the eggs (usually 4), and care for the downy, nidifugous, precocial young. Some species perform distraction displays.

**Illinois species:**

[ ] Wilson’s Phalarope (*Phalaropus tricolor*) Uncommon migrant, rare summer resident (NE) / (Breeds?) (endangered) [M49]

**Family Laridae, Gulls, Terns, and Allies (28/128)**

Widely distributed medium- to large-sized (20–80 cm) aquatic birds with stout, laterally compressed bills, long pointed wings, short legs, and palmate feet (hallux absent or very small). Large supraorbital salt glands are present. Eat fish and scavenge. Young are semi-precocial.

**Subfamily Stercorariinae, Skuas and Jaegers (2/8)**

**Distribution.**—Bipolar; high latitudes of both hemispheres.

**Characteristics.**—Body 40–60 cm. Bill strongly hooked and with a horny cere. Tail wedge shaped, with elongate central feathers in jaegers. Feet palmate, hallux small. Plumage largely brown, but color phases occur in most species. Sexes similar. Flight swift and powerful.

**Habitat.**—Winter largely at sea. Breed on tundra and barren islands and coastal zones of Arctic and Antarctic. Often found near seabird nesting colonies.

**Habits.**—Migratory and somewhat gregarious. Predacious on birds, eggs, and small mammals; some kleptoparasitic, robbing gulls and terns of fish; some scavenge blubber and offal.

**Breeding.**—Monogamous. Breed colonially. Nest is built on the ground. Eggs 2–3. Incubation and care of young by both sexes.

**Subfamily Larinae, Gulls (6/50), and Subfamily Sterninae (7/44), Terns**

**Distribution.**—Worldwide except Antarctica.

**Characteristics.**—Small to large birds (20–80 cm). Lack cere (to distinguish from Stercorariinae). Feet palmate, sometimes brightly colored, hallux small or absent. Plumage generally white below, gray above. Most gulls take 2 or more years to attain definitive plumage. Males larger than females. Long lived; record for a wild Herring Gull, 28 years; wild Arctic Tern, 27 years. See table above for a detailed comparison of the subfamilies.

**Habitat.**—Typically coastal marine. Many species also found near inland lakes, large rivers, and marshes.
Habits.—Gregarious and migratory; some terns undertake extremely long-distance migrations. See table for dietary habits.

Breeding.—Monogamous. Most species exhibit elaborate courtship behavior and aerial displays. Nest colonially and show strong fidelity to hatching site. Eggs 1–4. Both parents incubate the eggs and care for the semi-precocial young. Tern chicks sometimes form creches.

Illinois species:

[ ] Ring-billed Gull (Larus delawarensis) Common migrant and winter resident, rare summer resident / Breeds [M50]

[ ] Herring Gull (Larus argentatus) Common migrant and winter resident, rare summer resident / Breeds [M51]

[ ] Common Tern (Sterna hirundo) Common migrant and rare summer resident (NE) / Breeds (endangered) [M52]

[ ] Forster’s Tern (Sterna forsteri) Common migrant rare summer resident (NE) / Breeds (endangered) [M53]

[ ] Least Tern (Sterna antillarum) Occasional migrant and local summer resident (S) / Breeds (endangered) [M54]

[ ] Black Tern (Chlidonias niger) Common migrant; common (N) and rare (C) summer resident / Breeds (endangered) [M55]

Subfamily Rynchopinae, Skimmers (1/3)

Distribution.—Pantropical and north along coast of eastern North America and south to Argentina and Chile.

Characteristics.—Large birds (40–50 cm). The only birds with the lower mandible considerably longer than the upper mandible. The bill is long and knifelike and can be opened widely. Feet small and palmate. Tail short and forked. The neck muscles are particularly powerful and the junction of the skull and spine is reinforced. Eyes are light sensitive: the pupil is a vertical slit. Voice a doglike yelp. Sexes alike.

Habitat.—Sheltered, sandy seacoasts and large rivers.

Habits.—Gregarious. Some are migratory. Feed by flying low over the water with the lower mandible cutting the water’s surface. Feed on small fish, crustaceans and plankton. Most feeding is done at dawn, dusk and at night when plankton are closer to the surface.

