

**Table S2.** Phenotypic characteristics of eastern and western Amazonian populations of target species. Descriptions based on Restall et al. (2006). EC = Ecuador, FG = French Guiana.

Species	Subspecies EC	Subspecies FG	Phenotype EC	Phenotype FG	Phenotypic score
<i>Geotrygon montana</i>	<i>G. m. montana</i>	<i>G. m. montana</i>	No differences reported.	No differences reported.	1
<i>Phaetornis bourcierii</i>	<i>P. b. bourcierii</i>	<i>P. b. whitelyi</i>	Whitish throat, pale buffy flanks, more greenish crown, golden-buffy edges to uppertail-coverts.	Buffy throat and flanks; paler edges to uppertail-coverts	2
<i>Campylopterus largipennis</i>	<i>C. l. aequatorialis</i>	<i>C. l. largipennis</i>	White restricted to tip of rectrices.	White distal half of tail.	3
<i>Thalurania furcata</i>	<i>T. f. viridipectus</i>	<i>T. f. furcata</i>	Male: nape green; green gorget extends to breast; undertail-coverts fringed white.	Male: nape blue; gorget restricted to throat; undertail-coverts fringed pale blue.	4
<i>Trogon rufus</i>	<i>T. r. sulphureus</i>	<i>T. r. rufus</i>	Eye ring yellow in both sexes; male breast green; male tail reddish-coppery with green subterminal and black terminal bands.	Eye ring blue in both sexes; male breast cobalt-blue; male tail pale-olivaceous green with black terminal band.	4
<i>Chloroceryle aenea</i>			No differences reported.	No differences reported.	1
<i>Momotus momota</i>	<i>M. m. microstephanus</i>	<i>M. m. momota</i>	Nape violet-blue.	Nape rufous.	4
<i>Galbula albirostris</i>	<i>G. a. chalconocephala</i>	<i>G. a. albirostris</i>	Male: crown reddish-purple, chin partially dusky, underparts deep rufous.	Male: crown deep maroon, chin buff, underparts cinnamon.	3
<i>Philydor erythrocerum</i>	<i>P. e. subfulvum</i>	<i>P. e. erythrocerum</i>	Generally paler, with eyebrow and throat pale buffy, underparts washed more greyish-olive.	Generally more rufescent, more rufous on rump, eyebrow more orange.	2
<i>Automolus ochrolaemus</i>	<i>A. o. turdinus</i>	<i>A. o. turdinus</i>	No differences reported.	No differences reported.	1
<i>Xenops minutus</i>	<i>X. m. obsoletus</i>	<i>X. m. ruficaudus</i>	Whitish throat more extensive, and feathers have fine brownish fringes; some chest streaking.	Darker crown; narrow buff streaks and broader brown fringes to throat feathers; obvious chest streaking.	2
<i>Sclerurus mexicanus</i>	<i>S. m. peruvianus</i>	<i>S. m. macconelli</i>	Rump and upper tail coverts almost concolorous with back; orange only on throat.	Rump and uppertail-coverts bright rufous; orange-rufous of throat extends to breast and belly.	3
<i>Dendrocincla fuliginosa</i>	<i>D. f. neglecta</i> / <i>D. f. phaeochroa</i>	<i>D. f. fuliginosa</i>	Slightly darker and more olivaceous above; whiter throat; no streaks on throat; no postocular markings; legs and feet blue-grey.	Chin and throat buffy, flecked dusky and white, with pale shaft streaks; postocular row of tawny-orange spots; legs and feet black.	4
<i>Glyphorhynchus spirurus</i>	<i>G. s. castelnaudii</i>	<i>G. s. spirurus</i>	Variable, throat cinnamon, generally darker, more olivaceous below; shorter, stouter bill.	Chin and throat pale orange, scaled dark olive, pale buffy spots on breast large and diamond-shaped, fine streaks on belly.	3
<i>Thamnomanes ardesiacus</i>	<i>T. a. ardesiacus</i>	<i>T. a. obidensis</i>	Male: black restricted to chin.	Male: full black chin and throat.	3
<i>Thamnomanes caesioides</i>	<i>T. c. glaucus</i>	<i>T. c. glaucus</i>	No differences reported.	No differences reported.	1

