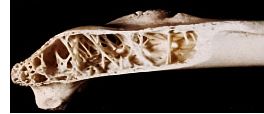


Zoo Birds

Bird Characteristics



- Pneumatized, reduced, and fused bones allow for a rigid, light frame needed for flight
- Their forelimbs are modified as wings; they are bipedal
- Birds are **endothermic** vertebrates
- They have four-chambered hearts
- Their skin is covered with feathers
- They lay hard-shelled eggs

Order Struthioniformes Ostrich



Struthio camelus

- Found in central and southern Africa, along the savannas; omnivorous diet
- 7-9 ft tall flightless bird with two forward facing toes, bare neck with a small head
- Legs are muscular and built for running; they can reach speeds of up to 45 mph for as long as 30 minutes
- Several females lay eggs in a common nest, which can have up to 30 eggs, dominant female lays her eggs in the center of the nest
- Males and females share in the incubation of the eggs, males at night and females during the day
- **Sexually dichromatic**; males have black plumage with white wing tips, females are grey
- They have a nomadic lifestyle and usually live in mixed sex flocks
- Zoo supports the **Sahara Conservation Fund** for protection of the Saharan red-necked ostrich

Order Rheiformes Greater Rhea



Rhea americana

- Found along eastern South America in grassy plains areas
- 3-5 feet tall, covered with grayish plumage; male has a dark collar during breeding season, 3 toed foot for running
- Male is responsible for brooding and care of the young; male mates with several females
- Greater rheas are ½ grown about 3 mos after hatching

Order Casuariformes Emu

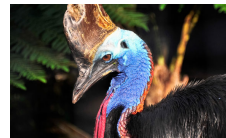


Dromiceius novaehollandiae

- Australia's largest native bird. Found all over the continent of Australia on grasslands, but now extinct on island of Tasmania
- Shaggy brownish-gray feathers, with blackish feathers on the neck and a whitish-blue area around the ears that is featherless
- Lives in loose flocks
- Can be a pest to farmers in some areas where they are more common
- Eats grasses, grains and some insects



Order Casuariformes Southern or Double-Wattled Cassowary



Casuarus casuarus

- Found in the northeastern tip of Australia and in New Guinea in dense rainforests
- 4-5 feet tall, with hair-like, black feathers, a naked blue neck with red down the back and a bright red wattle where the feathers start on the neck
- Large, horny casque on top of the head; debate about whether it is for defense or to push through vegetation
- Typically solitary
- Innermost toe bears a large claw used for defense
- Mainly frugivorous; eat fruits that have fallen to the ground
- Listed as Vulnerable due to habitat loss

Order Sphenisciformes Magellanic Penguin



Spheniscus magellanicus

- Most common penguin species, found on the coast of Chile in South America on bare to forested terrain
- Eat squid, cuttlefish, and sardines; at the Zoo they eat mainly herring
- Backward facing spines on tongue help keep the prey in its mouth and guide it down throat
- Dig burrows during the breeding season, where they gather in large colonies; lay two eggs, but typically only raise one chick successfully
- Both parents continue to brood the chicks in turn on a daily basis, for a period of about 30 days
- SF Zoo has the most successful breeding program of Magellanic penguins on record, with more than 150 chicks fledged since 1985
- SSP species

Order Pelicaniformes Brown Pelican



Pelecanus occidentalis

- Coastal water birds distributed from Canada to South America
- Large gular pouch allow them to catch large fish and sometimes store them for a short period; will also eat crustaceans
- Brown pelicans are the smallest pelican species, but still can have an 8 ft wingspan
- Dive to catch fish, where most other pelicans fish from the surface of the water
- Adaptations for diving; air pockets under its skin on its chest, protects the bird from the force of the dive

Order Pelicaniformes American White Pelican



Pelecanus erythrorhynchos

- Distributed in interior N. America, migrating and to coast to South America in winter
- Large gular pouch allow them to catch large fish and sometimes store them for a short period; will also eat crustaceans
- American white pelicans are Species of Special Concern in California; they are often shot by fisherman for stealing fish or by poachers
- Can have a 10 ft wingspan and are among the heaviest flying seabird
- Often have horny protuberances on the upper bill, used most likely during breeding
- The pelicans at the Zoo are rehab animals that are non-flighted

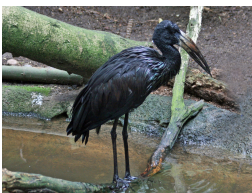
Order Pelicaniformes Pink Backed Pelican



Pelecanus rufescens

- Found in subtropical and tropical Africa, Saudi Arabia and S. India in swamps and shallow lakes
- Among the smallest of the pelican species
- Large bill and gular pouch allow them to catch many fish
- Feed while swimming, up-ending or partly submerging in pursuit of prey.
- Nests in trees in small groups or in large, loose colonies of 20-500 pairs
- Excellent fliers but must run over the water while beating their big wings and pounding the surface of the water with both feet in unison to get enough speed for takeoff.

