**Supplemental Material:**

**Supplemental Table 1. Species identified in the Lluta River wetland between September 2015 and October 2020.** *Residency Status: R: Resident, M: Migratory, A: Accidental*

|  |  |  |  |
| --- | --- | --- | --- |
| **Family / Bird species** | **Commun Name** | **Maximum count on site** | **Residency Status** |
|  |
| **Anatidae** |  |  |  |  |
| *Spatula cyanoptera* | Cinnamon teal | 36 | R |  |
| *Anas bahamensis* | White-cheeked pintail | 40 | R |  |
| *Anas georgica spinicauda* | Yellow-billed Pintail | 2 | R |  |
| *Spatula discors* | Blue-winged teal | 1 | A (M) |  |
| *Oxyura jamaicensis* | Andean duck | 1 | A |  |
| **Charadriidae** |  |  |  |  |
| *Pluvialis dominica* | Golden plover | 25 | M |  |
| *Charadrius nivosus* | Snowy plover | 2 | R |  |
| *Charadrius semipalmatus* | Semipalmated Plover | 30 | M |  |
| *Charadrius vociferus peruvianus* | Killdeer | 10 | R |  |
| *Pluvialis squatarola* | Grey Plover | 8 | M |  |
| **Laridae** |  |  |  |  |
| *Chroicocephalus serranus* | Andean gull | 350 | R |  |
| *Chroicocephalus maculipennis* | Brown-hooded gull | 300 | R |  |
| *Leucophaeus pipixcan* | Franklin gull | 2300 | M |  |
| *Larus dominicanus* | Kelp gull | 300 | R |  |
| *Larus belcheri* | Belcher's Gull | 60 | R |  |
| *Leucophaeus modestus* | Grey gull | 3000 | R |  |
| *Thalasseus elegans* | Elegant tern | 90 | M |  |
| *Larosterna inca* | Inca Tern | 25 | R |  |
| *Sterna hirundinacea* | South American tern | 3 | R |  |
| *Sternula antillarum* | Least Tern | 1 | A (M) |  |
| *Rynchops niger cinerascens* | Black Skimmer | 66 | M |  |
| **Scolopacidae** |  |  |  |  |
| *Calidris canutus* | Red Knot | 1 | M |  |
| *Calidris alba* | Sanderling | 700 | M |  |
| *Calidris bairdii* | Baird's sandpiper | 8 | M |  |
| *Arenaria interpres* | Ruddy turnstone | 8 | M |  |
| *Calidris pusilla* | Semipalmated Sandpiper | 6 | M |  |
| *Calidris himantopus* | Stilt Sandpiper | 15 | M |  |
| *Calidiris minutilla* | Least sandpiper | 2 | M |  |
| *Tringa semipalmata* | Willet | 19 | M |  |
| *Actitis macularius* | Spotted sandpiper | 5 | M |  |
| *Calidris melanotos* | Pectoral sandpiper | 2 | M |  |
| *Phalaropus tricolor* | Wilson's Phalarope | 8 | M |  |
| *Numenius phaeopus* | Whimbrel | 500 | M |  |
| *Limosa haemastica* | Hudsonian Godwit | 16 | M |  |
| *Tringa flavipes* | Lesser Yellowlegs | 10 | M |  |
| *Tringa melanoleuca* | Greater Yellowlegs | 50 | M |  |
| **Haematopodidae** |  |  |  |  |
| *Haematopus palliatus palliatus* | American oystercatcher | 123 | R |  |
| *Haematopus ater* | Blackish oystercatcher | 18 | R |  |
| **Ardeidae** |  |  |  |  |
| *Egretta caerulea* | Little Blue Heron | 8 | R |  |
| *Bubulcus ibis ibis* | Cattle Egret | 1 | R |  |
| *Egretta thula thula* | Snowy egret | 30 | R |  |
| *Ardea alba egretta* | Great egret | 30 | R |  |
| *Egretta tricolor* | Tricolored Heron | 1 | A |  |
| *Nycticorax nycticorax* | Black-crowned Night-Heron | 84 | R |  |
| *Nyctanassa violacea* | Yellow-crowned Night-Heron | 1 | A |  |
| **Rallidae** |  |  |  |  |
| *Fulica leucoptera* | White-winged Coot | 1 | R |  |
| *Fulica ardesiaca* | Slate-colored Coot | 20 | A |  |
| *Gallinula galeata* | Common Gallinule | 32 | R |  |
| **Pelecanidae** |  |  |  |  |
| *Pelecanus thagus* | Peruvian Pelican | 60 | R |  |
| *Sula variegata* | Peruvian Booby | 20 | R |  |
| ***Threskiortnithidae*** |  |  |  |  |
| *Plegadis chihi* | White-faced Ibi | 3 | R |  |
| *Platalea ajaja* | Roseate Spoonbill | 1 | A |  |
| *Plegadis ridgwayi* | Puna Ibis | 4 | A |  |
| **Phalacrocoracidae** |  |  |  |  |
| *Phalacrocorax brasilianus brasilianus* | Neotropic Cormorant | 42 | R |  |
| **Falconidae** |  |  |  |  |
| *Falco sparverius* | American Kestrel | 2 | R |  |
| *Falco peregrinus* | Peregrine falcon | 1 | R |  |
| ***Tyrannidae*** |  |  |  |  |
| *Lessonia oreas* | Andean Negrito | 2 | R |  |
| *Lessonia rufa* | Austral Negrito | 2 | R |  |
| *Muscisaxicola maculirostris* | Spot-billed ground tyrant | 1 | R |  |
| *Muscisaxicola maclovianus* | Dark-faced ground tyrant | 1 | R |  |
| ***Troglodytidae*** |  |  |  |  |
| *Troglodytes aedon* | House wren | 5 | R |  |
| ***Emberizidae*** |  |  |  |  |
| *Zonotrichia capensis* | Rufous-collared Sparrow | 26 | R |  |
| ***Cathartidae*** |  |  |  |  |
| *Cathartes aura jota* | Turkey Vulture | 94 | R |  |
| ***Icteridae*** |  |  |  |  |
| *Leistes bellicosus* | Peruvian meadowlark | 8 | R |  |
| *Molothrus bonariensis* | Shiny Cowbird | 4 | R |  |
| ***Columbidae*** |  |  |  |  |
| *Columbina cruziana* | Croaking Ground-Dove | 4 | R |  |
| *Zenaida meloda* | West Peruvian Dove | 23 | R |  |
| *Zenaida auriculata* | Eared Dove | 2 | R |  |
| ***Thraupidae*** |  |  |  |  |
| *Conirostrum cinereum* | Cinereous Conebill | 17 | R |  |
| *Xenospingus concolor* | Slender-billed finch | 31 | R |  |
| ***Phoenicopteridae*** |  |  |  |  |
| *Phoenicopterus chilensis* | Chilean Flamingo | 2 | A |  |

**Supplemental Table 2: Ranges of meteorological and landscape variables during the sampling months**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Min** | **Max** | **Median** |
| **Min. Temp (C°)** | 9 | 18 | 14 |
| **Max. Temp(C°)** | 20 | 30 | 26 |
| **Rainfall (mm)** | 0 | 3 | 0.37 |
| **Humidity (%)** | 55.7 | 68.30 | 61.50 |
| **NDVI** | 0.18 | 0.31 | 0.27 |
| **Water body size (km2)** | 0.0045 | 0.0333 | 0.014 |
|  |  |  |  |