



MATERIAL SUPLEMENTARIO / SUPPLEMENTARY MATERIAL

**Supplementary material article: Bird Diversity
Across an Andean City: The Limitation of Species
Richness Values and Watershed Scales**

**Material suplementario artículo: Diversidad de aves
en una ciudad andina: la limitación de los valores
de riqueza de especies y la escala de cuenca**

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Table 1. Bird species recorded in 77 systematic point counts located in urban and periurban areas of the Aburrá Valley-Colombia (data from 2014 to 2019). Species are arranged in descendent order according to the total relative abundance.

Order	Family	Species	Relative abundance (%)		
			Urban Neighborhoods	Periurban reference	Total
Passeriformes	Hirundinidae	<i>Pygochelidon cyanoleuca</i>	8.338	2.315	8.090
Passeriformes	Thraupidae	<i>Thraupis episcopus</i>	6.842	1.389	6.565
Columbiformes	Columbidae	<i>Zenaida auriculata</i>	6.814	1.852	6.344
Columbiformes	Columbidae	<i>Columbina talpacoti</i>	5.346	0.000	5.114
Passeriformes	Thraupidae	<i>Thraupis palmarum</i>	5.319	2.778	4.991
Passeriformes	Thraupidae	<i>Coereba flaveola</i>	4.903	0.000	4.819
Columbiformes	Columbidae	<i>Columba livia*</i>	5.152	0.000	4.573
Passeriformes	Turdidae	<i>Turdus ignobilis</i>	4.321	3.241	4.229
Passeriformes	Tyrannidae	<i>Pitangus sulphuratus</i>	3.878	0.463	3.664
Psittaciformes	Psittacidae	<i>Brotogeris jugularis</i>	3.989	0.000	3.615
Passeriformes	Troglodytidae	<i>Troglodytes aedon</i>	3.213	2.315	3.172
Passeriformes	Tyrannidae	<i>Tyrannus melancholicus</i>	3.296	1.852	3.098
Cathartiformes	Cathartidae	<i>Coragyps atratus</i>	1.801	0.000	2.016
Apodiformes	Trochilidae	<i>Amazilia tzacatl</i>	2.078	0.926	1.992
Passeriformes	Tyrannidae	<i>Pyrocephalus rubinus</i>	1.939	0.000	1.820
Passeriformes	Thraupidae	<i>Sicalis flaveola</i>	1.690	0.000	1.795
Psittaciformes	Psittacidae	<i>Forpus conspicillatus</i>	1.773	2.315	1.746
Passeriformes	Tyrannidae	<i>Myiozetetes cayanensis</i>	1.745	0.000	1.623
Piciformes	Picidae	<i>Melanerpes rubricapillus</i>	1.524	0.000	1.525
Pelecaniformes	Threskiornithidae	<i>Phimosus infuscatus</i>	1.551	0.000	1.500
Passeriformes	Tyrannidae	<i>Elaenia flavogaster</i>	1.247	0.463	1.279

(Continúa)