Order Ciconiiformes African Open-billed Stork



Anastomus lamelligerus

- Found over much of Africa south of the Sahara in marshes, swamps and lakes
- Medium sized bird with black feathers and bill; beak has space in between upper and lower mandibles for eating mollusks and snails
- Live in flocks primarily in wetlands areas, where they use their unique beak to pry open mollusk shells for food
- Sometimes seen foraging by riding on the backs of hippos

Order Ciconiiformes Hadada Ibis



Bostrychia hagedash

- Found throughout sub-saharan Africa in swamps, marshes, rivers and lakes
- Ibis are long legged wading birds with long downward curved bills that they use to find prey by touch
- This ibis is named after its stuttering call; "haa-daa-daa"
- Brownish gray with some metallic greens, a reddish patch on the upper bill, and white cheek feathers
- Found in Ethiopia and east Africa near swamps and marshes or pasturelands where they eat fish, spiders, snails, crustaceans, amphibians and carrion
- Endangered locally in Ghana, CITES III listed, due to habitat destruction

Order Ciconiiformes Waldraff Ibis



Geronticus eremita

- Flocking bird found off coastlines and cliffs of SW Morocco, Syria, and N Africa
- Also known as the Northern Bald Ibis
- Medium sized bird with a black, iridescent plumage, mostly bare, reddish head and beak, and a fluffy cascade of longer black feathers from the back of the head down the neck
- Critically Endangered, with only about 200 remaining in the wild.
- Several problems are associated with their decline, including habitat loss, hunting, pesticide poisoning, climate change, and being considered a local delicacy

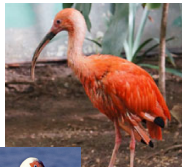
Order Ciconiiformes African Sacred Ibis



Threskiornis aethiopicus

- Found in sub-saharan Africa in marshy wetlands and mud flats
- Probe for food in mud and shallow water mostly insects; sensitive feelers on the inside of their bill help the bird identify food before it even sees it
- Flies with neck and legs outstretched, often in long, loose lines or "V" formations
- The Sacred Ibis was once common in Egypt until 1850. It is a symbol of the ancient Egyptians. Many ibis have been found mummified in tombs of pharaohs.

Order Ciconiiformes Scarlet Ibis & American White Ibis



Eudocimus ruber



Eudocimus albus

- Live in large flocks from hundreds to a few thousand near water in tropical North and South America
- Scarlet Ibis obtains coloring from their diet of carotene-rich crustaceans
- Probe for food in mud and shallow water mostly insects; sensitive feelers on the inside of their bill help the bird identify food before it even sees it
- Flies with neck and legs outstretched, often in long, loose lines or "V" formations

Order Ciconiiformes Roseate Spoonbill



Platalea ajaja

- Found in Gulf Coast of U.S., Mexico, Central and South America in marshes, swamps, ponds, and rivers, feeding in both fresh and saltwater wetlands
- Coloring is obtained from a carotene pigment in their crustacean diet
- Hunt by touch; sensitive touch receptors along the bill's length detect vibrations and signal the bill to close quickly
- Nest in colonies alongside ibises, storks, cormorants, herons, and egrets.
- Fly in flocks

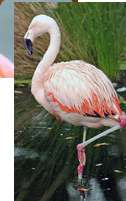
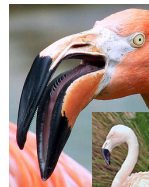
Order Ciconiiformes Hammerkop



Scopus umbretta

- Found around freshwater in sub-Saharan Africa and Madagascar along marshy shorelines
- Smallest of Order, but its membership in the order has also been debated
- Eat fish, invertebrates, frogs, tadpoles, insects, and shrimp. Usually take their catch to land to eat
- Build very large, roofed nests big enough to hold a man
- Call feared as omen of death

Order Phoenicopteriformes Chilean Flamingo



Phoenicopterus chilensis

- Found in brackish and saltwater lagoons In Central Peru south to Tierra Del Fuego
- Filter-feeders: bill swept back and forth while tongue acts as piston filtering tiny organisms and algae from water
- Despite living in colonies, flamingos are monogamous
- Like all flamingos, feed their chicks a "crop milk", secreted from the crop of both parents
- Make a mud nest shaped like a tower and lay one egg
- Can live 50 years

