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What's in a Bird's Name? Bird Records and Aguaruna Names in Amazonian Indigenous Territories of Peru

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Simple Summary: Highlighting connections between biological diversity and human languages can provide support for the conservation of both nature and culture. We investigated birds and bird names in western Amazonia, the region with the highest bird species richness in the world, working with indigenous communities whose oral traditions include rich knowledge of bird ecology, taxonomy, and behavior. Between 2004 and 2020, we conducted bird surveys together with residents of indigenous Aguaruna territories in the upper Marañón River valley, northern Peru, where no ecological surveys have been published before now. Based on field surveys in 10 Aguaruna communities, we documented 427 bird species in 51 families, including eight wintering Nearctic–Neotropical migratory species. We documented Aguaruna names for 294 bird species, representing 69% of the bird species detected in the study area. Although prior research suggested that unique Aguaruna names exist for the majority of the bird species present, we found unique Aguaruna names for just over a third (38%) of bird species documented, with the remainder of bird names shared by multiple species or families. Our findings provide evidence of high bird species richness benefiting from effective protection on indigenous lands, and of oral traditions that include a significant source of information on bird taxonomy but unfortunately are in decline.

Abstract: Western Amazonia hosts the highest bird diversity in the world, yet in many regional indigenous territories, biodiversity remains poorly known to science. Between 2004 and 2020, we conducted research with members of 10 indigenous Aguaruna communities in four regions of the northern Peruvian Amazon, recording a total of 427 bird species, including eight wintering Nearctic migratory species. Past studies suggested that unique Aguaruna names exist for the majority of bird species present, and this hypothesis was a focus of our research. We identified unique Aguaruna names for ~38% (161) of bird species documented and generic (shared) Aguaruna names for an additional ~31% (132) of bird species documented; the remaining ~31% (134) of bird species documented had no known Aguaruna name. Avian family membership was a significant predictor of whether a bird species had a unique Aguaruna name. Avian families in which a majority of species had unique Aguaruna names included parrots (Psittacidae), manakins (Pipridae), and nightjars (Caprimulgidae), comprising many conspicuous species in terms of their appearance, vocalizations, and/or behavior. Avian families in which a majority of species had no Aguaruna name included ovenbirds and woodcreepers (Furnariidae), tyrant flycatchers (Tyrannidae), and hummingbirds (Trochilidae), comprising many small, cryptic, forest interior species. Collaborative research on avian ecology together with studies of indigenous names and knowledge offers a basis on which to increase conservation engagement with indigenous people.

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1. Introduction

Lands inhabited by indigenous peoples in the tropics host much of the world's biodiversity [1]. An estimated 60 million indigenous people around the world directly depend almost entirely on forests for survival, and in turn, many indigenous territories effectively protect tropical forests from deforestation [2–5]. In the case of the largest contiguous forest in the world in the Amazon Basin, a third of its area is included in indigenous territories, and a quarter in protected areas [6]. The ecological knowledge and practices of indigenous peoples have important implications for the success of conservation efforts in this region [7]. A case in point is the Tropical Andes Biodiversity Hotspot, stretching across western South America from Venezuela to Argentina, which hosts the greatest bird species richness and numbers of endemic species in the world and is inhabited by approximately 10 million indigenous people from more than 50 ethnic groups with distinct languages [8]. Many indigenous people who are highly knowledgeable about nature belong to cultures that have been maintained in oral, rather than written, forms. Unfortunately, such traditional knowledge and practices that have developed over thousands of years are now highly threatened [9–11], as many human languages are declining in parallel with the catastrophic loss of biodiversity [12–14].

Approaches to mitigate losses of both natural and cultural heritage increasingly highlight the connections between them, particularly given the concurrence of biological and linguistic diversity in biodiversity hotspots [15,16]. These approaches include community engagement in the form of citizen participation in the collection and classification of data that are in turn used by scientists [17]. Although the term "citizen science" began appearing in scientific publications in the 1990s, the approach of including local knowledge in scientific research has a much longer history [17]. Many common and scientific names of birds, for example, stem from traditional knowledge and beliefs about birds, and some are derived from indigenous languages that are no longer spoken or known [18,19]. The standard convention of using scientific names, or taxonomic binomials, stems from the pioneering work of Swedish naturalist Carl Linnaeus, which allowed speakers of different languages to communicate about the same species [20]. For example, the bird Linnaeus and his fellow Swedes knew by the name gärdsmyg, which can be interpreted as "one who sneaks around the fence", was known to Germans as the Zaunkönig, or "king of the fence", and to the English as the wren. The origins of wren's English name are not clear but may derive from the Old Norse rindill, roughly meaning "little tail", a possible reference to the fact that the wren's tail is conspicuously cocked upward, a near-unique feature among European birds [19]. Given its extensive range across Europe and Asia, the wren has dozens of common names in different languages. Linneaus gave the wren the scientific binomial *Troglodytes troglodytes*, possibly inspired by its French name, troglodyte mignon, which can be translated as "cute cave-dweller", perhaps reflecting the bird's use of crevices and natural cavities as nest sites.

First published in Latin as *Systema Naturae* in 1735, Linnaeus' groundbreaking book was revised multiple times and subsequently appeared in English under the title, "A General System of Nature…" [20]. The Linnaean taxonomic classification system divides organisms from broad to specific categories, including domains, kingdoms, phyla, classes, orders, families, genera, and species, based on their apparent relationships with each other as determined from morphology and other factors, including genetic data in the modern

era. Linnaeus' efforts resulted in the first and only universal system of organizing biological taxa and relied on Latin and ancient Greek (languages no longer in use in any vernacular) as its standards. Through this endeavor, Linnaeus provided a key that offered people everywhere the means to communicate about species in a comprehensive system organized to reflect the relationships of all members of the natural world. Since the establishment of the Linnean taxonomic system, many researchers have used it as a basis for comparison with classification and naming systems for birds among traditional peoples [21–24].

Based on research with indigenous peoples in Mexico and Peru, Berlin [22] hypothesized that people in traditional societies categorize plant and animal taxa using common names that correspond to scientific species as recognized in the Linnean taxonomic system. Few studies have tested this hypothesis with indigenous names in languages belonging to oral traditions that were put into written form until recently [25–27]. The process of producing the first dictionary in Aguaruna [26], an indigenous Amazonian language, facilitated the scientific recognition of a bird known to the Aguaruna as inchítuch, which was subsequently described as a new species, the Orange-throated Tanager (*Wetmorethraupis sterrhopteron*) [28,29]. In this case, a unique indigenous bird name corresponds to a single scientific species, but in others, a single indigenous name may be used for multiple species or entire families of birds [30–32]. Previous studies that have compared indigenous and scientific bird naming systems have reported unique common names for a proportion of bird species present in study areas, including Akan names for 57% of 143 bird species in southern Ghana [33], Sundanese names for 77% of 222 bird species in West Java, Indonesia [34], and Noongar names for 80% of 166 bird species in western Australia [23]. By contrast, previous studies have in many cases found that traditional naming systems may group multiple species together under one generic common name, such as the case with Northern Sotho speakers in South Africa [31], Akan, Ewe, and Gonja speakers in West Africa [35], and Aguaruna speakers in Peru [32].

Comparing the scientific classification system to that of traditional societies may be complicated by the fact that while the Linnean approach to organizing taxa is based on the premise of discerning species' relationships to other extant species as well as ancestral species, indigenous systems of organization may operate under other premises. For example, the Karam people in Papua New Guinea traditionally do not consider the cassowary (*Casuarius* sp.) to be a bird, due to its special relationship with people [36]. Likewise, in many Amazonian traditions, birds are seen, like people, as individuals with agency, intentions, and desires that explain their behavior and relationships [32,37]. For example, Aguaruna people use the name kuncháu to refer to both the White-plumed Antbird (*Pithys albifrons*) and the Bicolored Antbird (*Gymnopithys bicolor*), members of the Thamnophilidae (whose Greek roots mean "ant-loving") family. The Aguaruna describe these species as walking with ants in the same way that people walk their dogs [32], while the ecological explanation for this behavior is that that antbirds follow army ant swarms to forage on arthropods and small vertebrates attempting to escape becoming prey to the ants [38]. Another contrast in Aguaruna and scientific interpretations of bird ecology applies to lekking (from the Swedish word for "play"), a courtship behavior that may include elaborate displays by males to attract mates in species such as hummingbirds (Trochilidae), cotingas (Cotingidae), and manakins (Pipridae). A number of scientific hypotheses have been proposed to explain lekking [39], but from an Aguaruna perspective, lekking birds simply enjoy dancing and parties for the same reasons people do, as they did in their human incarnations before they transformed into birds [30,32].

Highlighting traditional knowledge and names of birds may increase community engagement in bird study and conservation [13,33,40]. For example, in New Zealand, Māori common names are used for birds such as the kākāpō (*Strigops habroptila*) and

tūī (*Prosthemadera novaeseelandiae*) [23], and in Hawai'i, Hawai'ian common names are used for birds such as the 'i'iwi (*Drepanis coccinea*) and the ākohekohe (*Palmeria dolei*) [41]. Unfortunately, however, traditional knowledge of birds, including the use of local and indigenous names, has declined in many regions [41–45] in parallel with ongoing declines in human languages and biodiversity [12,15]. To mitigate such losses of culture and nature, collaborative research with traditional communities can provide important information on names and taxonomy, ecology, awareness of human impacts and ecological responses, and approaches to resource management [46–49]. Traditional knowledge, beliefs, and stories about birds [50–54] often include important information about bird behavior, ecology, and life histories [2,19,43]. Documenting and elucidating traditional ecological knowledge can thus advance understanding and conservation of both cultural and natural heritage.

Here, we address three main objectives: (1) to document bird species in Amazonian indigenous territories where no previous surveys of birds have been published; (2) to identify Aguaruna names for documented bird species; and (3) to evaluate the occurrence of both unique and generic Aguaruna bird names with reference to their correspondence to scientific nomenclature. Given past research hypothesizing that unique Aguaruna names exist for a majority of species present [21,22], and the importance of birds in Aguaruna culture [30,32], we expected the majority of birds identified in the study area to have unique Aguaruna names and set out to test this hypothesis. We also evaluated possible factors related to the presence or absence of unique Aguaruna names for local bird species [e.g., Orange-breasted Falcon (*Falco deiroleucus*); Violet-headed Hummingbird (*Klais guimeti*)], as opposed to generic names shared by multiple species [e.g., falcons (Falconidae); hummingbirds (Trochilidae)], as part of an exploratory, qualitative assessment. To this end, we considered characteristics such as birds' appearance, vocalizations, behavior, habitat, and cultural significance as factors that might influence whether or not birds were given unique Aguaruna names.

2. Methods

2.1. Study Areas

One of the most biologically diverse countries on earth, Peru features tropical forest on 60% of its land area and is host to nearly 20% of the world's bird species [55,56]. This spectacular avifauna is one of the largest on earth in a single country and includes a number of endemic and recently discovered species in the northern Peruvian Amazon [28,57–62]. As part of a national initiative to promote biodiversity conservation, the Peruvian government established three protected areas and one communal reserve in the upper Marañón valley, including the Cordillera de Colán National Sanctuary (64,115 ha), Ichigkat Muja-Cordillera del Condor National Park (88,477 ha), Santiago-Comaina Reserve (398,449 ha), and the Chayu Nain Communal Reserve (23,598 ha) [63–66]. This region is part of the Tropical Andes Biodiversity Hotspot and is considered a high-priority area for both bird and plant conservation in Peru [67]. Despite articles on new species discoveries, locations, breeding records, and museum collections [68–70], few ecological field studies from this region have been published [71–73].