Order	Family	Species	Relative abundance (%)		
			Urban Neighborhoods	Periurban reference	Total
Passeriformes	Thraupidae	<i>Tiaris olivaceus</i>	0.831	5.093	1.279
Pelecaniformes	Ardeidae	<i>Bubulcus ibis</i> *	1.108	1.389	1.156
Passeriformes	Fringillidae	<i>Euphonia lanirostris</i>	1.191	0.000	1.057
Passeriformes	Thraupidae	<i>Saltator striatipectus</i>	1.025	0.000	1.057
Passeriformes	Thraupidae	<i>Saltator olivascens</i>	1.108	0.000	1.033
Accipitriformes	Accipitridae	<i>Rupornis magnirostris</i>	1.025	0.926	0.984
Passeriformes	Thraupidae	<i>Stelpnia cyanicollis</i>	0.942	0.926	0.885
Apodiformes	Trochilidae	<i>Anthracothorax nigricollis</i>	0.942	0.000	0.861
Passeriformes	Icteridae	<i>Molothrus bonariensis</i>	0.776	1.852	0.811
Galliformes	Cracidae	<i>Ortalis columbiana</i>	0.554	5.556	0.787
Passeriformes	Thamnophilidae	<i>Thamnophilus multistriatus</i>	0.803	0.000	0.787
Passeriformes	Thraupidae	<i>Stelpnia vitriolina</i>	0.720	0.463	0.762
Passeriformes	Tyrannidae	<i>Todirostrum cinereum</i>	0.776	0.463	0.738
Passeriformes	Fringillidae	<i>Spinus psaltria</i>	0.609	0.926	0.689
Piciformes	Picidae	<i>Picumnus olivaceus</i>	0.526	0.000	0.566
Passeriformes	Tyrannidae	<i>Sayornis nigricans</i>	0.554	0.000	0.566
Piciformes	Picidae	<i>Melanerpes formicivorus</i>	0.609	0.000	0.541
Falconiformes	Falconidae	<i>Milvago chimachima</i>	0.609	0.000	0.541
Charadriiformes	Charadriidae	<i>Vanellus chilensis</i>	0.554	0.926	0.541
Passeriformes	Thraupidae	<i>Stelpnia heinei</i>	0.360	3.704	0.516
Psittaciformes	Psittacidae	<i>Amazona amazonica</i>	0.554	0.000	0.492
Passeriformes	Tyrannidae	<i>Myiodynastes maculatus</i>	0.499	0.000	0.492
Passeriformes	Thraupidae	<i>Sporophila nigricollis</i>	0.499	0.000	0.467
Cuculiformes	Cuculidae	<i>Crotophaga ani</i>	0.416	1.389	0.443
Passeriformes	Furnariidae	<i>Synallaxis albescens</i>	0.443	0.000	0.443
Coraciiformes	Momotidae	<i>Momotus aequatorialis</i>	0.332	2.315	0.418
Apodiformes	Trochilidae	<i>Saucerottia saucerottei</i>	0.443	0.000	0.418
Passeriformes	Tyrannidae	<i>Zimmerius chrysops</i>	0.388	1.389	0.418
Passeriformes	Paserellidae	<i>Arremon brunneinucha</i>	0.194	4.167	0.393
Psittaciformes	Psittacidae	<i>Amazona ochrocephala</i>	0.416	0.000	0.369
Galliformes	Cracidae	<i>Chamaepetes goudotii</i>	0.194	3.704	0.369
Passeriformes	Tyrannidae	<i>Myioborus miniatus</i>	0.139	3.241	0.295
Passeriformes	Icteridae	<i>Molothrus oryzivorus</i>	0.000	4.630	0.246
Piciformes	Picidae	<i>Colaptes punctigula</i>	0.166	0.463	0.221
Passeriformes	Tyrannidae	<i>Myiarchus cephalotes</i>	0.055	3.241	0.221
Passeriformes	Thraupidae	<i>Tangara labradorides</i>	0.166	1.389	0.221
Apodiformes	Trochilidae	<i>Chlorostilbon melanorhynchus</i>	0.139	0.463	0.197
Psittaciformes	Psittacidae	<i>Eupsittula pertinax</i>	0.194	0.000	0.172

(Continúa)

