

Misspellings are fine as long as it's clearly supposed to be the correct name

(9 pts) Station A

1. American White Pelican (1 pt), *Pelecanus erythrorhynchos* (1 pt)
2. Nonbreeding (1 pt), breeding adults have a yellow plate on their upper bills (1 pt)
3. Mainly fish (1 pt), also crayfish/salamanders. It sweeps through the upper layer of water with its bill pouch while swimming to catch prey (1 pt)
4. Parents may not have the resources to feed all their chicks, so they allow the stronger ones to murder the weak (2 pts)
5. A, great horned owls (1 pt)

<https://www.birdwatchingdaily.com/news/science/eldon-greij-explains-siblicide/>

(10 pts) Station B

1. Bobolink (1 pt), *Dolichonyx oryzivorus* (1 pt)
2. Male (1 pt)
3. Non-breeding males have yellow-tipped feathers but breeding males have a stark black and white pattern body. (1 pt)
4. A (1 pt)
5. Outside of migration, Bobolinks eat seeds and insect larvae, adult insects, spiders, and other arachnids. (1 pt) During migration, Bobolinks eat wild and domesticated rice and other seeds. (1 pt) Their beak is blunted to assist in breaking up seeds for consumption. (1 pt)
6. Bobolinks reside in grasslands and open fields (1 pt) and are negatively impacted by human mowing. (1 pt)

(12 pts) Station C

1. Downy Woodpecker (1 pt), *Dryobates pubescens* (1 pt)
2. B is the pacific variety. (1 pt) The Pacific variety has a brownish underbelly compared to the eastern variety. (1 pt)
3. Its tongue is long and barbed to aid in extracting insects from holes in trees. (2 pts)
4. Zygodactyl toe arrangement. (2 pts) It helps with climbing trees. (1 pt)
5. Mixed flocks let the woodpeckers spend less time watching out for predators and better luck finding insects. (2 pts)
6. Least Concern (1 pt)

(11 pts) Station D

1. Loggerhead Shrike (1 pt), *Lanius ludovicianus* (1 pt)
2. Butcher bird (1 pt)
3. Any 3 of the following: Insects, amphibians, reptiles, smaller birds, small mammals, road kill/carrion such as (lizards, snakes, frogs, turtles, sparrows, goldfinches, ground squirrels, voles, mice, shrews, grasshoppers, and beetles), for 1 pt each

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4. B, cup shaped (1 pt)
5. A (1 pt), the tomium is used to cut and paralyze prey by tearing into its spinal cord. (1 pt, 0.5 if only mentioning cutting meat/prey)
6. True (1 pt)

(9 pts) Station E

1. Ring-necked Pheasant (1 pt), *Phasianus colchicus* (1 pt)
2. Introduced from China/Asia (1 pt), for hunting/as game birds (2 pts)
3. Precocial (1 pt), benefits include the young being able to escape predators more easily, and the parents not having to spend as much of their energy on feeding the young after they are born (2 pts for listing either benefit)
4. South Dakota (1 pt)

Image: <https://www.flickr.com/photos/74347473@N02/49110175623>

https://www.allaboutbirds.org/guide/Ring-necked_Pheasant/lifehistory

https://web.stanford.edu/group/stanfordbirds/text/essays/Precocial_and_Altricial.html

(9 pts) Station F

1. Common Ground-Dove (1 pt), *Columbina passerina* (1 pt)
2. C, both sexes share duties (1 pt)
3. Crop milk or pigeon milk (2 pts)
4. The sound is produced by air going past specially shaped flight feathers (1.5 pts). The purpose is likely to warn other birds of danger (1.5 pts). (0.5 pts for second half if just "communication")
5. They are able to suck the water up without lifting their beaks then swallowing as other birds do (2 pts)

(10 pts) Station G

1. Herring Gull (2 pts), *Larus argentatus* (1 pt) (also accept *L. smithsonianus*)
2. Plumage: juveniles are much browner/have more streaking; adults are white, have gray back/black wing tips and tail, adults have red band on bill instead of black (1 pt for something about plumage, 1 pt for something about bill)
3. Wide variety of water-related habitats, including ocean coasts, bays, beaches, lakes, piers, rivers, mudflats, islands, etc. (2 pts for something along those lines)
4. True (1 pt)
5. Any of: lesser black-backed gull, great black-backed gull, glaucous gull, glaucous-winged gull, kelp gull (1 pt)
6. The salt they take in is absorbed and moves through their bloodstream into a pair of salt glands above their eyes. The densely salty fluid that results is excreted from the nostrils and runs down grooves in the bill. (2 pts for at least mentioning the salt glands, 1 more for more detailed explanation)