We conducted field research in the western Amazon basin of northern Peru, in tropical rainforest situated between 400 and 800 m above sea level (a.s.l.) [Figure 1]. In the vicinity of the upper Marañón River and its tributaries near the border with Ecuador, approximately 40,000 indigenous residents speak Aguaruna (locally called *awajún*) as a native language [74]. The word Aguaruna was introduced into Spanish via Jesuit missions by the late 18th century, prior to which the Aguaruna people were referred to as Jívaro, together with three other closely related groups: the Shuar, Achuar, and Huambisa; past research has reported a high degree of mutual intelligibility in Jívaro languages and a high overlap

in cultural traditions in their territories in northern Peru and southern Ecuador [22,75]. Anthropological studies have reported the occurrence of Aguaruna names for 159 bird species along the Cenepa River [21], 186 bird species along the Santiago River [21], and 126 bird species in the vicinity of the Chiriaco and Nieva Rivers [43], but unfortunately did not include any lists of bird species or Aguaruna names.

Approximately 500 bird species have been hypothesized to be present in the study region [21], and a list of 308 bird species from two communities (Wichim and Alto Wawas) in the study area was previously reported, together with their Aguaruna names [76]. The majority of the Aguaruna population lives in the Peruvian Department of Amazonas, including an estimated 35% monolingual Aguaruna speakers and the other 65% bilingual in Aguaruna and Spanish [74]. The dearth of ecological studies in this region is partly related to its remoteness as well as the history of political conflicts in the region [75,77]. Moreover, entry into indigenous territories by non-residents is only possible with special permission from community leaders, a factor that allows Aguaruna communities to be highly successful in maintaining control over their titled lands [72,76]. The Aguaruna language existed exclusively in oral form until the 20th century, when Christian missionaries worked with native speakers to develop its written form [26,29]. The introduction and spread of Christianity reduced the previously high homicide rate, which formed part of traditional cultural practices, resulting in an increasing Aguaruna population [29,77] that is now ~80% literate [74]. Past studies have documented extensive Aguaruna knowledge of bird taxonomy and ecology [21,22,43].

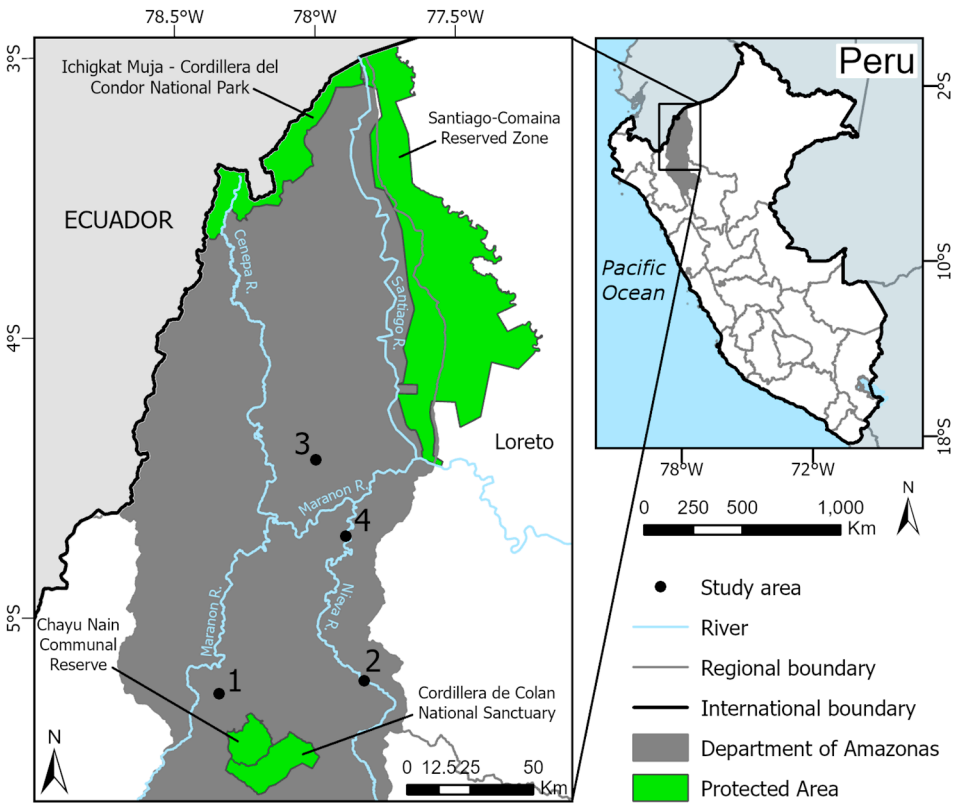


Figure 1. Study region in the upper Marañón River valley, Peru, including four main locations in the Department of Amazonas comprising a total of 10 Aguaruna communities: (1) Wichim and Alto Wawas; (2) Agkais, Ugkum, and Tatankus; (3) Saasá, Tuntanain, and Yumigkus; and (4) Japaime Quebrada and Japaime Escuela. Map by Brandon Franta.

2.2. Field Data Collection and Evaluation

Between 2004 and 2020, we conducted bird surveys together with indigenous community residents in four study areas [Figure 1] comprising 10 Aguaruna communities in the upper Marañón River valley, northern Peru. Our four study areas included the Aguaruna communities of Wichim and Alto Wawas [Figure 1, area 1]; Agkais, Ugkum, and Tatankus [Figure 1, area 2]; Saasá, Tuntanain, and Yumigkus [Figure 1, area 3]; and Japaime Quebrada and Japaime Escuela [Figure 1, area 4]. The habitat in this region comprises tropical lowland evergreen forests including trees 25–40 m in height with scattered emergent trees up to 60 m tall, river-edge forest including lower-stature successional vegetation, montane forest (> 500 m a.s.l.), elfin forest consisting of low, dense forests on ridgetops, within which are treefall gaps, scattered agricultural fields and patches of selectively logged forest and secondary forest. Elevation ranges from ~300 to 1000 m a.s.l., with very steep slopes in some areas and fast-running streams between rivers, including the Marañón River, a major tributary of the Amazon River.

Bird surveys were conducted in groups of at least two observers, all of which were led by either NA or BSS, using 8 × 42 binoculars to visually identify birds with a field guide [55,56]. Surveys were conducted primarily in humid tropical montane forests, but also in elfin forests, secondary forests, and riparian and agricultural habitats, by slowly walking along established trails while searching for birds. Between July 2004 and March 2005, we conducted bird surveys in Wichim and Alto Wawas [Figure 1, area 1]. Between March and July 2018, we surveyed an area in Agkais, as well as adjacent territories of Ugkum and Tatankus, along the Nieva River. Between October and December 2019, we surveyed an area in the Saasá Communal Conservation Forest and the adjacent Tuntanain Communal Reserve, and the community of Yumigkus. Between January and April 2020, we surveyed areas on the Nieva River near its confluence with the Marañón River, including Japaime Quebrada and Japaime Escuela.

In addition to conducting bird surveys in Wichim and Alto Wawas, we also sampled understory bird communities in February and March 2005, using mist nets as part of an investigation into the effects of single-tree selective logging on forest understory birds [76]. We mist netted birds at seven locations in Wichim and two locations in Alto Wawas, all of which were located in montane evergreen forests, in unlogged areas as well as logged forests 1–2 years postharvest and logged forests 4–5 years postharvest, at altitudes between 550 and 750 m a.s.l. At each sampling site, 8 mist nets (10 m by 3 m, 36 mm mesh) were opened by dawn, checked every 15–20 min, and closed at approximately 1400 h, for an accumulated total of 2064 mist net hours. All birds captured in mist nets were identified, recorded, and released at the site of capture.

In order to document birds' Aguaruna names, we interviewed Aguaruna residents identified as the most knowledgeable local people about birds. These included co-authors BSS and OTS as well as Segundo and Agustín Tsamajain Yagkuag, Roberto Jeremías Wampush, and Enrique Tsamajain Chumpi, who provided Aguaruna names for species we recorded and indicated whether these were unique or generic names, or whether no name for a species was known. The Aguaruna language occurs in three recognized varieties [74]: one on the Nieva River and its tributaries [Figure 1, areas 2 and 4], the second on the Marañón River and its tributaries, including the Cenepa and Santiago Rivers [Figure 1, area 3], and the third variety on the Chiriaco River [Figure 1, area 1]; our surveys encompassed all three linguistic areas. Wherever possible (i.e., where bird names appeared in the Aguaruna dictionary [26]), we used previously established orthography.

2.3. Statistical Methods

We used field data to produce a spreadsheet with all bird species identified in Linnean taxonomic order [56] with their corresponding Aguaruna names, with reference to their locations in the study area. We then categorized species in terms of (1) whether unique Aguaruna names were provided, (2) whether, instead, species shared generic Aguaruna names between multiple species, or (3) whether no Aguaruna name could be provided. Given past research hypothesizing that unique Aguaruna names exist for the majority of species present, we expected the majority of the birds we identified to have unique Aguaruna names. To test this hypothesis, we used generalized linear models (GLMs) and chi-square tests to test whether the majority of bird species had unique names, both for the entire species list and for each taxonomic family, in order to estimate the probability of species having unique names, given their taxonomic families, and whether this was statistically significant.

Accordingly, we fitted a binomial GLM with only an intercept term using R [78], to test whether the overall proportion of species with unique Aguaruna names represented the majority (>50%) of bird species identified in the study area. We also fitted a binomial GLM to test if the proportion of species with unique Aguaruna names differed significantly among families. The response matrix combined counts of species with and without unique names for each family, while family was included as a categorical predictor without an intercept. A chi-square test was used to assess whether there were significant differences in proportions among families. Finally, we qualitatively assessed and interpreted factors related to the presence or absence of unique Aguaruna names for the bird species documented in the study area, including characteristics such as birds' appearance, vocalizations, behavior, habitat, and cultural significance.

3. Results

We documented a total of 427 avian species in 51 families in the study area, including 723 mist net captures of 98 species [Table 1, Figure 2, Table A1]. Bird records included 419 year-round residents and eight wintering Nearctic–Neotropical migratory species [56]. The tanager (Thraupidae) family had the highest species richness (50 species), followed by the tyrant flycatchers (Tyrannidae; 48 species), typical antbirds (Thamnophilidae; 40 species); ovenbirds and woodcreepers (Furnariidae; 30 species), and hummingbirds (Trochilidae; 23 species). Wintering migrants included: Spotted Sandpiper (*Actitis macularius*), Olive-sided Flycatcher (*Contopus cooperi*), Eastern Kingbird (*Tyrannus tyrannus*), Swainson's Thrush (*Catharus ustulatus*), American Redstart (*Setophaga ruticilla*), Canada Warbler (*Cardellina canadensis*), Summer Tanager (*Piranga rubra*), and Scarlet Tanager (*Piranga olivacea*). Bird species threatened or near-threatened with global extinction included the Royal Sunangel (*Heliangelus regalis*), Olive-sided Flycatcher, and Orange-throated Tanager.

