

APPENDIX

Bird species recorded were classified according to their migratory status and feeding habits in each habitat type in Akumal region, Quintana Roo, Mexico

Species	Migratory status	Feeding habits*	PAI	Habitat use preferences**
<i>Dendrocygna autumnalis</i>	Resident	I	0.9856	Td (Gc)
<i>Anas discors</i>	Winter visitor	I	0.6312	Td (Gc)
<i>Nomonyx dominicus</i>	Resident	I	0.9856	Td (Gc)
<i>Ortalis vetula</i>	Resident	Fr	1.8874	Td (Gc), Cbm
<i>Phoenicopterus ruber</i>	Resident	I	0.1322	Cbm
<i>Podilymbus podiceps</i>	Winter visitor	I	0.6312	Td (Gc), Cbm
<i>Columba livia</i>	Introduced	Om	2.2480	Ca (Us)
<i>Patagioenas flavirostris</i>	Resident	Fr	0.8523	Mt
<i>Streptopelia decaocto</i>	Introduced	Om	0.8523	Td (Rh), Ca (Us)
<i>Columbina passerina</i>	Resident	Gr	1.2340	Tfr , Td (Rh)
<i>Zenaida asiatica</i>	Resident	Gr	1.2340	Mt , Tfr , Td (Gc, Rh), Ca (Cp, Us)
<i>Zenaida aurita</i>	Resident	Gr	1.2003	Td (Rh), Ca (Cp, Us)
<i>Coccyzus minor</i>	Resident	Fr, I	0.0045	Mt , Tfr
<i>Chordeiles acutipennis</i>	Resident	I	0.0987	Mt , Tfr , Td (Gc)
<i>Nyctidromus albigollis</i>	Resident	I	0.0846	Mt
<i>Chaetura vauxi</i>	Resident	I	1.0084	Mt , Tfr , Td (Gc, Rh), Ca (Cp, Us)
<i>Anthracothonax prevostii</i>	Resident	Ne	0.0012	Mt
<i>Archilochus colubris</i>	Winter visitor	Ne	0.0458	Mt , Tfr
<i>Chlorostilbon canivetii</i>	Resident	Ne	0.0683	Mt , Tfr
<i>Amazilia yucatanensis</i>	Resident	Ne	0.0879	Mt , Tfr
<i>Amazilia rutila</i>	Resident	Ne	0.0879	Mt , Tfr , Td (Rh), Ca (Us)
<i>Gallinula chloropus</i>	Winter visitor	I	0.0875	Td (Gc), Cbm
<i>Fulica americana</i>	Winter visitor	I	0.0875	Td (Gc), Cbm
<i>Himantopus mexicanus</i>	Transient	I	0.0987	Td (Gc)
<i>Phuvialis squatorola</i>	Winter visitor	I	0.0784	Cbm
<i>Phuvialis dominica</i>	Transient	I	0.0012	Td (Gc), Cbm
<i>Charadrius semipalmatus</i>	Winter visitor	I	0.5489	Cbm
<i>Charadrius vociferus</i>	Winter visitor	I	0.6231	Td (Gc), Cbm
<i>Jacana spinosa</i>	Resident	I	0.0023	Td (Gc), Cbm
<i>Actitis macularius</i>	Winter visitor	I	0.0987	Td (Gc), Cbm
<i>Tringa solitaria</i>	Winter visitor	I	0.0846	Td (Gc), Cbm
<i>Arenaria interpres</i>	Winter visitor	I	0.0846	Cbm
<i>Calidris minutilla</i>	Winter visitor	I	0.0846	Cbm
<i>Calidris pusilla</i>	Transient	I	0.0784	Cbm
<i>Leucophaeus atricilla</i>	Winter visitor	Ca	0.0784	Cbm
<i>Hydroprogne caspia</i>	Winter visitor	Ca	0.0458	Cbm
<i>Chlidonias niger</i>	Transient	I, Ca	0.0030	Cbm
<i>Thalasseus elegans</i>	Winter visitor	Ca	0.0458	Cbm
<i>Thalasseus maximus</i>	Winter visitor	Ca	0.0458	Cbm
<i>Fregata magnificens</i>	Resident	Ca	0.6307	Td (Gc), Cbm
<i>Sula leucogaster</i>	Resident	Ca	0.5543	Td (Gc), Cbm
<i>Phalacrocorax brasilianus</i>	Resident	Ca	0.9936	Td (Gc), Cbm
<i>Anhinga anhinga</i>	Resident	Ca	0.9701	Td (Gc), Cbm
<i>Pelecanus occidentalis</i>	Resident	Ca	0.6111	Td (Gc), Cbm
<i>Ardea herodias</i>	Winter visitor	Ca	0.0224	Td (Gc), Cbm