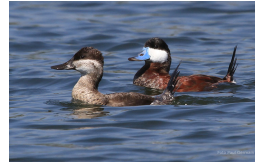
Order Anseriformes White-faced Whistling Duck



Dendrocygna viduata

- Found in sub-Saharan Africa and most of South America near lakes where it feeds on seeds and plants and some aquatic invertebrates
- Named for its distinctive white face; has a black nape, ruddy neck, brownish wings and a barred chest
- Three note whistling vocalization

Order Anseriformes Ruddy Duck



Oxyura jamaicensis

- Found throughout North America in wetlands
- Diving, stiff-tailed duck. Tail used as a rudder when diving underwater
- Diet of seeds and roots of aquatic plants, aquatic insects and crustaceans
- Males court females by beating their bill against their neck hard enough to create a swirl of bubbles in the water

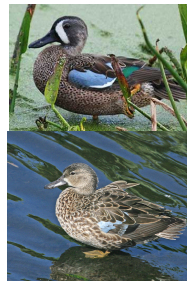
Order Anseriformes Marbled Teal



Marmaronetta angustirostris

- Found in Southern Spain, Northern Africa through the Middle East to extreme Western China
- Found in freshwater or brackish shallow ponds and marshes with abundant vegetation in arid country
- Feed mainly by dabbling and filtering mud to find food during the early morning and afternoon
- Dive to hide from a predator

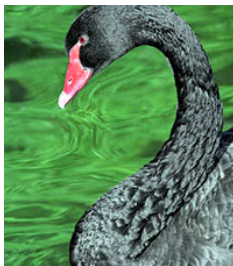
Order Anseriformes Blue-winged Teal



Anas discors

- Found across most of North America in fresh, brackish or saline water
- Small dabbling duck. Feeds on the surface, may head dip in shallow water but will rarely up-end to reach submerged vegetation
- Long distance migrants, often the first ducks south in fall and the last north in spring
- Grouped with shovelers as does not have all characteristics of a teal.

Order Anseriformes Black Swan



Cygnus atratus

- Found throughout Australia, introduced to New Zealand and Sweden; in freshwater, brackish or salt lakes and ponds
- Large, all black swan with a red bill and eyes, very tip of primaries are white, black legs and feet
- Eat water plants
- One of few birds that mate for life; parents share in incubating eggs

Order Anseriformes Black-necked Swans



Cygnus melanocorypha

- Found in marshes, lagoons and lakes of southern South America
- Large swan with a black neck and white wings and body, white stripe through the eye, dark bill with red tubercle like knobs
- Both sexes carry the young, called cygnets, on their backs

Order Anseriformes Coscoroba Swan



Coscoroba coscoroba

- Range is in South America from Tierra del Fuego to central Chile and Northern Argentina, Falkland Islands; winters in South East Brazil
- The Coscoroba Swan is the smallest species of swan
- Prefers shallow fresh water with vegetative cover
- Swans feed by immersing their head and neck and sometimes "tipping up"
- Found on Penguin Island

Order Falconiformes Bald Eagle



Haliaeetus leucocephalus

- Found throughout North America, Alaska, Canada, western coast of United States along open water with tall trees as nesting sites.
- Large, powerful bird of that eats fish, small birds, and carrion
- "Bald" name is believed to be shortened from "pie-bald", a designation for black and white coloration; takes 2-3 years to turn white from dark juvenile plumage
- Strictly North American birds, they have been protected since 1940, but became severely endangered when the widespread use of DDT caused the eggshells to become thin and break

Order Falconiformes Golden Eagle



Aquila chrysaetos

- With a wingspan of over 7 ft, it is one of the largest raptors in the Northern Hemisphere
- Found in open desert to grassland terrains
- A dark brown bird with lighter colored neck and head, giving it its name
- A mammal specialist, but will also catch ground nesting birds and even tortoises
- Feet have a distinctive large rear talon which locks into prey with a spring-like tendon

Order Falconiformes Turkey Vulture



Cathartes aura

- Lives in a wide range of habitats in North and South America such as grasslands, forest and deserts
- One of only raptors to soar with wings bent in a "v"
- Strong sense of smell help it locate carcasses
- Will defecate on its legs to kill bacteria that it may pick up from carrion and thermoregulate
- Can live 12-17 years in the wild, more than 20 in captivity

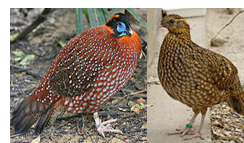
Order Falconiformes OFF EXHIBIT Andean Condor