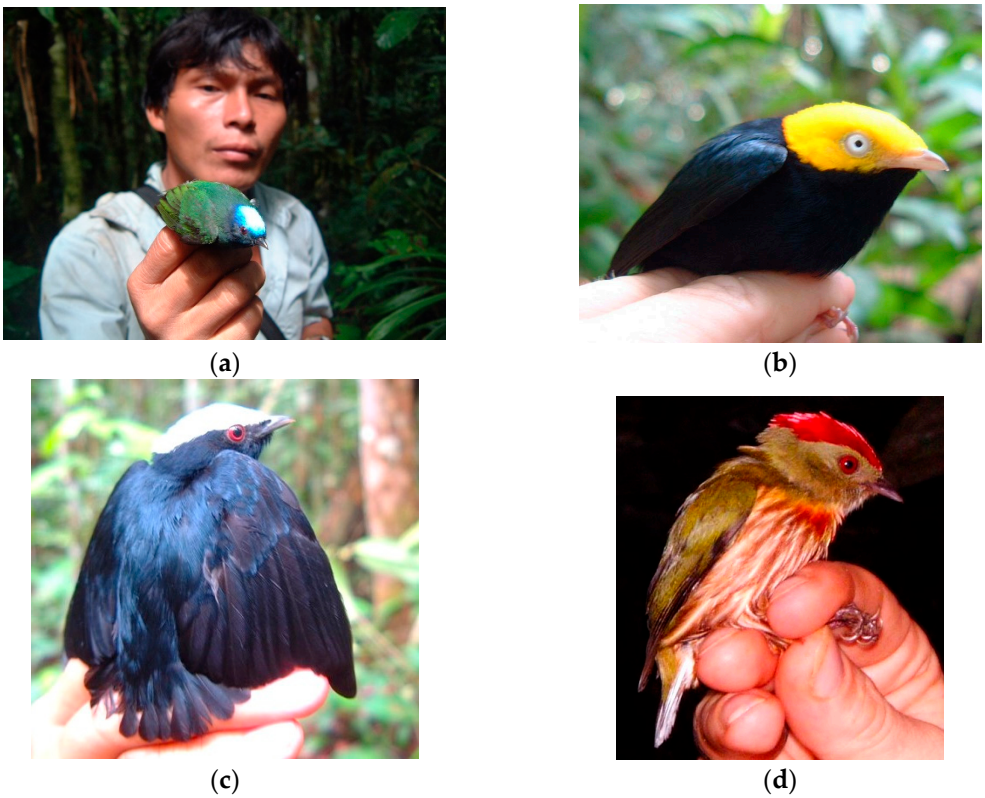


Figure 2. The majority (78%) of manakins (Pipridae) had unique Aguaruna names; manakins identified in our study area included (**a**) the Blue-capped Manakin (*Lepidothrix coronata;* shítagkui); (**b**) the Golden-headed Manakin (*Ceratopipra erythrocephala;* achayap); (**c**) the White-crowned Manakin (*Pseudopipra pipra*; kawia); and (**d**) the Kinglet Manakin (*Machaeropterus regulus*; pinchínam). Photos by Nico Arcilla.

Table 1. Numbers and percentages of bird species with unique Aguaruna names in 51 families in indigenous territories of the upper Marañón River valley, Peru, 2004–2020.

Family	English Common Name	Number of Species Detected in Study Area	Number of Species with Unique Aguaruna Names	Percentage of Species with Unique Aguaruna Names
Thraupidae	Tanagers and Allies	50	19	38
Tyrannidae	Tyrant Flycatchers	48	12	25
Thamnophilidae	Typical Antbirds	40	13	33
Furnariidae	Ovenbirds and Woodcreepers	30	4	13
Trochilidae	Hummingbirds	23	4	17
Psittacidae	New World and African Parrots	16	14	88
Cotingidae	Cotingas	13	7	54
Picidae	Woodpeckers	13	2	15
Bucconidae	Puffbirds	12	0	0
Icteridae	Troupials and Allies	10	6	60
Accipitridae	Hawks, Eagles, and Kites	10	4	40
Pipridae	Manakins	9	7	78
Falconidae	Falcons and Caracaras	9	4	44
Ramphastidae	Toucans	9	4	44
Turdidae	Thrushes and Allies	8	2	25
Columbidae	Pigeons and Doves	8	6	75
Cracidae	Guans, Chachalacas, and Curassows	8	6	75
Ardeidae	Herons, Egrets, and Bitterns	8	4	50
Trogonidae	Trogons	8	1	13

Table 1. *Cont.*

Family	English Common Name	Number of Species Detected in Study Area	Number of Species with Unique Aguaruna Names	Percentage of Species with Unique Aguaruna Names
Troglodytidae	Wrens	7	5	71
Tinamidae	Tinamous	7	3	43
Cuculidae	Cuckoos	6	3	50
Parulidae	New World Warblers	6	2	33
Fringillidae	Finches, Euphonias, and Allies	6	0	0
Caprimulgidae	Nightjars and Allies	5	5	100
Cardinalidae	Cardinals and Allies	5	1	20
Galbulidae	Jacamars	5	2	40
Strigidae	Owls	5	1	20
Cathartidae	New World Vultures	4	1	25
Rallidae	Rails, Gallinules, and Coots	4	0	0
Grallariidae	Antpittas	3	1	33
Momotidae	Motmots	3	1	33
Tityridae	Tityras and Allies	3	1	33
Formicariidae	Antthrushes	3	0	0
Polioptilidae	Gnatcatchers	3	0	0
Capitonidae	New World Barbets	2	2	100
Nyctibiidae	Potoos	2	2	100
Passerellidae	New World Sparrows	2	1	50
Vireonidae	Vireos, Shrike-Babblers, and Erpornis	2	0	0
Alcedinidae	Kingfishers	1	1	100
Anhimidae	Screamers	1	1	100
Apodidae	Swifts	1	1	100
Cinclidae	Dippers	1	1	100
Corvidae	Crows, Jays, and Magpies	1	1	100
Eurypygidae	Sunbittern	1	1	100
Hirundinidae	Swallows	1	1	100
Odontophoridae	New World Quails	1	1	100
Psophiidae	Trumpeters	1	1	100
Rhinocryptidae	Tapaculos	1	1	100
Scolopacidae	Sandpipers and Allies	1	1	100
Steatornithidae	Oilbird	1	1	100

3.1. Area Accounts

In Wichim and Alto Wawas [Figure 1, area 1], we documented 308 bird species over three months [Appendix A], including 98 species captured and released from mist nets. New World flycatchers (Tyrannidae) and antbirds (Thamnophilidae) were the best-represented families. In Agkais, Ugkum, and Tatankus [Figure 1, area 2], we documented 154 species over five months (Appendix A), with tanagers (Thraupidae) and parrots (Psittacidae) the best-represented families. Observations included year-round residents such as the endemic Orange-throated Tanager and the Musician Wren (*Cyphorhinus arada*), as well as seasonal migrants such as the Southern Screamer (*Chauna torquate*). In Saasá, Tuntanain, and Yumigkus [Figure 1, area 3], which share management of a Community Conservation Forest, we recorded 166 species over three months, with tanagers (Thraupidae) the best-represented family and observations including lekking species such as the Black-necked Red-Cotinga (*Phoenicircus nigricollis*) and Andean Cock-of-the-rock (*Rupicola peruvianus*). In Japaime Quebrada and Japaime Escuela [Figure 1, area 4], we recorded 167 species over four months (Appendix A); this area included a clay lick that attracted species such as the Scarlet-shouldered Parrotlet *(Touit huetii*), White-eyed Parakeet (*Psittacara leucophthalmus*), Orange-cheeked Parrot (*Pyrilia barrabandi*), and Cobalt-winged Parakeet (*Brotogeris cyanoptera*).

3.2. Aguaruna Names of Bird Species

A total of 294 bird species we identified had either unique or generic Aguaruna names [Appendix A]. Of the total 427 bird species detected in the study area, we documented unique Aguaruna names for 161 bird species (37.7%, 95% CI: 33–42.1%). The binomial GLM indicated that species were significantly less likely to have unique names than not (estimate = −0.51, SE = 0.10, z = −5.15, $p < 0.001$). The chi-square test indicated significant differences in the proportion of species with unique Aguaruna names among families ($\chi^2 = 161.52$, df = 50, $p < 0.001$). Avian families in which a majority of the species documented had unique Aguaruna names included parrots (Psittacidae; 88%), manakins (Pipridae; 78%; Figure 2), and nightjars (Caprimulgidae; 80%), comprising many species with conspicuous and distinctive vocalizations, coloration, and/or behavior. Avian families in which a majority of species had no Aguaruna name included ovenbirds and woodcreepers (Furnariidae), tyrant flycatchers (Tyrannidae), and hummingbirds (Trochilidae), comprising many cryptic species of the forest interior.

Out of the 51 bird families documented in the study region, nearly a third (15) were represented by either only one or two species. Of these, 94% (17/18) had unique Aguaruna names, including the Horned Screamer (*Anhima cornuta*; amuntai), the Sunbittern (*Eurypyga helias*; piyái, tintin; Figure 3), and the Oilbird (*Steatornis caripensis;* tayu; Figure 3). Parrots (Psittacidae) had a significant positive coefficient, indicating a higher proportion of species with unique names than expected by chance ($p < 0.05$). Five families had significant negative coefficients, indicating a significantly lower proportion of species with unique names compared to what would be expected by chance (Figure 3); these families included ovenbirds and woodcreepers (Furnariidae; $p < 0.001$); tyrant flycatchers (Tyrannidae; $p < 0.001$); hummingbirds (Trochilidae; $p < 0.01$); woodpeckers (Picidae; $p < 0.05$), and typical antbirds (Thamnophilidae; $p < 0.05$).

We were unable to document unique Aguaruna names for 134 bird species, representing 31% of the total identified [Appendix A], including rails (Rallidae; 4 species), puffbirds (Bucconidae; 12 species), antthrushes (Formicariidae; 3 species); vireos (Vireonidae; 2 species), gnatcatchers (Polioptilidae; 3 species), or finches (Fringillidae; 6 species). Instead, these species were among 134 species that shared generic Aguaruna names with multiple species (Figure 4). For example, the Aguaruna name seuk is used for wood-rails (*Aramides* spp.) and pitjuak for crakes (*Amaurolimnas* spp., *Anurolimnas* spp.). Likewise, in the woodpecker (Picidae) family, the Aguaruna family name tátasham is given to many large woodpeckers (e.g., *Campephilus* spp. and *Drycopus lineatus*). Many medium-sized woodpeckers share the Aguaruna name sawake, including the Little Woodpecker (*Dryobates passerinus*), the White-throated Woodpecker (*Piculus leucolaemus*), the Golden-olive Woodpecker (*Colaptes rubiginosus*), and the Chestnut Woodpecker (*Celeus elegans*). The Aguaruna name dái was reported for the smallest woodpecker present, Lafresnaye's Piculet (*Picumnus lafresnayi*), as well as the medium-sized Ringed Woodpecker (*Celeus torquatus*).