Image: https://www.allaboutbirds.org/guide/Herring_Gull/photo-gallery/71319291
<https://www.audubon.org/news/what-happens-when-seabirds-drink-saltwater>

(6 pts) Station H

1. Dark-eyed Junco (1 pt), *Junco hyemalis* (1 pt)
2. Snowbird (1 pt), because they often appear with the snow (1 pt)
3. B, 1-3 (1 pt)
4. True (1 pt)

(10 pts) Station I

1. Red-tailed Hawk (1 pt), *Buteo jamaicensis* (1 pt)
2. Leucism (2 pts). Not albinism! At least one of the following (1 pt):
 - a. Weakens the feathers structurally because melanin is a key component, so feathers wear out faster
 - b. Less insulation against cold weather (both because of weaker feathers and because of white reflecting the sun)
 - c. Less natural camouflage when hunting
 - d. Might affect courtship
3. Watching from a high perch, then swooping down to capture prey in talons (1 pt). Also by flying over fields and watching for prey (1 pt)
4. Passage hawks and/or its definition: birds that have left their nest but are not breeding adults/are less than a year in age (2 pts)
5. B, bald eagle (1 pt)

(9 pts) Station J

1. Black-bellied Whistling-Duck (1 pt), *Dendrocygna autumnalis* (1 pt)
2. False (2 pts)
3. A, conspecific (1 pt)
4. Cavity nesters are more likely to suffer from a shortage of suitable nesting spots (2 pts)
5. At least two of: (1 pt each)
 - a. stout, wedge shaped bill for prying plant material
 - b. feet are positioned well under body to support land foraging (in contrast to feet being closer to tail in diving ducks)
 - c. attenuated or parallel sided maxilla (top half of bill)
 - d. less pronounced nail (front of bill)
 - e. thicker bone and integument at far end of maxilla
 - f. larger optic lobes
 - g. more proximal nares (nostrils)
 - h. greater angle formed by axes of brain and skull

<https://cdn.download.ams.birds.cornell.edu/api/v1/asset/30002321/640>

<https://www.ducks.org/conservation/waterfowl-research-science/understanding-waterfowl-the-art-of-deception>

(7 pts) Station K

1. Yellow Warbler (1 pt), *Setophaga petechia* (1 pt)
2. Brown-headed cowbirds (1 pt), who lay their eggs in warbler nests (1 pt)
3. Mostly insects (1 pt)
4. They have short, slender, tweezer-like beaks (1 pt) suited for picking up insects off foliage/tree bark (1 pt)

(9 pts) Station L

1. Barred Owl (2 pts), *Strix varia* (2 pts)
2. Who cooks for you? (1 pt)
3. A, 1-5 eggs (1 pt)
4. Barred owls feed on small mammals which protect crops against pests/rodents. (2 pts)
5. True (1 pt)

(8 pts) Station M

1. Northern Mockingbird (2 pts), *Mimus polyglottos* (2 pts)
2. "many-tongued thrush", referring to its mimicking/mimicry ability (2 pts) (meaning of name not required)
3. D (2 pts) and for reference, A - blue jay, B - common yellowthroat, C - american robin

(7 pts) Station N

1. Spotted Towhee (1 pt), *Pipilo maculatus* (1 pt)
2. The male (1 pt)
3. Habitat is near the ground, with dense vegetation/shrub cover (1 pt), so their nests are usually placed either on the ground or in short shrubs/thickets (1 pt)

(11 pts) Station O

1. Mallard (2 pts), *Anas platyrhynchos* (2 pts)
2. Mallards are so adaptable that they are counted as invasive species in some areas and can push local species to extinction. They compete with local species for resources and can hybridize with many species, polluting the other species' gene pool. Everyone becomes mallards. (3 pts)
 - a. 1 pt for mentioning that they can be invasive or something along those lines
 - b. 1 pt for competing with other species for resources
 - c. 1 pt for the hybridization part

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3. MITF (2 pts). <https://www.nature.com/articles/s41467-018-04868-4>
4. Helps them identify food in murky water when dabbling (2 pts).
<https://quacklab.net/research/>

(13 pts, tiebreaker by score on this station) Station P: fill in the blank

Answer: 1. Dentary, 2. Abiotic factors, 3. Vent, 4. Crissum, 5. Podotheca, 6. Gleaning, 7. Crop, 8. Malar region, 9. Gizzard, 10. Wattle, 11. Shaft, 12. Down, 13. Plumage