Vultur gryphus

- Lives in Andes mountains and adjacent pacific coast of western South America in open grasslands and alpine areas up to 16,000'
- Longest wingspan (over 10 feet) of any raptor and largest wing surface area of any bird
- Adapted for soaring on thermals in search of carrion; rely on sense of sight to help locate carcasses
- Sexual dimorphism
- Will defecate on its legs to kill bacteria that it may pick up from carrion
- One of longest living birds – up to 70 years in wild

Order Galliformes Temminck's Tragopan



Tragopan temminckii

- Found in northern South Asia in mountainous forests between 3,000 – 12,000'
- Medium-sized, pheasant with short tails; they are mainly herbivorous
- Prefer to nest in trees a few feet off the ground; spends most of the daytime on the ground scratching for food
- Migrate vertically up and down the mountain slopes according to the seasons
- Sexually dichromatic
- Precocial young

Order Galliformes Satyr's Tragopan



Tragopan satyra

- Found in central and eastern Himalayas in mountainous forests from 8,000 – 14,000 feet
- **Sexually dichromatic**
- More dependent on flight than other tragopans; also like to perch
- Males grow blue horns and a gular wattle during breeding season
- Eats seeds, fresh leaves, moss, bamboo shoots, berries and insects

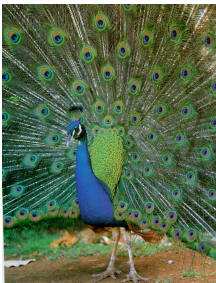
Order Galliformes Himalayan Monal



Lophophorus impejanus

- Found in the Himalayas in mountainous forest regions from 7900 – 14800 feet
- National bird of Nepal
- Relatively large-sized pheasant
- **Sexually dichromatic**
- Precocial young
- Strong legs and a long, curved beak that together enable it to dig into the hard soil of the mountains to uncover food

Order Galliformes Common Peafowl



Pavo cristatus

- Common gamebird of Southern Asia, known for the spectacular displays of the male; found in open hill forests near water
- **Sexually dichromatic**; drab peahen; peacocks have iridescent blue feathers with a green train of feathers with an eye pattern that they fan out in display
- Famous "Kee-ow" call is used in many films in inaccurate locations
- Omnivorous diet of: seeds, fruit, roots, worms, insects and snails
- Have free reign to roam the Zoo
- Symbol of Krishna these birds have long been protected by the people of India

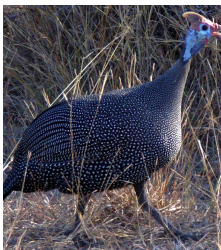
Order Galliformes Wild Turkey



Meleagris gallopavo

- Found distributed throughout U.S. in forests and woodlands.
- Large bird with dark iridescent plumage, bare head and neck, with blue and red fleshy wattles; males have fan-like tail feathers to display in courtship
- Eats seeds, roots, insects, and flowers
- Domestic breeds originated from the wild form
- **Sexually dimorphic**

Order Galliformes Helmeted Guineafowl



Numida melegris

- Found over most of Africa south of the Sahara Desert in open savannas
- Black and white spotted plumage with horny helmet on top of bare, bluish head
- Makes a staccato call that sounds like hammering
- Tend to run instead of flying to escape predators; short wings
- Omnivorous diet of: seeds, berries, tender shoots and invertebrates including frogs and snails

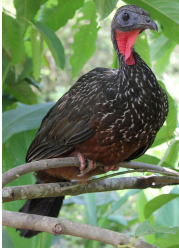
Order Galliformes Blue-throated Piping-guan



Pipile cumanensis

- Found in northern and western South America along the edge of tropical forests
- Blue-throated piping-guan is separated from other piping-guan species by blue throat and white facial skin with white crest
- Almost completely arboreal; live in canopy
- Mainly frugivores; forage solitarily or small groups up to 12; prefer palm fruits but some figs and snails
- Visit salt and clay licks as a possible supplement to their diet
- Precocial young although they are fed by their parents
- Listed as Vulnerable

Order Galliformes Spix's Guan



Penelope jacquacu

- Found in Bolivia, Brazil, Columbia, Ecuador, Guyana, Peru and Venezuela in humid rain and cloud forests
- Almost completely arboreal; live in upper canopy where they gather primarily fruits also some nuts and insects
- Forage solitarily in pairs
- Small flocks often seen perched in trees at night
- Precocial young although they are fed by their parents
- Not globally threatened