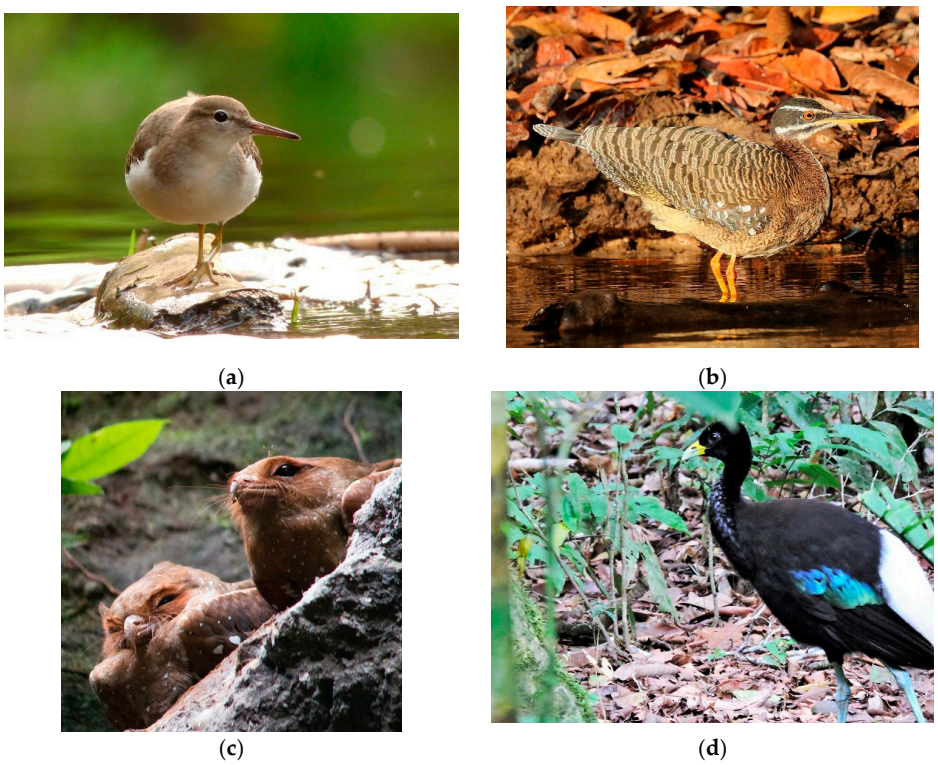


Figure 3. Many bird species with unique Aguaruna names were the sole members of avian families in the study area, including (**a**) the Spotted Sandpiper (*Actitis macularia;* tiígkig); (**b**) the Sunbittern (*Eurypyga helias;* piyái, tintin); (**c**) the Oilbird (*Steatornis caripensis;* tayu); and (**d**) the Gray-winged Trumpeter (*Psophia crepitans*; chíwa). Photos by (**a**) Alejandro Bayer Tamayo, CC BY-SA 2.0, (**b**) Charles J. Sharp, CC BY-SA 4.0; (**c**) Eric Gropp, CC BY-SA 2.0, and (**d**) Rodrigo Mariaca, CC BY-SA 4.0, via Wikimedia Commons.

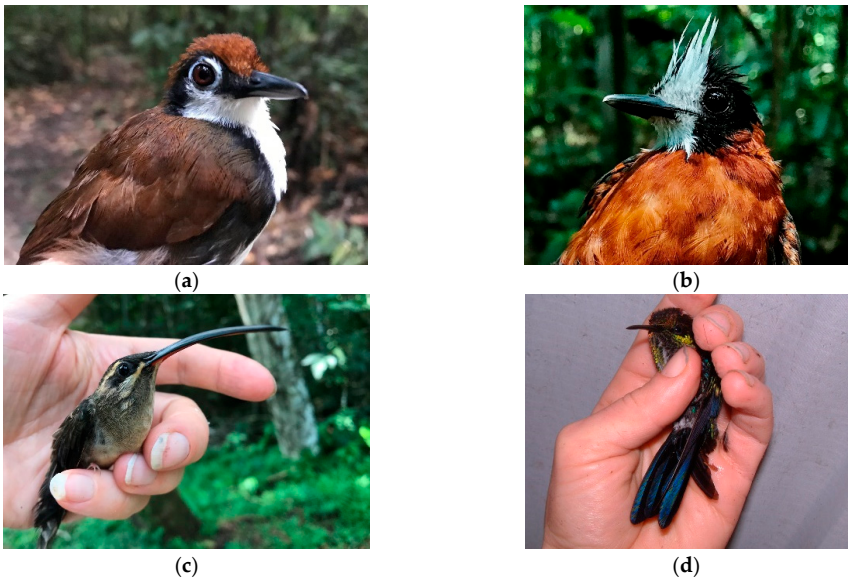


Figure 4. Most antbirds (Thamnophilidae) lacked unique Aguaruna names, including both (**a**) the Bicolored Antbird (*Gymnopithys bicolor*) and (**b**) the White-plumed Antbird (*Pithys albifrons*), who share the generic Aguaruna name, kuncháu. Likewise, the majority of hummingbirds (Trochilidae) lack unique Aguaruna names, including (**c**) the Long-tailed Hermit (*Phaethornis superciliosus*) and (**d**) the Fork-tailed Woodnympth (*Thalurania furcata*); instead, most hummingbirds share the generic Aguaruna name, jempe. Photos by Nico Arcilla.

4. Discussion

Over 15 months of field surveys in Aguaruna territories in the northern Peruvian Amazon from 2004 to 2020, we documented 427 bird species of 51 avian families, together with their Aguaruna names. Unique Aguaruna names were reported for 38% (161) of the species documented, while 31% (132) shared generic names with one or more other species; the remaining 31% (134) of the species in the study area did not have any known Aguaruna name. Our findings nevertheless complement past studies showing that Aguaruna knowledge of bird taxonomy and ecology is extensive and has a high correspondence to that developed through scientific research [21,22,43]. Factors that appeared to influence whether bird species had Aguaruna names included conspicuous appearance (e.g., large size, colorful plumage), vocalizations (e.g., loud, distinctive), and behavior (e.g., lekking, ant-following), as well as habitat (e.g., occurring in open or human-dominated environments or forest interior) and cultural importance (e.g., featured in traditional folklore and stories).

4.1. Aguaruna Names and Knowledge of Bird Species

Given past studies suggesting that unique Aguaruna names existed for 80–90% of animal species present [43,79], we expected a majority of the 427 bird species identified in the study area to have unique Aguaruna names. However, our findings indicate that the majority of the birds we documented did not have unique Aguaruna names to distinguish them in the manner of the Linnean taxonomic system. Instead, 38% of the species we documented had unique Aguaruna names and 31% shared generic Aguaruna names corresponding to groups of species including families and genera. One limitation of past studies in this region is that no field guide to the birds of Peru was available before 2001 [55] and no systematic bird surveys had been carried out to establish a list of birds present in this region until now; instead, previous studies used locally obtained bird specimens [21,22] and interviews where respondents provided lists from memory [32,43] to solicit bird names.

In some oral traditions in regions with lower bird diversity, unique indigenous names may be given to most bird species, such as in the Samoan islands of Polynesia, where the majority of ~70 known bird species have unique Samoan names [80]. However, in a region with such high bird diversity as western Amazonia, with an estimated ~500 bird species in our study area, it is questionable whether unique indigenous names might exist for most species in an exclusively oral tradition, particularly as many of these species are secretive, cryptic, and difficult or impossible to detect or distinguish without tools such as binoculars or mist nets. Nevertheless, Aguaruna culture has a close relationship with birds, whom they consider to have participated directly in the development of their culture [30,32,52]. In addition to naming many of the bird species around them, Aguaruna residents also have names for avian behavior, such as píshak saayu, which is known to biologists as mixed-species flocking. Aguaruna children may be named after birds, such as súgka, the Andean Cock-of-the-rock, and achayap, a name shared by both the Golden-headed Manakin (*Ceratopipra erythrocephala*) and Blue-backed Manakin (*Chiroxiphia pareola*).

Aguaruna communities may also be named after birds, such as Saasá, the Hoatzin (*Opisthocomus hoazin*), a species previously found in this area before unfortunately being hunted to local extinction, and Teésh, the Yellow-rumped Cacique (*Cacicus cela*), which is featured in folklore as playing a crucial role in rescuing the people from the unkáju, a mythical crab demon that violently oppressed the Aguaruna people before they were liberated by birds [30]. In Aguaruna cosmology, birds were people before they became birds, and serve as intermediaries between the natural and supernatural worlds [30], similar to traditions such as that of the Emberá in Panama [81]. We found no evidence of cases where local bird names appear to originate from outside cultural influences, such as the Agta use of Spanish names including aguila for the Philippine Eagle (*Pithecophaga jefferyi*) and

martinez for the introduced Crested Myna (*Acridotheres cristatellus*) in the Philippines [42], and the Akan use of bird names that reference police uniforms and Christmas in Ghana [33].

4.2. Assessing the Presence of Unique and Generic Indigenous Names for Birds

The proportions of unique and generic Aguaruna bird names we found appear comparable to those of the Agta people in northern Luzon, Philippines, who reported 110 names for 294 birds known to their home area, about half of which are unique to particular species and half of which are generic names applied at the family or genus level [42]. Both the Aguaruna and the Agta appear to assign more distinctive and conspicuous bird species unique names, while smaller, more cryptic, less vocal birds and birds of the forest interior may receive generic names or no name [42]. For example, all four forest-falcons (genus *Micrastur*; Falconidae) documented in the study area share the Aguaruna generic name bakantáu. In the Agta language, all woodpecker (Picidae) species share the generic name kamambitel, and multiple egrets (e.g., Western Cattle Egret [*Bubulcus ibis*], Great Egret [*Ardea alba*], Medium Egret [*Ardea intermedia*], Little Egret [*Egretta garzetta*]) share the common name uduk [42]. Similarly, the Emberá people of Panama use the generic name imbichú for all hummingbirds (Trochilidae), the generic name kokarrá for New World wood quails (genus *Odontophorus*), and the generic name chákoro for New World orioles (genus *Icterus*) [81].

In many cases, unique Aguaruna names are given to distinguish species that exhibit salient visual differences from congenerics, such as in color or size. For example, the Aguaruna use the name púmpuk for owls (Strigidae) in general, but distinguish the smallest owl, the Peruvian Screech-Owl (*Megascops roboratus*) with the unique name suutín. In the case of hummingbirds (Trochilidae), Aguaruna uses the name jémpe for hummingbirds in general, but distinguishes the Reddish Hermit (*Phaethornis ruber*) with the unique names ipák jémpe, where ipák refers to the achiote (*Bixa orellana*) shrub [26] that produces red fruit used to make a red dye. As another example, the Yellow-tufted Woodpecker (*Melanerpes cruentatus*), which is described as having "gaudy plumage [that is] unmistakable" [56] has the unique species name tegashá or teashá in Aguaruna, while five other large woodpeckers (e.g., *Campephilus* spp. and *Drycopus lineatus*) share the Aguaruna name tátasham. In the case of the Crimson-crested Woodpecker (*Campephilus melanoleucos*), tátasham is modified to tátasham kiakia; the Aguaruna modifier kiakia may be translated as "dark", [26] providing some agreement with its Greek-based scientific name root melas, meaning black [82]. All other woodpeckers (Picidae) appeared to lack unique Aguaruna names. Many medium-sized woodpeckers share the Aguaruna name sawake, including Little Woodpecker, White-throated Woodpecker, Golden-olive Woodpecker, and Chestnut Woodpecker. The Aguaruna name dái was reported for one of the smallest woodpeckers, Lafresnaye's Piculet (*Picumnus lafresnayi*), as well as the medium-sized Ringed Woodpecker.