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<i>Ardea alba</i>	Resident	Ca	0.0458	Td (Gc), Cbm
<i>Egretta thula</i>	Resident	I, Ca	0.1322	Td (Gc), Cbm
<i>Egretta caerulea</i>	Winter visitor	I, Ca	0.1322	Td (Gc), Cbm
<i>Egretta tricolor</i>	Winter visitor	I, Ca	0.0112	Td (Gc), Cbm
<i>Bubulcus ibis</i>	Resident	I	0.7789	Ca (Cp)
<i>Butorides virescens</i>	Resident	I, Ca	0.0112	Td (Gc), Cbm
<i>Euducimus albus</i>	Resident	I	0.6803	Td (Gc), Cbm
<i>Coragyps atratus</i>	Resident	Ca	1.9635	Mt, Tfr, Td (Gc, Rh), Ca (Cp, Us)
<i>Cathartes aura</i>	Resident	Ca	1.9648	Mt, Tfr, Td (Gc, Rh), Ca (Cp, Us)
<i>Pandion haliaetus</i>	Winter visitor	Ca	0.0112	Cbm
<i>Buteogallus anthracinus</i>	Resident	Ca	0.0157	Tfr, Cbm
<i>Rupornis magnirostris</i>	Resident	Ca	0.1002	Mt, Tfr, Ca (Cp, Us)
<i>Buteo nitidus</i>	Resident	Ca	0.0875	Mt, Tfr, Ca (Cp)
<i>Tyto alba</i>	Resident	Ca	0.0045	Td (Rh), Ca (Cp, Us)
<i>Megascops guatemalae</i>	Resident	Ca	0.0012	Mt, Tfr
<i>Glaucidium brasilianum</i>	Resident	Ca	0.0012	Mt
<i>Trogon melanocephalus</i>	Resident	Fr	0.0085	Mt, Tfr
<i>Trogon caligatus</i>	Resident	Fr	0.0088	Mt,
<i>Momotus coeruliceps</i>	Resident	Om	0.0654	Mt
<i>Eumomota superciliosa</i>	Resident	Om	0.0879	Mt, Tfr
<i>Megaceryle alcyon</i>	Winter visitor	Ca	0.0085	Td (Gc), Cbm
<i>Chloroceryle americana</i>	Resident	Ca	0.0084	Td (Gc), Cbm
<i>Melanerpes pygmaeus</i>	Resident	I	0.0879	Mt, Tfr
<i>Melanerpes aurifrons</i>	Resident	I	0.6321	Mt, Tfr, Td (Rh), Ca (Us)
<i>Picoides scalaris</i>	Resident	I	0.6004	Tfr, Td (Rh), Ca (Us)
<i>Campephilus guatemalensis</i>	Resident	I	0.0081	Mt, Tfr
<i>Herpetotheres cachinans</i>	Resident	Ca	0.0879	Tfr, Ca (Cp)
<i>Falco sparverius</i>	Winter visitor	Ca	0.0701	Tfr, Ca (Cp)
<i>Falco columbarius</i>	Winter visitor	Ca	0.0556	Mt, Tfr, Td (Gc), Ca (Cp)
<i>Eupsittula nana</i>	Resident	Fr	0.7540	Mt, Tfr, Td (Rh), Ca (Cp, Us)
<i>Amazona xantholara</i>	Resident	Fr	0.6412	Mt
<i>Sittasomus griseicapillus</i>	Resident	I	0.0683	Mt
<i>Xiphorhynchus flavigaster</i>	Resident	I	0.0023	Mt
<i>Synallaxis erythrothorax</i>	Resident	I	0.0023	Mt
<i>Camptostoma imberbe</i>	Resident	I	0.0023	Mt, Tfr
<i>Myiopagis viridicata</i>	Resident	I	0.0245	Mt, Tfr
<i>Elaenia flavogaster</i>	Resident	I	0.0023	Mt, Tfr
<i>Oncostoma cinereigulare</i>	Resident	I	0.0245	Mt
<i>Todirostrum cinereum</i>	Resident	I	0.0023	Mt
<i>Rhynchocyclus brevirostris</i>	Resident	I	0.0023	Mt
<i>Contopus virens</i>	Transient	I	0.0245	Mt, Tfr
<i>Contopus cinereus</i>	Resident	I	0.0335	Mt, Tfr, Td (Rh), Ca (Cp)
<i>Attila spadiceus</i>	Resident	I	0.0335	Mt, Tfr
<i>Myiarchus yucatanensis</i>	Resident	I	0.0335	Tfr
<i>Myiarchus tuberculifer</i>	Resident	I	0.0278	Mt, Tfr, Td (Rh), Ca (Cp, Us)
<i>Myiarchus tyrannulus</i>	Resident	I	0.1150	Mt, Tfr, Td (Rh), Ca (Cp, Us)
<i>Pitangus sulphuratus</i>	Resident	Om	0.2369	Mt, Tfr, Td (Rh, Gc), Ca (Us)
<i>Myiozetetes similis</i>	Resident	I	0.4481	Mt, Tfr, Td (Rh), Ca (Us)
<i>Myiodynastes luteiventris</i>	Resident	I	0.1150	Mt, Tfr