Order Galliformes Great Curassow



Crax rubra

- Found from southern Mexico to western Ecuador in tropical and sub-tropical forests
- Sexual dimorphic; male is black with yellow knob on upper mandible; female is rust-colored and smaller
- Well develop hind toes that allow them to walk easily along tree limbs.
- Large muscular gizzard with two ceca for hindgut fermentation
- Voice is amplified by having long trachea and air chambers in the neck. Amplification allows them to keep in contact in denser forest.
- Not globally threatened

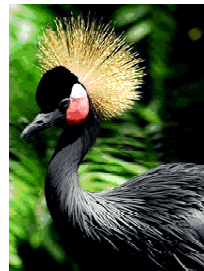
Order Gruiformes East African Crowned Crane



Balearica regulorum

- Range from Eastern Congo, Uganda, and Kenya to central Tanzania in open savannas
- Can perch in trees, unlike other cranes
- Stamps its feet to flush out insect or reptilian prey; also eat seeds, plants, frogs, worms, fish and aquatic eggs; follows herds of antelope or buffalo to eat the insects they stir up and attract
- Cranes perform an elaborate courtship dance that consist of head bobbing, deep bows, leaps, grasping with its bill and tossing of objects, running with wings flapping and short low ritual flights
- East African or Grey Crowned Crane is an Endangered species
- National bird of Uganda

Order Gruiformes West African Crowned Crane



Balearica pavonina

- Found south of the Sahara desert and in the western parts of Africa. It is spread especially in Sudan and Ethiopia in open savannas
- Can perch in trees, unlike other cranes
- Mainly insectivorous
- Stamps its feet to flush out insect or reptilian prey; also eat seeds, plants, frogs, worms, fish and aquatic eggs; follows herds of antelope or buffalo to eat the insects they stir up and attract
- Cranes perform an elaborate courtship dance that consist of head bobbing, deep bows, leaps, grasping with its bill and tossing of objects, running with wings flapping and short low ritual flights
- National bird of Nigeria

Order Psittaciformes Black Parrot



Coracopsis nigra

- Found in swamps and evergreen forests of Madagascar and Seychelles islands
- Mainly frugivorous: eats fruits, berries, flowers, and seeds
- Mostly considered a pest by native people, habitat loss has made them scarce, although they are not listed as threatened at this time
- Considered one of the more primitive of the parrots
- Also known as Lesser Vassa Parrot

Order Psittaciformes Red-sided Eclectus Parrot



Eclectus roratus

- Found on New Guinea and surrounding islands in semi-tropical and tropical rainforests.
- Extreme sexual dimorphism – male on left, female on right
- The contrast between plumage of the male and the female is so marked that the two birds were, until the early 20th century, considered different species.
- Polygynandrous - females may mate with multiple male and males may mate with multiple females.
- The eclectus has an unusually long digestive tract and thus requires a high fiber diet of mainly fruit
- Mainly frugivorous

Order Psittaciformes Green-winged Macaw



Ara chloroptera

- Fairly widespread in forests of northern South America in interior tropical forests and hill country
- Powerful beak to crush or open even the hardest nuts and seeds; also diet consists of fruits
- Beak can generate a pressure of 2000 psi and can snap a broomstick in half
- Most common of macaws, but faces pressure due to pet trade and deforestation
- Second largest type of parrot
- Are able to eat some poisonous fruits due to their habit of eating river clay, which appears to neutralize the toxins

Order Psittaciformes Hyacinth Macaw



Anodorhynchus hyacinthinus

- Largest flying parrot
- Found mostly in Brazil, some populations in eastern Bolivia and northeastern Paraguay
- Prefer lightly forested areas such as palm swamps and flooded grasslands.
- Diet consists mostly of palm nuts; capable of eating brazil nuts & coconuts
- Tongue has bone inside as an adaptation for tapping into fruits

Order Psittaciformes Chestnut-fronted Macaw



Ara severus

- Also known as Severe Macaw; they are largest of the mini-macaws
- Found in Tropical E. Panama to the Guianas, N. Bolivia and Amazonian Brazil in open forests, woodlands
- Usually roosting quietly in the canopy in pairs or small parties
- Cavity nesters

Order Psittaciformes Blue-headed Macaw



Primolius couloni

- Found in eastern Peru, extreme western Brazil, and north-western Bolivia in humid lowland evergreen forests along rivers
- Not found in large flocks; seen in groups 2 - 4 outside of breeding
- Cavity nesters
- Known to visit clay licks to possibly neutralize toxins in diet of seeds

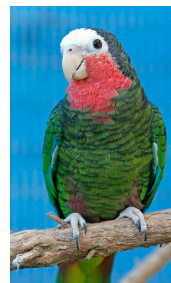
Order Psittaciformes Vinaceous-breasted Amazon