Ovenbirds and woodcreepers (Furnariidae) comprise one of the best-represented avian families present in the study area, and many woodcreeper species of various genera share the Aguaruna name kuíntam. However, the Cinnamon-rumped Foliage-gleaner (*Philydor pyrrhodes*) and all documented members of the genus *Automolus* share the name ekemin kuíntam. The smallest and most common woodcreeper in the study area [56,76], the Wedge-billed Woodcreeper (*Glyphorynchus spirurus*), was given the Aguaruna name tushím, but it reportedly shares this with other woodcreeper species including the Olivaceous Woodcreeper (*Sittasomus griseicapillus*) and some members of the genus Xiphorhynchus. However, the largest woodcreeper in the study area, the Strong-billed Woodcreeper (*Xiphocolaptes promeropirhynchus*), was given a unique name, apu kuíntam, which roughly translates to "chief woodcreeper".

Vultures (Cathartidae) comprise four species in the study area, and three of them share the Aguaruna name chuwág ([Black Vulture; *Coragyps atratus*], [Turkey Vulture; *Cathartes aura*], [Greater Yellow-headed Vulture; *Cathartes melambrotus*]). While the plumage of the latter three species is predominantly black, the male King Vulture (*Sarcoramphus papa*) is distinguished from these by a white mantle, and it also has a unique Aguaruna name, ukúmat, which is also an Aguaruna verb meaning "to bury a family member" [26]. Whereas many other members of the Falconidae family in the study area share the same Aguaruna common name, as mentioned above, the Black Caracara (*Daptrius ater*), characterized by a distinctive appearance, is also characterized by the unique Aguaruna name shánashna in one of our study areas (Wichima and Alto Wawas); in the other study areas where we conducted this investigation, it is recognized by the generic name yákakau, which it shares with the Red-throated Caracara (*Ibycter americanus*).

4.3. Factors Associated with the Presence or Absence of Unique Aguaruna Names

We found avian family membership to be a highly significant predictor of whether a species has a unique Aguaruna name, and that many conspicuous species in terms of their appearance, vocalizations, and/or behavior had unique Aguaruna names. The Psittacidae was the only avian family for which we found a significant positive coefficient, indicating a higher proportion of unique Aguaruna names for parrot species than would be expected by chance, with unique Aguaruna names for 88% of the 15 parrot species identified in the study area. A family renowned for its beauty, parrots include many large, colorful, conspicuous species that are highly vocal. Parrots are also sought after as pets [83]. Although trapping parrots for the pet trade is unfortunately widespread in many countries [84], involvement in trapping parrots for trade appears to be relatively rare among the Aguaruna. Unique Aguaruna names exist for 80% of the nightjar (Caprimulgidae) species, which are nocturnal and have cryptic plumage present but have highly distinctive vocalizations. Unique Aguaruna names also exist for 78% of the manakins (Pipridae), small but colorful birds that are a highly vocal lekking species.

Large and vocal birds that are both hunted for food and featured in folklore, guan and curassow (Cracidae) species, had unique Aguaruna names in 75% of the cases. These findings are consistent with studies in the Alaskan Arctic showing that larger birds may be more likely to have unique indigenous names, such as in the case of unique Yupik names for most large (e.g., cranes, swans, eagles) and medium-sized (e.g., crows, geese) species, whereas most species of small birds (e.g., swallows, sparrows) lack unique names [24]. Similarly, 75% of the pigeons and doves (Columbidae), which are also large, vocal, and hunted for food, had unique Aguaruna names. In addition, 71% of the wrens (Troglodytidae) had unique Aguaruna names; although their small size and cryptic plumage make them difficult to see, wrens are highly vocal, with distinctive, beautiful, and often highly elaborate songs. Finally, 60% of the New World blackbirds (Icteridae) had unique names; icterids are large, colorful, vocal, highly social, build distinctive and conspicuous nests in large groups, and are featured in folklore.

Previous researchers have likewise found that indigenous knowledge of birds differs by avian family [24]. For example, some groups of Alaska Inuit may have unique names for most local species of ducks, geese, and swans (Anatidae), hawks, eagles, and kites (Accipitridae), and shorebirds and allies (Charadriidae), whereas most species of woodpeckers (Picidae), swallows (Hirundinidae), and warblers (Parulidae) lack unique indigenous Iñupiaq names [24]. In addition, many species that were the sole representatives of their avian family in the study area also had unique Aguaruna names, including the Spotted Sandpiper (tiígkig; Figure 3) and Gray-winged Trumpeter (*Psophia crepitans*; chíwa; Figure 3). These species are visually conspicuous and may also be hunted by the

Aguaruna for food. Our findings thus corroborate past research on indigenous bird naming systems demonstrating that unique names are given to bird species considered important for subsistence or cultural reasons [24].

By contrast, no puffbirds (Bucconidae), and only 15% and 17% of woodpeckers (Picidae) and hummingbirds (Trochilidae), respectively, had unique Aguaruna names. Despite their often bold and beautiful plumage, puffbirds, woodpeckers, and hummingbirds tend to be cryptic species due to their behavior and habitat. Puffbirds are seldom seen because they sit motionless for long periods of time, and woodpeckers are often high in the canopy or hidden behind tree trunks. Although hummingbirds are culturally significant for the Aguaruna and are frequently featured in folklore and traditional stories [29,30], hummingbirds' small size and fast movements make them challenging to distinguish, and most (83%) hummingbird species documented in the study area lacked unique names.

4.4. Study Limitations and Future Directions

Our surveys were not exhaustive, and future studies should detect additional bird species and reveal additional Aguaruna bird names and knowledge of bird ecology. Future studies would also ideally provide more clarification for some questions and areas of disagreement revealed in our data. For example, there appears to be agreement on the Aguaruna name *téuteu* for the Bat Falcon (*Falco rufigularis*), but some also provided this name for the Scrub Nightjar (*Nyctidromus anthonyi*), while the Aguaruna dictionary definition of *téuteu* is "a bird species that calls téu, téu, téu" [26]. While in many cases, multiple bird species appeared to share the same Aguaruna name, in others, our Aguaruna collaborators may not have been aware of unique names, as these may be known by few people through oral traditions that are now highly threatened. The Aguaruna dictionary [26] includes many names for as yet unidentified bird species, which could form the basis of future research.

Additional studies of bird names and knowledge in Aguaruna as well as many other languages that did not exist in written form until the past century may make important contributions to our understanding of nature and culture through comparison with the Linnaean taxonomic system, which remains the sole universal means of communicating information about bird species. Meanwhile, challenges to increasing the use of indigenous bird names include not only the lack of studies of indigenous bird names, but also the lack of unique species names for many birds in indigenous languages that until recently did not exist in written form. For example, the most recent and comprehensive field guide to birds in Ghana and Togo, West Africa, includes a checklist of birds that provides names in three regional indigenous languages (Akan, Ewe, and Gonja), while noting that many local names are used for groups of birds (e.g., herons, owls, woodpeckers) rather than unique species [35]. Approximately half of the bird species known in the region appear to lack unique Akan species names, and even fewer unique species names are known in Ewe and Gonja [35]. In other cases, however, multiple indigenous names may exist for the same bird species, which may reflect variations according to the place, language form, or speaker group, as we found among the Aguaruna [Appendix A] and has also been found among the Māori in New Zealand [13], among other languages and regions.

5. Conclusions

Our findings on birds in Aguaruna territories, together with a first systematic list of Aguaruna bird names as they correspond to scientific names, provide a basis on which to increase engagement and collaboration between indigenous communities, ornithologists, and conservation actors in this region. Unfortunately, traditional ecological knowledge is in decline, both in the case of the Aguaruna and other traditional indigenous groups around

the world [23,24,32,45,49]. This decline may be reflected in part in our finding, contrary to expectation, that most birds documented do not appear to have unique Aguaruna names. Despite past publications suggesting that unique Aguaruna names exist for the majority of species present [21,43,79], the majority of bird species we identified did not have unique Aguaruna names to distinguish them. Instead, 38% of the species we documented had unique Aguaruna names, 31% shared generic Aguaruna names corresponding to groups of species including families and genera, and the remaining 31% had no known Aguaruna name.

Avian family membership was a significant predictor of whether a bird species had a unique Aguaruna name. A majority of species of parrots (Psittacidae), manakins (Pipridae), and nightjars (Caprimulgidae) had unique Aguaruna names, whereas no puffbirds (Bucconidae) and few ovenbirds or woodcreepers (Furnariidae) or tyrant flycatchers (Tyrannidae) had unique Aguaruna names. Birds more likely to have Aguaruna names included those with traits such as large size, colorful plumage, loud and distinctive vocalizations, conspicuous behavior, and those with cultural importance as food or pets. Smaller species with cryptic behavior and those occurring in habitats in which they are less visible to people (e.g., inside the forest interior) appeared to be less likely to have unique names, even if they featured in folklore (e.g., woodpeckers, hummingbirds). Continuing to document and elucidate indigenous names and knowledge of birds, particularly those which occur in oral traditions that may otherwise disappear, promises to make valuable contributions towards understanding, valuing, and protecting the natural and cultural heritage of humanity, both in Amazonia and around the world.

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Institutional Review Board Statement: This study was conducted according to the guidelines of the Declaration of Helsinki, with research permits granted by the Government of the Republic of Peru (INRENA, 2005) and access to indigenous territories granted by their respective authorities.

Data Availability Statement: Data referred to but not provided in this manuscript can be provided on request.

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Appendix A

Table A1. Birds detected in indigenous territories of the upper Marañón River valley, northern Peru, 2004–2020; scientific nomenclature follows [85]; taxonomic order follows [56].