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<i>Tyrannus melancholicus</i>	Resident	I	0.2369	Tfr, Td (Gc, Rh), Ca (Cp, Us)
<i>Tyrannus couchii</i>	Resident	I	0.2369	Mt, Tfr, Td (Gc), Ca (Cp)
<i>Tyrannus tyrannus</i>	Transient	I	0.1150	Mt, Tfr, Td (Rh), Ca (Cp)
<i>Tityra semifasciata</i>	Resident	Fr, I	0.2369	Mt, Tfr
<i>Pachyrhamphus aglaiae</i>	Resident	I	0.1123	Mt, Tfr
<i>Vireo pallens</i>	Resident	I	0.2369	Mt
<i>Vireo philadelphicus</i>	Winter visitor	I	0.2369	Mt, Tfr
<i>Vireo magister</i>	Resident	I	0.1123	Mt
<i>Psilorhinus morio</i>	Resident	Om	1.0523	Mt, Tfr, Td (Rh), Ca (Cp)
<i>Cyanocorax yucatanicus</i>	Resident	Om	1.1238	Mt, Tfr, Td (Rh)
<i>Stelgidopteryx serripennis</i>	Winter visitor	I	1.0523	Mt, Tfr, Td (Gc, Rh), Ca (Cp, Us)
<i>Riparia riparia</i>	Transient	I	1.0035	Td (Gc), Cbm
<i>Petrochelidon fulva</i>	Resident	I	1.0523	Td (Gc), Cbm, Ca (Cp)
<i>Hirundo rustica</i>	Transient	I	1.0035	Td (Rh, Gc), Ca (Cp, Us)
<i>Thryothorus maculipectus</i>	Resident	I	0.1123	Mt, Tfr
<i>Thryothorus ludovicianus</i>	Resident	I	0.1122	Mt, Tfr
<i>Uropsila leucogastra</i>	Resident	I	0.2369	Mt, Tfr
<i>Polioptila caerulea</i>	Resident	I	0.2035	Mt, Tfr, Td (Rh), Ca (Us)
<i>Catharus ustulatus</i>	Transient	I	0.1122	Mt, Tfr
<i>Turdus grayi</i>	Resident	Om	0.2369	Mt, Tfr, Td (Rh)
<i>Hylocichla mustelina</i>	Winter visitor	I	0.1122	Mt, Tfr
<i>Dumetella carolinensis</i>	Resident	I	0.2369	Mt, Tfr
<i>Melanoptila glabrisstris</i>	Resident	I	0.1123	Mt, Tfr
<i>Mimus gilvus</i>	Resident	Fr, I	0.2369	Mt, Tfr, Td (Rh), Ca (Us)
<i>Arremonops rufivirgatus</i>	Resident	Gr	0.1123	Mt, Tfr
<i>Euphonia hirundinacea</i>	Resident	Fr	0.2369	Mt
<i>Dives dives</i>	Resident	Om	0.9856	Mt, Tfr, Td (Gc, Rh), Ca (Us)
<i>Quiscalus mexicanus</i>	Resident	Om	3.4522	Td (Gc, Rh), Ca (Us)
<i>Molothrus aeneus</i>	Resident	Gr	0.9856	Td (Gc, Rh), Ca (Us)
<i>Icterus prosthmelas</i>	Resident	I	0.2369	Mt, Tfr
<i>Icterus cucullatus</i>	Resident	Om	0.2568	Mt, Tfr, Td (Rh)
<i>Icterus chrysater</i>	Resident	I	0.1148	Mt, Tfr
<i>Icterus auratus</i>	Resident	I	0.1148	Mt, Tfr
<i>Icterus galbula</i>	Winter visitor	Om	0.1148	Tfr, Td (Rh)
<i>Seiurus aurocapilla</i>	Winter visitor	I	0.1123	Mt, Tfr
<i>Helmitheros vermivorum</i>	Winter visitor	I	0.1123	Mt, Tfr
<i>Parkesia noveboracensis</i>	Winter visitor	I	1.0035	Mt, Tfr
<i>Mniotilta varia</i>	Winter visitor	I	0.1123	Mt, Tfr, Td (Rh)
<i>Protonotaria citrea</i>	Transient	I	0.0041	Mt, Tfr
<i>Oreothlypis peregrina</i>	Transient	I	0.0041	Mt, Tfr
<i>Oreothlypis ruficapilla</i>	Winter visitor	I	0.1148	Mt, Tfr, Td (Rh)
<i>Geothlypis poliocephala</i>	Resident	I	0.0245	Mt, Tfr
<i>Geothlypis trichas</i>	Winter visitor	I	0.0041	Tfr
<i>Setophaga citrina</i>	Winter visitor	I	0.0041	Mt, Tfr
<i>Setophaga ruticilla</i>	Winter visitor	I	0.0041	Mt, Tfr
<i>Setophaga americana</i>	Winter visitor	I	0.0041	Mt, Tfr
<i>Setophaga magnolia</i>	Winter visitor	I	0.1123	Mt, Tfr
<i>Setophaga petechia</i>	Winter visitor	I	0.1148	Mt, Tfr, Td (Rh)
<i>Setophaga caeruleascens</i>	Winter visitor	I	0.0041	Mt, Tfr