Amazona vinacea

- Medium-sized, stocky green parrots of Argentina, Brazil, and Paraguay
- Found in subtropical or tropical moist forests and plantations
- Pairs or small flocks with larger groups of around 30 for breeding
- Nests in large tree cavities and may breed in loose colonies and sometimes on cliffs
- Classified as Endangered and listed on Appendix I of CITES

Order Psittaciformes Cuban Amazon



Amazona leucocephala

- Medium-sized parrot found in woodlands and dry forests of Cuba, the Bahamas and Cayman Islands in the Caribbean
- Gather in flocks, and disperse into pairs during the breeding season
- Cavity nesters; The Abaco Island (Bahamas) population nests underground in limestone crevices, where they are protected from wildfires
- Male assumes responsibility for feeding the brooding female

Order Psittaciformes Red-lored Amazon



Amazona autumnalis

- Found in tropical rainforest and lowland forests and woodlands of Caribbean coast of Mexico through Central America into northwest South America, with a population in Brazil
- Gather in flocks but considered sedentary since live in same place all year long
- Make calls early dawn and at dusk
- Cavity nesters
- Male assumes responsibility for feeding the brooding female

Order Psittaciformes Salvin's Amazon



Amazona autumnalis salvini

- Found in Northern Nicaragua south to Columbia and Venezuela in tropical rainforest canopy
- Sub species of the red-lored Amazon
- Make calls early dawn and at dusk
- Cavity nesters
- Male assumes responsibility for feeding the brooding female
- Mate for life; they engage in mutual preening and partner feeding
- Except in breeding season they stay in flocks

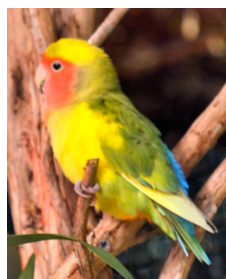
Order Psittaciformes Palm Cockatoo



Probosciger aterrimus

- Found in New Guinea and Cape York Peninsula, Queensland, Australia in tropical rainforest and moist savanna woodlands up to 4,000 feet
- Largest of the cockatoos
- Bare, scarlet cheek patches, becomes a brighter shade when the bird gets excited
- Raises its cheek feathers to cover the red patch completely when shy
- Advertise its territory by holding a stick in its foot and drum against a hollow tree, creating a loud noise that can be heard up to 100 m away
- As fruit eaters, they are important seed dispersers in their range

Order Psittaciformes Peach-faced Lovebirds



Agapornis roseicollis

- Native to arid southwestern Africa in arid habitats on the edges of deserts, sparse woodlands and mountainous regions; dependent on the presence of water
- Usually found in small groups
- Carry nesting materials in feathers on rump
- Get the "lovebird" moniker from how they rest, usually in pairs, turning their faces toward each other
- Also known as rosy-faced lovebird, it is the largest of the lovebirds

Order Cuculiformes Lady Ross's Turaco



Musophaga rossa

- Native to equatorial Africa; found in dense lowland and mountain forests
- Second largest of the turaco family
- Turacos are clumsy flyers; they use their semi-zygodactylous toes for clambering through the canopies; the fourth (outer) toe can be switched back and forth.
- Turacos are only birds to possess true red and green color; color comes from the presence of 2 copper pigments, which are unique to the Musophagidae Family
- Turacos aid in seed dispersal by messily eating fruit

Order Cuculiformes White-Cheeked Turaco



Tauraco leucotis

- Found in Ethiopia and Sudan in Africa in dense humid forest and woodlands
- Under-wing coverts are red/crimson
- Live in flocks of about 12 members in the upper canopy of the forests
- Turacos are clumsy flyers; they use their semi-zygodactylous toes for clambering through the canopies; the fourth (outer) toe can be switched back and forth.
- Turacos are only birds to possess true red and green color
- Semi-zygodactylous; fourth (outer) toe can be switched back and forth.
- Turacos aid in seed dispersal by messily eating fruit; primarily frugivores

Order Cuculiformes Western Grey Plainain Eater



Crinifer piscator

- Found in west and equatorial Africa in open woodland and savannas
- Less agile in running along branches than other Turacos, as a result tends to fly more
- A shaggy dark brown nape crest with whitish edges is unique among Turacos
- Gregarious species
- Omnivorous diet of fruit and insects; frequently comes to ground to drink
- **Semi-zygodactylous**; fourth (outer) toe can be switched back and forth