Family	Species	Common Name	Aguaruna Name *	Location **
Tinamidae	*Tinamus tao*	Gray Tinamou	secuch	A, S
	Tinamus major	Great Tinamou	wága	W, A, S, J
	Tinamus guttatus	White-throated Tinamou	wagkúsh	A, S, J
	Crypturellus cinereus	Cinerous Tinamou	kintachik	S, J
	Crypturellus soui	Little Tinamou	tsúwam	W
	Crypturellus undulatus	Undulated Tinamou		W
	Crypturellus tataupa	Tataupa Tinamou	wagkúsh	W
Cracidae	*Ortalis guttata*	Speckled Chachalaca	wakats	W, A, S, J
	Chamaepetes goudotii	Sickle-winged Guan	pitsa	W, S
	Penelope jaquacu	Spix's Guan	aunts	A, S, J
	Mitu tuberosum	Razor-billed Currasow	bashu	A, S
	Aburria aburri	Wattled Guan	uwachau	A, S
	Mitu salvini	Salvin's Currasow	bashu	A, S
	Pipile cumanensis	Blue-throated Piping-Guan	kuyu	A, S
	Nothocrax urumutum	Nocturnal Currasow	ayachui	A, S, J
Odontophoridae	*Odontophorus stellatus*	Starred Wood-Quail	púush	W, A, S, J
Ardeidae	*Tigrisoma fasciatum*	Fasciated Tiger-Heron	entsanmaya untuju	A
	Tigrisoma lineatum	Rufescent Tiger-Heron	untuju	A
	Ardea alba	Great Egret	taanta	A, S, J
	Cochlearius cochlearius	Boat-billed Heron	wapataj	A, S
	Pilherodius pileatus	Capped Heron	wapataj, ima	A, S, J
	Nycticorax nycticorax	Black-crowned Night-Heron	tuchira	S, J
	Egreta thula	Snowy Egret	ima	A, S, J
	Butorides striata	Striated Heron		W
Anhimidae	*Anhima cornuta*	Horned Screamer	amuntai	A
Cathartidae	*Coragyps atratus*	Black Vulture	chuwág	A, S, J
	Cathartes aura	Turkey Vulture	chuwág	W, A, S
	Cathartes melombrotus	Greater Yellow-headed Vulture	chuwág	J
	Sarcoramphus papa	King Vulture	ukúmat	A, S, J

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Accipitridae	*Elanoides forficatus*	Swallow-tailed Kite	nayap	W, A, S, J
	Ictinia plumbea	Plumbeous Kite		W
	Microspizas superciliosus	Tiny Hawk		W
	Accipiter striatus	Sharp-shinned Hawk		W
	Pseudastur albicollis	White Hawk	sai pínchu	W
	Cryptoleucopteryx plumbea	Plumbeous Hawk		W
	Rupornis magnirostris	Roadside Hawk	chikiwí	W
	Buteo brachyurus	Short-tailed Hawk		W
	Buteo albonotatus	Zone-tailed Hawk		W
	Harpia harpyja	Harpy Eagle	ukukui	A, S, J
Falconidae	*Ibycter americanus*	Red-throated Caracara	yákakau	A, S, J
	Daptrius ater	Black Caracara	shánashna, yákakau	W, S, J
	Micrastur gilvicollis	Lined Forest-Falcon	bakantáu	A, S, J
	Micrastur ruficollis	Barred Forest-Falcon	bakantáu	W, A, S, J
	Micrastur semitorquatus	Collared Forest-Falcon	bakantáu	A, S, J
	Micrastur mirandollei	Slaty-backed Forest-Falcon	bakantáu	A, S, J
	Herpetotheres cachinnans	Laughing Falcon	makua	J
	Falco rufigularis	Bat Falcon	téuteu	W
	Falco deiroleucus	Orange-breasted Falcon	chíijai, káuta	W
Psophiidae	*Psophia crepitans*	Gray-winged Trumpeter	chíwa	A, S
Eurypygidae	*Eurypyga helias*	Sunbittern	piyái, tintin	W, A, S
Rallidae	*Aramides cajaneus*	Gray-cowled Wood-Rail	seuk	A, S, J
	Aramides calopterus	Red-winged Wood-Rail	seuk	A, S, J
	Amaurolimnas concolor	Uniform Crake	pitjuak	A, S, J
	Rufirallus castaneiceps	Chestnut-headed Crake	pitjuak	W, A, S, J
Scolopacidae	*Actitis macularius*	Spotted Sandpiper	tiígkig	W
Columbidae	*Patagioenas plumbea*	Plumbeous Pigeon	yápagkam	W, A, S, J
	Patagioenas subvinacea	Ruddy Pigeon	yápagkam	W, A, S, J
	Patagioenas fasciata	Band-tailed Pigeon	paúm	W
	Patagioenas speciosa	Scaled Pigeon	shímpa	W, A, S, J
	Columbina talpacoti	Ruddy Ground Dove	shugkaem	A, S, J
	Claravis pretiosa	Blue Ground Dove	yapimpits	W, A, S, J
	Geotrygon montana	Ruddy Quail-Dove	tsabau yámpits	W
	Leptotila rufaxilla	Gray-fronted Dove	yaúch	W, A, S, J

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Psittacidae	*Orthopsittaca manilatus*	Red-bellied Macaw	wacha	A, S, J
	Ara militaris	Military Macaw	shamak	A
	Ara severus	Chestnut-fronted Macaw	wácha	W
	Psittacara leucophthalmus	White-eyed Parakeet	chipi	A, J
	Aratinga weddellii	Dusty-headed Parakeet	shishi	J
	Pyrrhura roseifrons	Rose-fronted Parakeet	mantseét	W, A, S, J
	Brotogeris cyanoptera	Cobalt-winged Parakeet	kijus	A, S, J
	Forpus xanthopterygius	Cobalt-rumped Parrotlet	kijus	J
	Touit huetii	Scarlet-shouldered Parrotlet	nuinui	A, J
	Pyrilia barrabandi	Orange-cheeked Parrot	pajai	A, J
	Pionus menstruus	Blue-headed Parrot	tuwísh	W, A, S, J
	Pionus sordidus	Red-billed Parrot	tuwisham	W, A
	Amazona ochrocephala	Yellow-crowned Parrot	tigku	A, J
	Amazona mercenarius	Scaly-naped Parrot	kawau	A
	Amazona amazonica	Orange-winged Parrot	uwagmas	J
	Amazona farinosa	Mealy Parrot	wakam kawau	A, J
Cuculidae	*Coccycua minuta*	Little Cuckoo	tututág, ikamcham	W, A, S, J
	Piaya cayana	Squirrel Cuckoo	ikáncham	W, A, S, J
	Piaya melanogaster	Black-bellied Cuckoo	tejés ikáncham, ikáncham	W, A, S, J
	Crotophaga major	Greater Ani	cuacua, curacura	A, S, J
	Crotophaga ani	Smooth-billed Ani	baít	W, A, S, J
	Crotophaga sulcirostris	Groove-billed Ani	bait	A, S, J
Strigidae	*Megascops roboratus*	Peruvian Screech-Owl	suutin, suutin púmpuk	A, S, J
	Megascops watsonii	Tawny-bellied Screech-Owl	púmpuk	J
	Megascops choliba	Tropical Screech-Owl	púmpuk	J
	Pulsatrix perspicillata	Spectacled Owl	púmpuk	W
	Bubo virginianus	Great Horned Owl	púmpuk	W
Nyctibiidae	*Nyctibius aethereus*	Long-tailed Potoo	autam	S, J
	Nyctibius grandis	Great Potoo	kaú	S, J
Steatornithidae	*Steatornis caripensis*	Oilbird	táyu	W, A, S, J
Caprimulgidae	*Nyctiphrynus ocellatus*	Ocellated Poorwill	sukuyá	S, J
	Uropsila lyra	Lyre-tailed Nightjar	mujanmaya sukuyá	A, S
	Nyctidromus albicollis	Common Pauraque	taakén	W
	Antrostomus rufus	Rufous Nightjar	díigshap	W
	Nyctidromus anthonyi	Scrub Nightjar	téuteu, sukuyá	W
Apodidae	*Chaetura cinereiventris*	Gray-rumped Swift	shuijpip	S

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Trochilidae	*Eutoxeres condamini*	Buff-tailed Sicklebill	jémpechau	W
	Glaucis hirsutus	Rufous-breasted Hermit		W
	Threnetes leucurus	Pale-tailed Barbthroat	yugkipkin jémpeji	W
	Phaethornis ruber	Reddish Hermit	ipák jémpe	W
	Phaethornis koepckeae	Koepcke's Hermit	yugkipkin jémpeji	W
	Phaethornis bourcieri	Straight-billed Hermit		W
	Phaethornis hispidus	White-bearded Hermit	jempe	J
	Phaethornis superciliosus	Long-tailed Hermit	jempe	W, S, J
	Phaethornis malaris	Great-billed Hermit	jempechau	W, A
	Doryfera ludovicae	Green-fronted Lancebill	mujaya jémpe	W
	Doryfera johannae	Blue-fronted Lancebill	mujaya jémpe	W
	Heliothryx auritus	Black-eared Fairy	pujúpat	W
	Heliangelus regalis	Royal Sunangel		W
	Coeligena torquata	Collared Inca		W
	Heliodoxa gularis	Pink-throated Brilliant		W
	Heliodoxa schreibersii	Black-throated Brilliant		W
	Heliodoxa aurescens	Gould's Jewelfront	jempe	W, S
	Heliodoxa leadbeateri	Violet-fronted Brilliant		W
	Klais guimeti	Violet-headed Hummingbird		W
	Campylopterus largipennis	Gray-breasted Sabrewing		W
	Thalurania furcata	Fork-tailed Woodnymph		W
	Chionomesa fimbriata	Glittering-throated Emerald		W
	Chrysuronia oenone	Golden-tailed Sapphire		W
Trogonidae	*Trogon personatus*	Masked Trogon	tajujam or tajukam	S, J
	Trogon melanurus	Black-tailed Trogon	chakua	A, S, J
	Trogon collaris	Collared Trogon	tajujam or tajukam	S, J
	Trogon viridis	Green-backed Trogon	tajujam, táwai	W, A, S, J
	Trogon curucui	Blue-crowned Trogon	kute	A, S, J
	Trogon rufus	Amazonian Black-throated Trogon	tajujam	A, S, J
	Trogon violaceus	Guianan Trogon	táwai, tajujam	W, A, S, J
	Pharomachrus antisianus	Crested Quetzal	kute	S, J
Momotidae	*Momotus momota*	Amazonian Motmot	yukuju, yukúju	A, S, J
	Electron platyrhynchum	Broad-billed Motmot	esát yukúju, yukúju	W, A, S, J
	Baryphthengus martii	Rufous Motmot	yukúju	W, A, S, J
Alcedinidae	*Megaceryle torquata*	Ringed Kingfisher	cháji	W
Galbulidae	*Jacamerops aureus*	Great Jacamar	jempemu	A, S, J
	Brachygalba lugubris	Brown Jacamar	kuimish	W
	Galbula chalcothorax	Purplish Jacamar	jémpeemu, shuate	W, A, S
	Galbula cyanescens	Bluish-fronted Jacamar	jémpeemu	W
	Galbula albirostris	Yellow-billed Jacamar	jémpeemu	W

