AN ANNOTATED BIRD LIST FOR ALTO SAN LUIS
WITH A BRIEF DESCRIPTION OF THE BIRD COMMUNITIES

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INTRODUCTION
The habitats of the San Luis area include mature and regenerating forest in the protected areas of Alto San Luis, as well as agricultural and grazing lands and some forested areas in Bajo San Luis. Based on the Holdridge Life Zone System (1966), this area encompasses transitional dry forest in the lower sections of the valley, subtropical moist-wet forest in the lowest part of Alto San Luis and lower montane cloud forest above the waterfall and the Finca Buen Amigo loop trail. A quite different bird community can be encountered along the two kilometer walk through the San Luis watershed. Fogden stated in his Monteverde bird checklist (1993) that “the upper part of the San Luis Valley is wetter and cloudier. It is poorly known…” This remains the least studied area of Monteverde's Pacific slope. The goal with this list is to inform biologists, naturalists and the general public of the San Luis bird-fauna and to establish a database for the University of Georgia's new Research Station.

AREA
The Alto San Luis area encompasses birds from INVU (Instituto Nacional de Vivienda y Urbanismo) the Cementerio of Alto San Luis (800 m), the UGA property, Finca La Bella and Mauricio Ramirez’s farm. It is bordered by the cliff edge and Rio San Luis, and extends up to the cloud forest (1300m), accessed from the Upper Alondra, the San Luis waterfall, and the Buen Amigo farm.

The area surveyed does not include Bajo San Luis, the El Lajero dirt road connecting San Luis with the settlement of Monteverde, the highest section of the Buen Amigo loop trail or the highest parts of the Cliff Edge. Their inclusion would have increased the species total.

SITES
1-Bajo San Luis: Information for Bajo San Luis is not included in the bird checklist. However, it is close to Alto San Luis and there are some interesting species worth mentioning.

Many bird species of Bajo San Luis are similar to those of the tropical dry forest (such as the ones in the North Pacific lowlands), and are mostly absent from Alto San Luis. Examples of these species include the Olive Sparrow (Arremonops rufivirgatus), and the Cinnamon Hummingbird, (Amazilia rutila).

A noticeable number of Pacific mid-elevation bird species such as the Orange-billed Nightingale-Thrush (Catharus aurantirostris) are present in both Bajo and Alto San Luis.

A rocky river species, the Sunbittern (Eurypiga helias), inhabits the San Luis River. Ant swarms are attended by Gray-headed Tanagers (Eucometis penicilatta), Ruddy Woodcreepers...
(Dendrocincla homochroa), Brown Jays (Cyanocorax morio), Orange-billed Nightingale-Thrush (Catharus aurantiirostris), and Ivory-billed Woodcreepers (Xiphorhynchus flavigaster).

2-Alto San Luis: Since the U.G.A. Station, located in Alto San Luis, has resident and frequent visiting naturalists, it is better documented than other sites. The presence of altitudinal migrants, which descend to lower elevations from the continental divide or Atlantic slope during fruiting or flowering seasons, makes the bird fauna quite variable. Two examples are the Resplendent Quetzal (Pharomachrus mocinno) and the Three-wattled Bellbird (Procnias tricarunculata). Fruiting resources in corridors are very valuable, for they enable such birds to migrate.

3-Cloud forest (Waterfall, Upper Alondra and Buen Amigo): This area has the lowest temperatures, an almost nonexistent dry season and high moisture in the form of rainfall and mist. Elevation ranges from 1200m to 1400m. This area is composed of primary forest, late secondary growth and some grazing pastures. Mixed flocks are abundant.

METHODS AND INFORMATION SOURCES
1) Personal field observations around San Luis between 2000-2005, 3-6 months a year.
2) Mistnetting in the San Luis watershed for 3 weeks in February 2001 and two weeks in April-May of 2002.
3) Personal interviews with Nolan Zeide, Jill Parsell and Lucas Ramirez, three naturalists who have lived in the San Luis region and birded there on a regular basis.

The present list includes a total of 227 species. Twenty other species reported by naturalists or in the previous operation San Luis list have been deleted from this study, because their presence could not be verified. It is probable that more species will be found in San Luis, especially migrating birds and vagrants from other areas.

CONTENT OF THE CHECKLIST
Data presented in the bird list spreadsheet include:

1) The taxonomic classification (Order, Family and Species). The species name used here was taken from the American Ornithologist Union (AOU) 7th Checklist, published in 1998. However, the genus Columba was substituted for Patagienas, a recent taxonomic change.

2) Status: Five categories are used to classify birds; an avid birder might find the categories an oversimplification while a novice birder might experience difficulty finding a bird listed as common.

   Abundant: Seen or heard many times on a daily basis.
   Common: Seen or heard at least once a day.
   Uncommon: Seen or heard at least once a week.
   Rare: Seen or heard once a month or less.
   Accidental: Outside its normal range with only a few existing records.

3) Migration status.
4) Updated records for the Monteverde bird lists published in 2000 (Fogden).
5) Observations about the natural history and exact location of each bird seen in San Luis.
DIFFERENCES BETWEEN SAN LUIS AND OTHER AREAS WITH SIMILAR ELEVATION AND PRECIPITATION

The San Luis area has 4 attributes that make its watershed area different from the neighboring communities of Santa Elena, which some naturalists and biologists have “lumped” San Luis with. This area has been formely called Zone 1 (see Fogden 1993).

1) An influx of lowland dry species due to the lower elevation of the San Luis basin (the Station is at 1100m) and possibly the substantial amount of protected transitional dry forest at the San Luis Reserve. Therefore we find species characteristic of tropical deciduous forest that are absent or rare in the Monteverde area, such as the Plain-capped Starthroat (*Heliothrichus constantii*) and the Lesser Ground-Cuckoo (*Morococcyx erythropygus*).

2) An influx of Atlantic bird species that cross to the Pacific side through the Brillante Gap, (This probably doesn’t occur in the Santa Elena area because of the higher elevation of the continental divide there.) Species such as the Red-headed Barbet (*Eubucco bourcierii*), Crimson-collared Tanager (*Phlogothaupis sanguinolentus*), Slaty-tailed Trogon (*Trogon Massena*) and White ruffed Manakin (*Corapipo altera*) are absent from the Santa Elena area but are seen infrequently at the Station and on a more frequent basis at along the waterfall trail and at Finca Buen Amigo.

3) The presence of small ponds, like Laguna Guayabos and a small pond on Mauricio Ramirez’s property, not characteristic of the Monteverde area. This provides some aquatic habitat for waterbirds such as the Least Grebe (*Tachybaptus dominicus*), and the Great Blue Heron (*Ardea herodias*).

4) The San Luis river where we find riverine species such as the Torrent Tyrannulet (*Serpophaga cinerea*), and American Dipper (*Cinclus mexicanus*).

SPECIES ABUNDANCE AND TRENDS

Open and semiopen areas are considered to favor North-American migrants. Since San Luis has semiopen forests as well as second growth and edges, it attracts a fair number of North American migrants including warblers, vireos, and flycatchers.

The high bird diversity documented in the San Luis watershed could be attributed to its location along an altitudinal gradient (700 to 1400m). Elevation changes cause species turnover. The number of species of wrens, warblers, woodcreepers, galliforms, hummingbirds, trogons and flycatchers seems constant throughout the elevational gradient, but species of toucans, icterids, falcons, and cuckoos are more abundant in lower elevations. Tanagers are less common in the lower elevations and barbets and ovenbirds are absent altogether from the lower parts of San Luis.

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REFERENCES