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<i>Setophaga virens</i>	Winter visitor	I	0.0041	Mt, Tfr
<i>Cardellina canadensis</i>	Winter visitor	I	0.0041	Mt, Tfr
<i>Cardellina pusilla</i>	Winter visitor	I	0.0245	Tfr, Td (Rh), Ca (Us)
<i>Icteria virens</i>	Winter visitor	I	0.0041	Mt, Tfr, Td (Rh)
<i>Thraupis abbas</i>	Resident	Fr, I	0.1148	Mt, Tfr
<i>Piranga roseogularis</i>	Resident	I	0.2035	Mt
<i>Piranga rubra</i>	Winter visitor	I	0.2369	Mt, Tfr
<i>Cardinalis cardinalis</i>	Resident	Gr	0.1148	Tfr
<i>Phœticus ludovicianus</i>	Winter visitor	I, Gr	0.2035	Mt, Tfr, Td (Rh)
<i>Cyanocopsa parellina</i>	Resident	Gr	0.2369	Mt, Tfr, Td (Rh)
<i>Passerina caerulea</i>	Winter visitor	Gr	0.2568	Tfr, Td (Rh), Ca (Us, Cp)
<i>Passerina cyanea</i>	Winter visitor	Gr	0.1148	Tfr, Ca (Cp)
<i>Volatinia jacarina</i>	Resident	Gr	0.1123	Tfr, Ca (Cp)
<i>Cyanerpes cyaneus</i>	Resident	Ne	0.1123	Mt, Tfr
<i>Sporophila torqueola</i>	Resident	Gr	0.1148	Tfr, Ca (Cp)
<i>Saltator atriceps</i>	Resident	Gr	0.2035	Mt, Tfr
<i>Saltator coerulescens</i>	Resident	Gr	0.2369	Mt, Tfr

* Feeding habits: Omnivores (Om); Nectarivores (Ne); Carnivores (Ca); Frugivores (Fr); Granivores (Gr); Invertebrates (I, included aquatic invertebrates, bark insectivores aerial insectivores, trunk insectivores, generalist insectivores, ground insectivores, and leaf insectivores).

** Habitat use preferences: Mature tropical forest (**Mt**); Tropical forest remnants (**Tfr**), Modified environments by tourism developments (**Td**); Golf course and artificial water bodies in golf course (Gc), Hotel and residential zones with native and introduced vegetation (Rh); Modified environments by urban development, crops and livestock (**Ca**); Urban zone with native and introduced vegetation (Us), Cattle pastures and agricultural fields (Cp); and, Coast dunes, beach and mangrove zones (**Cbm**).