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Bucconidae	*Notharchus tectus*	Pied Puffbird	wawik	A, S, J
	Notharchus hyperrhynchus	White-necked Puffbird	wawik	A, S, J
	Nystalus striolatus	Eastern Striolated Puffbird	apapajua	A, S
	Bucco capensis	Collared Puffbird	apapájua, shiik	W, A, S, J
	Bucco macrodactylus	Chestnut-capped Puffbird	wawik	W, A, S, J
	Bucco tamatia	Spotted Puffbird	shiik	A, S, J
	Malacoptila fusca	White-chested Puffbird	mujáya shiík	W
	Malacoptila fulvogularis	Black-streaked Puffbird		W
	Monasa nigrifrons	Black-fronted Nunbird	tiuju, tiju	A, S, J
	Monasa flavirostris	Yellow-billed Nunbird	tiuju, tiju	A, S, J
	Monasa morphoeus	White-fronted Nunbird	tíiju, tiju	W, S, J
	Nonnula brunnea	Brown Nunlet		W
Capitonidae	*Capito aurovirens*	Scarlet-crowned Barbet	puui	A, S, J
	Capito auratus	Gilded Barbet	takáikit	W, S, J
Ramphastidae	*Pteroglossus azara*	Ivory-billed Aracari	pinísh, pantam pinísh	W, A
	Pteroglossus castanotis	Chestnut-eared Aracari	pinísh, apu pinísh	A, S, J
	Pteroglossus pluricinctus	Many-banded Aracari	pinísh	A, S, J
	Aulacorhynchus prasinus	Northern Emerald Toucanet	ikáuk	W, A, S
	Aulacorhynchus derbianus	Chestnut-tipped Toucanet	ikáuk	W
	Selenidera reinwardtii	Golden-collared Toucanet	kajúntsam	W, A, S, J
	Ramphastos ambiguus	Yellow-throated Toucan	shaatak	A
	Ramphastos tucanus	White-throated Toucan	tsukagká	A, S, J
	Ramphastos vitellinus	Channel-billed Toucan	tsukagká, kejua	W, A, S, J
Picidae	*Picumnus lafresnayi*	Lafresnaye's Piculet	dái	W
	Melanerpes cruentatus	Yellow-tufted Woodpecker	tejashá	W, A, S, J
	Dryobates passerinus	Little Woodpecker	sawake	W
	Piculus leucolaemus	White-throated Woodpecker	sawake	W
	Colaptes rubiginosus	Golden-olive Woodpecker	sawake	W
	Celeus elegans	Chestnut Woodpecker	sawake	W, S, J
	Celeus torquatus	Ringed Woodpecker	dái	W, J
	Celeus undatus	Waved Woodpecker		W
	Dryocopus lineatus	Lineated Woodpecker	tátasham	W
	Campephilus pollens	Powerful Woodpecker	tátasham	S, J
	Campephilus haematogaster	Crimson-bellied Woodpecker	tátasham	A, S, J
	Campephilus rubricollis	Red-necked Woodpecker	tátasham	A, S, J
	Campephilus melanoleucos	Crimson-crested Woodpecker	tátasham kiakia	W

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Furnariidae	*Sclerurus mexicanus*	Middle American Leaftosser	yasag	W
	Sclerurus caudacutus	Black-tailed Leaftosser	tagtag	W
	Synallaxis maranonica	Marañon Spinetail		W
	Metopothrix aurantiaca	Orange-fronted Plushcrown		W
	Xenerpestes singularis	Equatorial Graytail		W
	Premnornis guttuliger	Rusty-winged Barbtail		W
	Ancistrops strigilatus	Chestnut-winged Hookbill		W
	Automolus subulatus	Eastern Woodhaunter		W
	Philydor pyrrhodes	Cinnamon-rumped Foliage-gleaner	ekemin kuíntam	W
	Thripadectes holostictus	Striped Treehunter		W
	Automolus ochrolaemus	Orange-throated Foliage-gleaner	ekemin kuíntam	W
	Automolus infuscatus	Olive-backed Foliage-gleaner	ekemin kuíntam	W
	Clibanornis rubiginosus	Ruddy Foliage-gleaner	ekemin kuíntam	W
	Automolus rufipileatus	Chestnut-crowned Foliage-gleaner	ekemin kuíntam	W
	Xenops tenuirostris	Slender-billed Xenops		W
	Xenops rutilans	Streaked Xenops		W
	Dendrocincla fuliginosa	Plain-brown Woodcreeper	kuíntam	W
	Glyphorynchus spirurus	Wedge-billed Woodcreeper	tushím	W
	Campylorhamphus trochilirostris	Red-billed Scythebill	kuíntam	S, J
	Dendrexetastes rufigula	Cinnamon-throated Woodcreeper	kuíntam	W, S, J
	Xiphocolaptes promeropirhynchus	Strong-billed Woodcreeper	apu kuíntam	W
	Dendrocolaptes picumnus	Black-banded Woodcreeper	kuíntam	W
	Xiphorhynchus guttatus	Buff-throated Woodcreeper	kuíntam	W
	Xiphorhynchus ocellatus	Ocellated Woodcreeper	kuíntam, tushím	W, S, J
	Xiphorhynchus elegans	Elegant Woodcreeper	tushím	S, J
	Xiphorhynchus triangularis	Olive-backed Woodcreeper	kuíntam	W
	Sittasomus griseicapillus	Olivaceous Woodcreeper	tushím	S, J
	Lepidocolaptes lacrymiger	Montane Woodcreeper	kuíntam	W
	Lepidocolaptes albolineatus	Guianan Woodcreeper	kuíntam	W
	Furnarius leucopus	Pale-legged Hornero	chijajai	J

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
	Taraba major	Great Antshrike	aénts págka	W, S, J
	Cymbilaimus lineatus	Fasciated Antshrike	tsejechík	W, A, S, J
	Frederickena unduliger	Undulated Antshrike	tsejechik	A, S, J
	Thamnophilus schistaceus	Plain-winged Antshrike	págka	W
	Thamnophilus cryptoleucus	Castelnau's Antshrike		W
	Thamnophilus caerulescens	Variable Antshrike		W
	Thamnophilus unicolor	Uniform Antshrike	págka	W
	Dysithamnus mentalis	Plain Antvireo		W
	Thamnomanes ardesiacus	Dusky-throated Antshrike		W
	Thamnomanes caesius	Cinereous Antshrike		W
	Megastictus margaritatus	Pearly Antshrike	chuchup	A, S, J
	Pygiptila stellaris	Spot-winged Antshrike		W
	Epinecrophylla haematonota	Rufous-backed Stipplethroat		W
	Epinecrophylla spodionota	Foothill Stipplethroat		W
	Epinecrophylla erythrura	Rufous-tailed Stipplethroat		W
	Myrmotherula brachyura	Pygmy Antwren	chunchuíkit	W
	Isleria hauxwelli	Plain-throated Antwren		W
	Myrmotherula axillaris	White-flanked Antwren	kunchácham	W
Thamnophilidae	*Euchrepomis humeralis*	Chestnut-shouldered Antwren	tempejuash	A, S, J
	Myrmotherula ignota	Moustached Antwren	chunchuikit	S, J
	Myrmotherula longipennis	Long-winged Antwren	ujushkutam	W
	Myrmotherula schisticolor	Slaty Antwren		W
	Hypocnemis peruviana	Peruvian Warbling-Antbird	wáakiam, wakiam	W, A, S, J
	Cercomacra cinerascens	Gray Antbird		W
	Cercomacroidesnigrescens	Blackish Antbird	kunchácham	W
	Cercomacroidesserva	Black Antbird		W
	Pyriglena leuconota	East Amazonian Fire-eye		W
	Myrmoborus myotherinus	Black-faced Antbird	ujikíach, tiigkísh	W, A, S, J
	Myrmochanes hemileucus	Black-and-white Antbird		W
	Myrmelastes leucostigma	Spot-winged Antbird	chíjikiau	W
	Sciaphylax hemimelaena	Chestnut-tailed Antbird	mujaya chíjikiau	W
	Myrmophylax atrothorax	Black-throated Antbird		W
	Akletos melanoceps	White-shouldered Antbird		W, J
	Myrmelastes hyperythrus	Plumbeous Antbird	kunchacham	W, J
	Pithys albifrons	White-plumed Antbird	kuncháu	W, A, S, J
	Pithys castaneus	White-masked Antbird		W
	Gymnopithys bicolor	Bicolored Antbird	kuncháu	W
	Rhegmatorhina melanosticta	Hairy-crested Antbird		W
	Hylophylax naevius	Spot-backed Antbird		W
	Willisornis poecilinotus	Common Scale-backed Antbird		W

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Formicariidae	*Formicarius rufipectus*	Rufous-breasted Antthrush	takinch	A
	Formicarius colma	Rufous-capped Antthrush	takinch	J
	Formicarius analis	Black-faced Antthrush	takinch	J
Grallariidae	*Grallaricula flavirostris*	Ochre-breasted Antpitta		W
	Grallaricula ferrugineipectus	Rusty-breasted Antpitta		W
	Myrmothera campanisona	Thrush-like Antpitta	puampua	A, S, J
Rhinocryptidae	*Liosceles thoracicus*	Rusty-belted Tapaculo	tagtag	A
Tyrannidae	*Phyllomyias cinereiceps*	Ashy-headed Tyrannulet		W
	Myiopagis caniceps	Gray Elaenia		W
	Elaenia flavogaster	Yellow-bellied Elaenia		W
	Elaenia albiceps	White-crested Elaenia		W
	Ornithion inerme	White-lored Tyrannulet		W
	Mecocerculus poecilocercus	White-tailed Tyrannulet		W
	Serpophaga cinerea	Torrent Tyrannulet		W
	Nessotriccus murinus	Southern Mouse-colored Tyrannulet	pakitagtag	W
	Pseudotriccus pelzelni	Bronze-olive Pygmy-Tyrant		W
	Corythopis torquatus	Ringed Antpipit		W
	Pogonotriccus ophthalmicus	Marble-faced Bristle-Tyrant		W
	Phylloscartes ventralis	Mottle-cheeked Tyrannulet		W
	Mionectes olivaceus	Olive-striped Flycatcher		W
	Mionectes oleagineus	Ochre-bellied Flycatcher		W
	Myiornis albiventris	White-bellied Pygmy-Tyrant		W
	Myiornis ecaudatus	Short-tailed Pygmy-Tyrant	pakitagtag	W
	Hemitriccus zosterops	White-eyed Tody-Tyrant		W
	Todirostrum cinereum	Common Tody-Flycatcher		W
	Todirostrum chrysocrotaphum	Yellow-browed Tody-Flycatcher	timpemush	W
	Rhynchocyclus olivaceus	Eastern Olivaceous Flatbill		W
	Platyrinchus mystaceus	White-throated Spadebill		W
	Platyrinchus coronatus	Golden-crowned Spadebill		W
	Platyrinchus platyrhynchos	White-crested Spadebill		W
	Myiophobus fasciatus	Bran-colored Flycatcher		W
	Myiobius villosus	Tawny-breasted Flycatcher		W
	Myiobius atricaudus	Black-tailed Flycatcher	tagkuík	W
	Terenotriccus erythrurus	Ruddy-tailed Flycatcher		W