Order Cuculiformes Guira Cuckoo



Guira guira

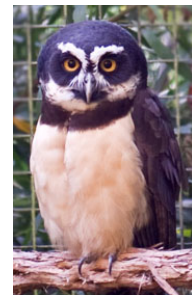
- Found in southern Brazil, Uruguay, Paraguay, Bolivia and northeastern Argentina in open and semi-open habitats
- Eats large arthropods, frogs, eggs, small birds and mammals
- Not good fliers; fly like "kites in the wind"
- Social, non-parasitic cuckoo; lays eggs in communal nest
- Females promote success of own chicks by tossing eggs and/or chicks of others out of nest
- Sparse feathers on backs; often seen sunning themselves
- Emits strong pungent odor from large anal glands; significance is unknown
- Common in its range; currently not threatened

Order Strigiformes Unusual Owl Adaptations



- Asymmetrical ear openings to pinpoint location of sounds
- most owls nocturnal; eyes are tubes and fixed in the skull; owls compensate by rotating neck 270 degrees
- Most owls have feather-covered legs and talons
- Some have pronounced facial disc, which acts like a radar dish, guiding sounds into the ear openings
- Feathers have comb-like or fringe-like leading edge on the primary wing feathers to muffle sound of air rushing over wing surface
- Owls do not have crop; they regurgitate pellet of fur and bones

Order Strigiformes Spectacled Owl



Pulsatrix perspicillata

- Found in Mexico, Central America and Northern two-thirds of South America in dense tropical and sub-tropical forest near water
- Hunt from perch on a high branch, and then drops swiftly on any prey it has spotted
- Spectacled owls appear to be especially vocal on moonlit nights
- Asymmetrical ear holes for triangulating sound
- Cavity nesters
- Largest of New World tropical owl species

Order Strigiformes Eurasian Eagle Owl

- Found in West North Africa, Middle East, Southern Europe into Asia in mountains with cliffs and rocky outcrops.
- Eagle Owls are largest owls in the world and recognized by their large orange eyes and prominent ear tufts
- Feathered feet that also helps muffle sound as they fly
- Usually solitary but pair up during courtship and are thought to mate for life
- Deep booming call
- Owls do not have a crop; swallow prey whole resulting in coughing up owl pellet



Bubo bubo

Order Strigiformes Northern Saw-whet Owl

- Found in western part of the United States and in some of Mexico and the southern portion of Canada in coniferous and deciduous forests
- Crepuscular and opportunistic hunters that use the "sit and wait" tactic to swoop down onto prey on the ground from low hunting perches
- Nest in tree cavities and old nests made by other small raptors
- When threatened will elongate its body in order to appear like a tree branch or bump, often bringing one wing around to the front of its body
- Can fly reasonably well as soon as they leave the nest



Aegolius acadicus

Order Strigiformes Burrowing Owl

- Found throughout open landscapes of North and South America
- Live underground in burrows they've dug themselves or taken over from a prairie dog, ground squirrel, or tortoise.
- Often active during the day, although they tend to avoid the midday heat, and they do most of their hunting from dusk until dawn, when they can use their night vision and hearing to their advantage.
- Have a higher tolerance for carbon dioxide than other birds — an adaptation found in other burrowing animals.



Athene cunicularia

Order Strigiformes Great Horned Owl

- Found over most of North and South America in a wide variety of habitats
- Largest of the American owls, with large, ear-like tufts rising above the eyes; "typical" owl
- One of the only owls to give the "hoo-hoo" vocalization that most people think all owls make
- Eats rodents, insects, reptiles, amphibians and even other owl species



Bubo virginianus

Order Strigiformes Barn Owl

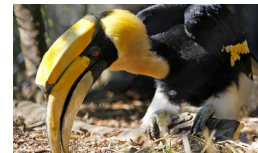
- Found widely distributed throughout the world but not in desert or polar regions and most of Asia in open country and grasslands
- Nocturnal predator of prey
- Barn owl's long wingspan coupled with soft, fringed feathers that don't "swoosh" as they move, is an adaptation for slow silent flight while hunting



Tyto alba

Order Bucerotiformes Great Hornbill

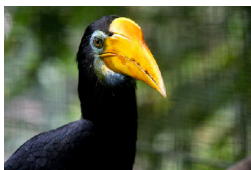
- Found in SE and Southern Asia in canopies of tall evergreen forests
- Distinct yellow, curving bill and large casque, with black and white feathers
- Like other hornbills, nest in hollows of trees and will seal the female and eggs inside with mud, leaving a slit for the male to feed her; female breaks out in three months, but the whole is resealed by the chick for another month of feeding inside the tree
- Eats fruits, particularly figs, but also eats animal prey such as reptiles, amphibians, small mammals, and birds
- Hornbill feathers are collected and return to the local people