Order	Family	Species	Relative abundance (%)		
			Urban Neighborhoods	Periurban reference	Total
Passeriformes	Troglodytidae	<i>Henicorhina leucophrys</i>	0.000	3.241	0.172
Passeriformes	Tyrannidae	<i>Leptopogon superciliaris</i>	0.139	0.926	0.172
Passeriformes	Tyrannidae	<i>Myiodynastes chrysocephalus</i>	0.083	1.852	0.172
Passeriformes	Thraupidae	<i>Sporophila minuta</i>	0.194	0.000	0.172
Passeriformes	Paserellidae	<i>Atlapetes albinucha</i>	0.028	2.315	0.148
Passeriformes	Tyrannidae	<i>Camptostoma obsoletum</i>	0.083	0.000	0.148
Passeriformes	Icteridae	<i>Hypopyrrhus pyrohypogaster</i>	0.000	2.778	0.148
Passeriformes	Troglodytidae	<i>Pheugopedius mystacalis</i>	0.139	0.463	0.148
Passeriformes	Thraupidae	<i>Ramphocelus flammigerus</i>	0.166	0.000	0.148
Passeriformes	Fringillidae	<i>Euphonia cyanocephala</i>	0.139	0.000	0.123
Passeriformes	Tyrannidae	<i>Machetornis rixosa</i>	0.111	0.463	0.123
Passeriformes	Tyrannidae	<i>Serpophaga cinerea</i>	0.139	0.000	0.123
Passeriformes	Hirundinidae	<i>Stelgidopteryx ruficollis</i>	0.055	0.926	0.123
Passeriformes	Turdidae	<i>Catharus aurantiirostris</i>	0.111	0.000	0.098
Passeriformes	Thraupidae	<i>Chlorospingus flavopectus</i>	0.000	1.852	0.098
Passeriformes	Thraupidae	<i>Anisognathus somptuosus</i>	0.000	1.389	0.074
Passeriformes	Parulidae	<i>Basileuterus rufifrons</i>	0.028	0.000	0.074
Passeriformes	Corvidae	<i>Cyanocorax affinis</i>	0.083	0.000	0.074
Piciformes	Picidae	<i>Dryocopus lineatus</i>	0.083	0.000	0.074
Pelecaniformes	Ardeidae	<i>Egretta thula</i>	0.083	0.000	0.074
Columbiformes	Columbidae	<i>Leptotila verreauxi</i>	0.055	0.463	0.074
Passeriformes	Parulidae	<i>Myiothlypis coronata</i>	0.000	1.389	0.074
Passeriformes	Thraupidae	<i>Sporophila intermedia</i>	0.083	0.000	0.074
Passeriformes	Vireonidae	<i>Vireo leucophrys</i>	0.000	1.389	0.074
Passeriformes	Thraupidae	<i>Volatinia jacarina</i>	0.083	0.000	0.074
Passeriformes	Paserellidae	<i>Zonotrichia capensis</i>	0.028	0.926	0.074
Psittaciformes	Psittacidae	<i>Ara ararauna</i>	0.055	0.000	0.049
Passeriformes	Parulidae	<i>Basileuterus tristriatus</i>	0.000	0.926	0.049
Cathartiformes	Cathartidae	<i>Cathartes aura</i>	0.028	0.000	0.049
Piciformes	Picidae	<i>Colaptes rubiginosus</i>	0.028	0.463	0.049
Passeriformes	Tyrannidae	<i>Elaenia frantzii</i>	0.000	0.926	0.049
Falconiformes	Falconidae	<i>Falco sparverius</i>	0.028	0.463	0.049
Passeriformes	Tyrannidae	<i>Legatus leucophaeus</i>	0.055	0.000	0.049
Passeriformes	Turdidae	<i>Myadestes ralloides</i>	0.000	0.926	0.049
Passeriformes	Tyrannidae	<i>Myiophobus fasciatus</i>	0.055	0.000	0.049
Passeriformes	Thraupidae	<i>Saltator atripennis</i>	0.000	0.926	0.049
Passeriformes	Furnariidae	<i>Synallaxis azarae</i>	0.000	0.926	0.049
Passeriformes	Thraupidae	<i>Tangara arthus</i>	0.000	0.926	0.049

(Continúa)

Order	Family	Species	Relative abundance (%)		
			Urban Neighborhoods	Periurban reference	Total
Passeriformes	Thraupidae	<i>Tangara nigroviridis</i>	0.000	0.926	0.049
Passeriformes	Turdidae	<i>Turdus fuscater</i>	0.000	0.926	0.049
Psittaciformes	Psittacidae	<i>Ara macao</i>	0.028	0.000	0.025
Pelecaniformes	Ardeidae	<i>Butorides striata</i>	0.028	0.000	0.025
Passeriformes	Vireonidae	<i>Cyclarhis nigrirostris</i>	0.000	0.463	0.025
Passeriformes	Grallaridae	<i>Grallaria ruficapilla</i>	0.000	0.463	0.025
Apodiformes	Trochilidae	<i>Haplophaedia aureliae</i>	0.000	0.463	0.025
Gruiformes	Rallidae	<i>Laterallus albigularis</i>	0.028	0.000	0.025
Passeriformes	Mimidae	<i>Mimus gilvus</i>	0.028	0.000	0.025
Pelecaniformes	Ardeidae	<i>Nycticorax nycticorax</i>	0.028	0.000	0.025
Passeriformes	Tyrannidae	<i>Phaeomyias murina</i>	0.028	0.000	0.025
Passeriformes	Cotingidae	<i>Pipreola riefferii</i>	0.000	0.463	0.025
Passeriformes	Tyrannidae	<i>Pyrrhomyias cinnamomeus</i>	0.000	0.463	0.025
Passeriformes	Thraupidae	<i>Sporophila schistacea</i>	0.028	0.000	0.025
Passeriformes	Thraupidae	<i>Tangara gyrola</i>	0.000	0.463	0.025
Passeriformes	Tyrannidae	<i>Tolmomyias sulphurescens</i>	0.028	0.000	0.025

* Exotic (Non-Neotropical) bird species