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Tyrannidae	*Neopipo cinnamomea*	Cinnamon Manakin-Tyrant	jinimcham	W
	Lathrotriccus griseipectus	Gray-breasted Flycatcher		W
	Contopus virens	Eastern Wood-Pewee		J
	Contopus cooperi	Olive-sided Flycatcher		W
	Contopus fumigatus	Smoke-colored Pewee	piasha	W
	Contopus nigrescens	Blackish Pewee		W
	Sayornis nigricans	Black Phoebe	bishkig	W
	Onychorynchus coronatus	Royal Flycatcher	ujuchkutam	A
	Myiotheretes striaticollis	Streak-throated Bush-Tyrant		W
	Myiozetetes similis	Social Flycatcher		W
	Myiozetetes luteiventris	Dusky-chested Flycatcher		W, J
	Pitangus sulphuratus	Great Kiskadee	kántut, kistun, kistug	W, A, S, J
	Philohydor lictor	Lesser Kiskadee		W
	Myiodynastes maculatus	Streaked Flycatcher		W, S, J
	Tyrannus savana	Fork-tailed Flycatcher	wiumaj	A
	Tyrannus tyrannus	Eastern Kingbird		S, J
	Sirystes sibilator	Sibilant Sirystes		W, S, J
	Tyrannus melancholicus	Tropical Kingbird	suiwiwi	W, A, S, J
	Myiarchus swainsoni	Swainson's Flycatcher	tiwijam	J
	Attila spadiceus	Bright-rumped Attila		W
	Piprites chloris	Wing-barred Piprites		W
Tityridae	*Tityra semifasciata*	Masked Tityra	étsa	W, A, S, J
	Laniocera hypopyrra	Cinereous Mourner		W
	Pachyramphus polychopterus	White-winged Becard		W
Cotingidae	*Xipholena punicea*	Pompadour Cotinga		W
	Lipaugus vociferans	Screaming Piha	paípainch	W, A, S, J
	Rhytipterna simplex	Grayish Mourner		W
	Querula purpurata	Purple-throated Fruitcrow	pauwai	J
	Ampelion rubrocristatus	Red-crested Cotinga	tankauip, tankuip	A, S
	Pipreola frontalis	Scarlet-breasted Fruiteater		W
	Pipreola chlorolepidota	Fiery-throated Fruiteater		W
	Rupicola peruvianus	Andean Cock-of-the-rock	súgka	W, A, S
	Phoenicircus nigricollis	Black-necked Red-Cotinga	petsa	S
	Cephalopterus ornatus	Amazonian Umbrellabird	ugkum	W, A, S
	Gymnoderus foetidus	Bare-necked Fruitcrow	yampaim	A, S, J
	Cotinga cayana	Spangled Cotinga	auu	A, J
	Cotinga maynana	Plum-throated Cotinga	auu	A, S, J

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Pipridae	*Tyranneutes stolzmanni*	Dwarf Tyrant-Manakin	wiíshamau	W
	Machaeropterus regulus	Kinglet Manakin	pinchínam	W, A, S, J
	Lepidothrix coronata	Blue-capped Manakin	shítagkui, wisham (A)	W, A, S
	Manacus manacus	White-bearded Manakin	tashíjim	W, A, S, J
	Chiroxiphia pareola	Blue-backed Manakin	achayap	W, A, S, J
	Cryptopipo holochlora	Green Manakin	apu wiísham	W
	Pseudopipra pipra	White-crowned Manakin	kawia	W, A, S, J
	Pipra filicauda	Wire-tailed Manakin	chiagmach	A, S
	Ceratopipra erythrocephala	Golden-headed Manakin	achayap	W, A, S, J
Vireonidae	*Tunchiornis ochraceiceps*	Tawny-crowned Greenlet		W
	Pachysylvia hypoxantha	Dusky-capped Greenlet		W
Corvidae	*Cyanocorax violaceus*	Violaceous Jay	kíjuancham	W, A, S, J
Hirundinidae	*Tachycineta albiventer*	White-winged Swallow	kayashuigpit	W
Troglodytidae	*Campylorhynchus turdinus*	Thrush-like Wren	ungku	J
	Cyphorhinus arada	Musician Wren	kúgkup	W, A, S, J
	Henicorhina leucosticta	White-breasted Wood-Wren	chuíchuig, ujikiash	W, S, J
	Microcerculus marginatus	Scaly-breasted Wren	tiigkísh, tigkish	W, S, J
	Pheugopedius coraya	Coraya Wren		W
	Cantorchilus leucotis	Buff-breasted Wren		W
	Troglodytes aedon	House Wren	kúshukush	W, S, J
Polioptilidae	*Microbates cinereiventris*	Tawny-faced Gnatwren	tsanchíim	W
	Ramphocaenus melanurus	Long-billed Gnatwren	tsanchíim, purichik	W, A
	Polioptila plumbea	Tropical Gnatcatcher		W
Cinclidae	*Cinclus leucocephalus*	White-capped Dipper	yumbiau	A
Turdidae	*Myadestes ralloides*	Andean Solitaire		W
	Catharus ustulatus	Swainson's Thrush	kúpi	W
	Entomodestes leucotis	White-eared Solitaire		W
	Cichlopsis leucogenys	Rufous-brown Solitaire		W
	Turdus leucops	Pale-eyed Thrush		W
	Turdus maranonicus	Marañon Thrush		W
	Turdus albicollis	White-necked Thrush		W
	Turdus ignobilis	Black-billed Thrush	yukúpau, tímantim	W, J
Passerellidae	*Ammodramus aurifrons*	Yellow-browed Sparrow		W
	Arremon aurantiirostris	Orange-billed Sparrow	bashukit	W

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Thraupidae	*Ramphocelus carbo*	Silver-beaked Tanager	kanampúsh, canampush, chanke	W, A, S, J
	Ramphocelus nigrogularis	Masked Crimson Tanager	chágke, chanke	W, A, S, J
	Schistochlamys melanopis	Black-faced Tanager		W
	Schistochlamys ruficapillus	Cinnamon Tanager		W
	Cissopis leverianus	Magpie Tanager	píshi	W, A, S, J
	Creurgops verticalis	Rufous-crested Tanager		W
	Trichothraupis melanops	Black-goggled Tanager		W
	Loriotus cristatus	Flame-crested Tanager		W
	Tachyphonus surinamus	Fulvous-crested Tanager	wampagkít	W, J
	Loriotus luctuosus	White-shouldered Tanager	wampagkít	W, S, J
	Tachyphonus rufus	White-lined Tanager		W
	Lanio fulvus	Fulvous Shrike-Tanager	sechai	W
	Buthraupis montana	Hooded Mountain Tanager	tama	A
	Rauenia bonariensis	Blue-and-yellow Tanager	timantin	A
	Thraupis episcopus	Blue-gray Tanager	suísh, suwish	W, A, S, J
	Thraupis palmarum	Palm Tanager	suwish	W, A, S, J
	Calochaetes coccineus	Vermilion Tanager		W
	Wetmorethraupis sterrhopteron	Orange-throated Tanager	inchítuch	W, A, S
	Iridosornis analis	Yellow-throated Tanager	nugkagkit	A
	Iridosornis reinhardti	Yellow-scarfed Tanager		W
	Iridosornis rufivertex	Golden-crowned Tanager	wampagkit	A
	Tangara vassorii	Blue-and-black Tanager	tsanu	A
	Stilpnia nigrocincta	Masked Tanager	tsánu	W
	Stilpnia cyanicollis	Blue-necked Tanager	tsanu	W, A
	Ixothraupis xanthogastra	Yellow-bellied Tanager	dashípkit	W
	Tangara mexicana	Turquoise Tanager	bakakit	S
	Tangara chilensis	Paradise Tanager	semanchúk	W, A, S
	Tangara gyrola	Bay-headed Tanager	písumanch	W, A
	Tangara schrankii	Green-and-gold Tanager	bakakít	W, A
	Tangara velia	Opal-rumped Tanager		S
	Tersina viridis	Swallow Tanager	chaís	W, J
	Dacnis lineata	Black-faced Dacnis	tsejémna	W, A, S
	Dacnis flaviventer	Yellow-bellied Dacnis		W
	Dacnis cayana	Blue Dacnis		W
	Cyanerpes caeruleus	Purple Honeycreeper	jémpekit	W, A, S
	Cyanerpes nitidus	Short-billed Honeycreeper	jémpekit	A, S
	Chlorophanes spiza	Green Honeycreeper	ukúshkit, ukúnchkit	W, A, S
	Hemithraupis flavicollis	Yellow-backed Tanager	makuikuishi	W, S
	Conirostrum sitticolor	Blue-backed Conebill		W
	Conirostrum albifrons	Capped Conebill		W
	Diglossa mystacalis	Moustached Flowerpiercer		W
	Diglossa albilatera	White-sided Flowerpiercer	págka	W, S, J

Table A1. *Cont.*

Family	Species	Common Name	Aguaruna Name *	Location **
Thraupidae	*Saltator grossus*	Slate-colored Grosbeak	wichikaut	W, A, S, J
	Saltator maximus	Buff-throated Saltator	tsayag	W
	Volatinia jacarina	Blue-black Grassquit	nanchijam	J
	Sporophila americana	Wing-barred Seedeater	nagchijam	W
	Sporophila castaneiventris	Chestnut-bellied Seedeater	nanchijam	J
	Sporophila angolensis	Chestnut-bellied Seed-Finch		W, S, J
	Lanio fulvus	Fulvous Shrike-tanager	tsantsem	S, J
Cardinalidae	*Piranga flava*	Hepatic Tanager		W, S, J
	Piranga rubra	Summer Tanager	pichugkuch	W
	Piranga olivacea	Scarlet Tanager		W
	Habia rubica	Red-crowned Ant-Tanager		W
	Cyanoloxia cyanoides	Blue-black Grosbeak	nanchijam	W, J
Parulidae	*Setophaga pitiayumi*	Tropical Parula		W
	Setophaga ruticilla	American Redstart		W
	Geothlypis aequinoctialis	Masked Yellowthroat		W
	Cardellinacanadensis	Canada Warbler	chichakaim	W
	Myiothlypis luteoviridis	Citrine Warbler		W
	Myiothlypis fulvicauda	Buff-rumped Warbler	bijankísh	W
Icteridae	*Psarocolius angustifrons*	Russet-backed Oropendola	chuwi	A, S, J
	Psarocolius decumanus	Crested Oropendola	chuwi	W, A, S, J
	Psarocolius bifasciatus	Olive Oropendola	muun chuwi	A, S, J
	Cacicus cela	Yellow-rumped Cacique	teesh	W, A, S, J
	Amblycercus holosericeus	Yellow-billed Cacique	chuwitan	J
	Cacicus uropygialis	Scarlet-rumped Cacique	mujaya chuitam	A
	Molothrus oryzivorus	Giant Cowbird	tsantsentse	A, S, J
	Icterus cayanensis	Epaulet Oriole		W
	Icterus mesomelas	Yellow-tailed Oriole		W
	Icterus croconotus	Orange-backed Troupial	juitam	A, S, J
Fringillidae	*Euphonia laniirostris*	Thick-billed Euphonia	uushap	W, S, J
	Euphonia mesochrysa	Bronze-green Euphonia	táma	W
	Euphonia minuta	White-vented Euphonia	táma, ushap	W, A, S, J
	Euphonia xanthogaster	Orange-bellied Euphonia	uushap	W, S, J
	Euphonia rufiventris	Rufous-bellied Euphonia	kanajitsáka, tama uushap	W, A, S, J
	Euphonia chrysopasta	Golden-bellied Euphonia	uushap	S, J

* Aguaruna names follow [26]. ** Locations are coded as follow: W = Wawas-Anexo Wichim and Alto Wawas; A = Agkais, Ugkum, and Tatankus; S = Saasá, Tuntanain, and Yumigkus; J = Japaime Quebrada and Japaime Escuela.

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