Breeding.—Monogamous. Breed colonially on sandy beaches often with terns, gulls or plovers. Eggs 2–5, incubated by the female. Both sexes feed the downy, nidifugous, semi-precocial young. Bill does not elongate until the chick nearly reaches adult size.

Note.—Friction (from contact with the water) wears the surface of the lower mandible away: it grows at twice the rate of the upper mandible.

Family Alcidae, Auks and Allies (12/23)

Distribution.—Holarctic and circumpolar.

Characteristics.—Small to large birds (15–50 cm). Bill variable; in Puffins and some Auklets the bill is ornamented with brightly colored horny plates during breeding season.
Planktivorous species have a gular pouch. Body chunky. Wings and tail short. Legs set far back on the body. Feet palmate, hallux absent. Plumage dense and firm. Many species are dark above and white below. Molt all flight feathers simultaneously resulting in a period of flightlessness. Adaptations for diving include development of the carina and pectoralis muscles and blood with high hemoglobin content. Sexes similar. 

**Habitat.**— Cold marine habitats off rocky coasts.

**Habits.**— Partly migratory and gregarious. Awkward on land. Alcids are wing propelled divers that feed mainly on fish and crustaceans, and can remain submerged for 1–2 minutes, diving to depths of 150 m (Common Murre). Generally pelagic and silent except when breeding.

**Breeding.**— Monogamous. Most nest colonially on sheer cliffs or rocky islands inaccessible to predatory mammals. Mixed colonies of several species are common. Nest on ledges, in crevices, among rocks, under plants, or in burrows they dig themselves. Most species show high nest site fidelity. Clutch usually consists of a single egg. Both sexes incubate the egg and rear the young. Young are downy and semi-precocial, and often flutter off cliff nests prior to growth of flight feathers, possibly to escape predation by gulls. 

**Note:** The nest of the Marbled Murrelet wasn’t discovered until 1974. They build their nests in old growth forests of the Pacific Northwest, and may be the next flagship species in the campaign to preserve old growth

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**ORDER COLUMBIFORMES, PIGEONS, DODOS, AND SANDGROUSE**

Cosmopolitan except polar regions. Plump land birds with small heads and short bills with a downcurved culmen and a fleshy cere. Have short legs with reticulate scales. Feet not webbed, toes short. All have a large crop, and most also have a muscular gizzard. The crop is the source of “pigeon milk” that is fed to the young. Their dense plumage is easily detached. Plumage colors and patterns are variable. Food consists primarily of fruits and seeds. Three families, one presented here (one recently extinct).

**Family Columbidae, Pigeons and Doves (40/313)**

**Distribution.**— Worldwide in temperate and tropical regions, with the greatest diversity in Asia and Australia.

**Characteristics.**— Small to moderately large birds (15–85 cm). Body stout, head small, bill short and slender, often swollen at the tip. Fleshy cere present. Plumage thick, loosely attached to the skin; color highly variable, and partly iridescent in some species.

Filoplumes present in some species. Sexes similar. Typical vocalization is a cooing sound. Strong fliers.

**Habitat.**— Most species found in forests, a few in open country.

**Habits.**— Many species are migratory. Most are gregarious, a few solitary. Diet of seeds, fruit, and nuts. Columbids are the only birds able to drink water by sucking rather than dipping and raising the bill. Many species have excellent homing abilities. Rock doves are used extensively in research on homing mechanisms.

**Breeding.**— Monogamous. Nest is a simple platform of sticks built by both sexes. Eggs 1–3 but usually two. Both sexes incubate, the female at night and the male during the day. Young are fed “pigeon milk,” which is a curdlike material produced by sloughing of the fluid filled epithelial cells from the crop lining. This material contains more fat and protein than cow or human milk. Young later fed regurgitated grain and fruit. Young naked, nidicolous, and altricial.

**Notes.**— Many island species are currently in danger of extinction, (e.g. Mauritius Pink Pigeon, White-crowned Pigeon).

**Extinction of the Passenger Pigeon from North America occurred in the early 20th century.**

**Illinois species:**

- [ ] Rock Dove (*Columba livia*) Abundant resident (introduced) / Breeds [M56]

- [ ] Mourning Dove (*Zenaida macroura*) Abundant migrant and summer resident / Breeds [M57]