Buceros bicornis

Order Bucerotiformes Wrinkled Hornbill

OFF EXHIBIT



Aceros corrugatus

- Found in S. Thailand, peninsular Malaysia, Sumatra and Borneo in broadleaved evergreen forest
- First two vertebrae in their necks are fused to support the weight of their casque; large bill is fused to the skull
- Casque acts as a vibrating chamber to make the hornbill's voice louder
- Wrinkled hornbills are monogamous and remain in a pair for life
- Cavity nesters; females sealed in nest with mud and droppings; mother and chicks are fed exclusively by the male

Order Coraciiformes Laughing Kookaburra



Dacelo novaeguineae

- Largest of the kingfishers, this eastern Australian and New Zealand native in temperate forest
- Known for its staccato call, which resembles laughing
- While its diet can include fish, it more commonly eats lizards and snakes, which it smashes on the ground, against a rock or branch; also eats insects, small birds, and frogs
- Monogamous bird that has helpers from previous clutches; cavity nesters

Order Coraciiformes Blue-Bellied Roller

- Found in western and central Africa in wooded areas often along the edge of open or recently burned areas
- Named for their tumbling courtship fights
- Carnivorous, eating mainly large insects such as beetles, grasshoppers, termites and occasionally snakes, other reptiles or palm-oil fruit
- Robust, hook-tipped beak display their predatory nature
- Short legs with small feet function largely for perching not hopping along a branch



Coracias cyanogaster

Order Piciformes Curl-crested Aracari

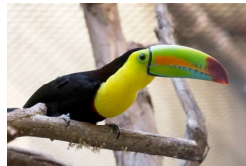
- Found in Western Brazil and into SE Peru and NE Bolivia in tropical rainforests
- Over-sized and colorful bill, which allows them to pluck fruit from vegetation as well as drink water from the crevices of trees
- Primarily frugivorous
- Relatively small wings, suitable only for short distance flights
- Last three vertebrae fused, tail joined to spine with ball and socket joint; toucans flip tails up; compact posture for roosting together in small hollows
- Gregarious and fly in small flocks (3-12) or pairs



Pteroglossus beauharnaesii

Order Piciformes Keel-billed Toucan

- Found in Southern Mexico to Venezuela and Columbia in open areas of the country with large trees; forage from canopy to middle levels and rarely come to the ground.
- One of the largest and most vocal of all toucan species
- Colorful giant bill is the hallmark of toucans
- National bird of Belize
- Frugivorous; seed disperser
- Cavity nesters; conserve space by folding its tail up over its back and tucking its beak beneath its wing when it roosts



Ramphastos sulfuratus

Order Passeriformes Superb Starling

- N Ethiopia, Kenya, Somalia, Uganda & Tanzania in open woodland and scrubland
- The Superb Starling has a distinctive whistling call
- Mainly insectivorous; forage by probing into the soil and then forcing the beak open, creating an open space where they can search for food
- Male and females share responsibility for nest building, incubation, and feeding young



Lamprotornis superbus

Order Passeriformes Long-tailed Glossy Starling

- Found in open woodlands of Africa south of the Sahara
- Gregarious species whose call is harsh and grating
- Omnivorous; eats fruits and insects
- Long tails for balance and their feet are very good at gripping
- Nest in hole; normal clutch is 2 to 4 eggs



Lamprotornis caudatus

Order Passeriformes Bali Mynah

- Endemic to the island of Bali in Indonesia; only endemic vertebrate species
- Found in dry open lowland forests
- National bird of Bali
- Large bird in starling family
- Monogamous species that nests in tree cavities
- Critically endangered; part of a SSP
- Their striking appearance and interesting song have made them popular as pets



Leucopsar rothschildi

OFF EXHIBIT

Order Passeriformes Crested Oropendula

- Found in Costa Rica to northeastern Argentina; including much of the Amazon basin, east of the Andes. They are primarily found in tropical lowland forest edges and clearings.
- Musky smell due to the oil from the preen gland
- Gregarious and live in large flocks of up to 100 birds; breeding season, the flock divides into smaller colonies
- Dominant male, which mates with most of the females following an elaborate bowing display that swings nest next back and forth
- Nests are teardrop shaped and suspended from branch high in an isolated tree



Psarocolius decumanus

Order Passeriformes Green Jay

- Found in a wide range of habitats across Central and northern South America
- Crow family with strong bill and sturdy legs
- Green jays have been observed using sticks as tools to extract insects from tree bark
- Rarely consume food immediately but will carry it in their bill to a perch where they then hold it in their feet and peck it apart before swallowing in smaller bits
- Omnivorous diet of fruit, insects, seeds, spiders, eggs and small rodents and lizards



Cyanocorax yncas