



Tropical Bird Communities

Motmots (*Momotidae*)

- Sh:** large bodied, long-tail with rackets
- P:** erect, often with twitching tail (“*pajaro reloj*”)
- A:** perch for long periods, sally for bugs on ground or branches
- S:** wooden “Hoo-Doo” (most spp), like striking soft wood blocks
- Ecology:** predators on med/lg. insects, sit-and-wait predation



Cracids (*Cracidae*)

- Sh:** turkey like: plump body & long tail; skinny neck & small head
- P:** body horizontal, neck usually upright
- A:** walk on forest floor (Curassows) or perch in trees (Guans, Chachalacas)
- S:** various piping, honking or nervous whistling sounds
- Ecology:** eat large fruits, contribute to higher tropical biomass



Salvin's Curassow



Tinamous (*Tinamidae*)

- Sh:** plump little “chickens of the forest”; longish legs, long neck, small head
- P:** walk like little quails
- A:** often explode from undergrowth, terrifyingly loud wingbeats
- S:** haunting, ghostly, querulous
- Ecology:** high nest predation rates in tropics; also contribute to biomass



Parrots (*Psittacidae*) and Monogamy

- Sh:** large head, robust body; heavy, seed-cracking bill; zygodactyl feet
- P:** erect
- A:** perch for a while, social, use feet to manipulate fruits
- S:** harsh squawks, from powerful (macaw) to high & twittery (parakeet)
- Ecology:** seed predators, salt licks, lifelong pair-bonding (monogamy)



Avian Mating Systems

- Monogamy**
 - ~95% of spp. are at least ‘serially monogamous’
 - paternity tests reveal extra-pair copulations, aka cheating
 - feeding young requires two parents
 - food acquisition is difficult
- Polygamy**
 - = “unequal sex ratios in reproduction”
 - **polygyny:** one male, many females
 - **polyandry:** one female, many males (rare!)
 - develops when food is abundant, reliable
 - thus one parent can raise chicks
 - nectarivores (hummingbirds), frugivores (manakins)

Manakins (*Pipridae*) and Polygamy

- Sh:** small-bodied; males brightly, elaborately colored; females drab
- P:** perch horizontally
- A:** males display on lek
- S:** variable whistles; wing-snapping during displays
- Ecology:** rely on sm. fruits (*Melastomataceae*, *Rubiaceae*); polygyny



specifically, polygyny

Polygyny in Manakins

Female Roles

- abundant food permits raising chicks
- build nest, lay eggs, raise young ... *drab* coloration
- choose males: female choice = *sexual selection*

Male Roles

- contribute genes (copulate)
 - 1 Long-tailed Manakin made *all* 200 copulations in 1 season
- display to attract females
 - complex songs, behaviors; bright colors
 - longest delay in plumage maturation (up to 4 years)

Lekking

- "lek" = display court
- males court females ... spend up to 95% of day
 - again, abundant food

Red-capped Manakin



Club-winged Manakin



Long-tailed Manakin (*Chiroxiphia linearis*)



Polyandry in Jacanas

Jacanas

- live in swamp vegetation, eat (abundant) invertebrates

Polyandry

- female controls large territory
 - inside: territories of multiple males (hers)
- she helps males defend, vs. males, or female
- infanticide (common in polygyny)



Jacanas and Polyandry



Oropendolas & Caciques (Icteridae) and Colonial Breeding

- Sh:** large-bodied, longish tail, heavy pointed bill
black & yellow/red (Cacique) ... brown-green w/ gold tail (Oropendola)
- P:** perch at 45° angle; body sleek, elongated
- A:** social; hanging & woven nests; goofy display of “falling” off perch
- S:** mechanical, “crumpling paper”, liquid; and the “crazy bird” (YR Cacique)



Colonial Nesting

Benefits

- predator detection
- defense vs. nest parasites
 - Piratic Flycatcher

False Nests

- predators are detected
- parasites lay eggs

Wasp Nests

- nests commonly near wasps
- commensalism



Mixed Species Flocks - Canopy

“Normal” = territoriality

- for feeding, reproduction
- dependable resources + defensible territory

Canopy Frugivore Flocks

- up to 30 species
- *nuclear species*
 - Blue-winged Mountain-Tanager

Resource Base

- patchy, super abundant
- resource not defensible
- varying: ripeness, size, access
 - niche diversification
 - reduced competition

Mixed Species Flocks - Canopy

Advantages

- predator detection & defense
- predator confusion / satiation
- communal “map” of fruit sources
 - hippocampal brain region -- spatial memory
 - Clark’s Nutcracker
 - Chickadees

Bird Seed Dispersal

- defecate pre-flight
- also travel far
- thus: short and long-distance dispersal

Ant-following Birds (*several families*)

Sh: medium-bodied; long legs

P: perch on vertical saplings

A: actively hunt insects w/ army ant swarms

S: variable songs; mostly complex trills & crescendo-whistles



Bird Song

Species Identification

- “if you have to see the bird, you’re already lost”
- we will learn common calls in each site
- pay attention to tone and structure

Why Sing?

- territory establishment & defense
- attract mates, and pair-bond
- song vs. alarm call vs. contact note

Types of sounds

- **song (syrinx):** musical, whistle, or click/rustle
- **bill clatter:** toucans
- **wing snap:** manakins
- **wing flap:** pigeons
- **drumming:** woodpeckers



Army Ants (*Eciton burchellii*)