<i>Myrmotherula axillaris</i>	<i>M. a. melanea</i>	<i>M. a. axillaris</i>	Male: much blacker above, charcoal rather than slate, and black more extensive on vent, wings and tail darker and undertail-coverts with a little black on centres; less white on flanks. Female: olive above, darker on sides, paler below.	Male: slate grey above with white outer fringes to scapulars; undertail-coverts subterminally black with white fringes. Female: rufescent olive above.	3
<i>Myrmotherula longipennis</i>	<i>M. l. zimmeri</i>	<i>M. l. longipennis</i>	Female: head darker greyish-olive, back bluish-grey, wings and tail darker with more contrasting cinnamon spots on wings; cinnamon below.	Female: olive-brown above with slight greyish tone, rufous-buffy fringes to wing-coverts and tips of tail; whitish belly.	4
<i>Myrmotherula menetriesii</i>	<i>M. m. pallida</i>	<i>M. m. cinereiventris</i>	Male: uniform grey. Female: grey above, tinged olive, underparts rich cinnamon.	Male: slightly darker, with occasional black dot on breast. Female: brownish-olive above, distinctly paler ochraceous below with slight grey wash on flanks.	4
<i>Hypocnemis cantator</i>	<i>H. c. saturata</i>	<i>H. c. cantator</i>	Yellow throat to breast, with a few deliberate black streaks on sides; brighter rufous below.	White chin to belly, with some streaking; flanks to undertail-coverts rich rufous.	4
<i>Hylophylax naevius</i>	<i>H. n. theresae</i>	<i>H. n. naevius</i>	More extensive black and more extensively streaked pale on back; more extensively streaked black below; larger white tips to tail.		2
<i>Hylophylax poecilinotus</i>	<i>H. p. lepidonotus</i>	<i>H. p. poecilinotus</i>	Female: entire underparts pale rufous, yellowish-ochre belly.	Female: top and sides of head deep rufous; chin tinged pale rufous; throat white; breast to undertail-coverts grey, tinged pale rufescent on flanks; thighs rufous.	4
<i>Pithys albifrons</i>	<i>P. a. peruvianus</i>	<i>P. a. albifrons</i>		Narrow white postocular line. [Note: Grey nape, as described in Restall et al. 2006, is an error]	4
<i>Formicarius colma</i>	<i>F. c. nigrifrons</i>	<i>F. c. colma</i>	Black usually to forecrown; legs and feet vinaceous	Black restricted to forehead; legs and feet dark vinaceous	2
<i>Formicarius analis</i>	<i>F. a. zamorae</i>	<i>F. a. crissalis</i>	Very dark with intense colours, very small white loreal spot.	Palest race, bright pale chestnut patch behind ear-coverts and large white loreal spot.	4
<i>Conopophaga aurita</i>	<i>C. a. occidentalis</i>	<i>C. a. aurita</i>	Male: darker above with heavy black scallops, rufous more extensive on breast. Female: white chin.	Fine black scallops on back and belly mainly clear white. Female: white chin and throat.	3
<i>Mionectes oleagineus</i> / <i>M. macconelli</i>	<i>M. o. hauxwelli</i>	<i>M. m. macconelli</i>	Olive above with two diffuse ochraceous wingbars.	Dark olive-green above, with no wingbars.	4
<i>Corythopis torquatus</i>	<i>C. t. sarayacuensis</i>	<i>C. t. anthoides</i>	Crown concolorous with brownish-olive back.	Slightly smaller; crown slate grey.	2
<i>Rhynchocyclus olivaceus</i>	<i>R. o. aequinoctialis</i>	<i>R. o. guianensis</i>	Yellow fringes to wing-coverts.	Yellow-ochre fringes to wing-coverts.	2
<i>Platyrinchus coronatus</i>	<i>P. c. coronatus</i>	<i>P. c. gumia</i>		Smaller, with brighter yellow belly.	2
<i>Myiobius barbatus</i>	<i>M. b. barbatus</i>	<i>M. b. barbatus</i>	No differences reported.	No differences reported.	1

<i>Pipra erythrocephala</i>	<i>P. e. berlepschi</i>	<i>P. e. erythrocephala</i>	Uniform yellow head with narrow, sharply defined red border.	Orange head with variable reddish suffusion.	3
<i>Dixiphia pipra</i>	<i>D. p. coracina</i>	<i>D. p. pipra</i>	Male: grey bases to white feathers. Female: clean grey top of head and nape, whitish-yellow head-sides, bright yellowish bellow.	Male: pure white cap. Female: olive-green above with greyish tone to head, grey underparts washed olive-green, slightly paler on belly and vent.	4
<i>Schiffornis turdina</i>	<i>S. t. aenea</i> (E slope of Andes) / <i>S. t. amazona</i> (NE lowlands)	<i>S. t. wallacii</i>	<i>S. t. aenea</i> has browner crown than <i>S. t. amazona</i> .	Like <i>amazona</i>	2
<i>Hylophilus ochraceiceps</i>	<i>H. o. ferrugineifrons</i>	<i>H. o. luteifrons</i>	Tawny forecrown; grey underparts washed narrowly olive on sides and flanks; eyes yellowish white.	Yellowish-rufous forecrown; throat greyish or yellowish-white, buffier below, specially on breast; eyes brown.	4
<i>Cyphorhinus arada</i>	<i>C. a. salvini</i>	<i>C. a. arada</i>	Lacks bold streaks on mantle; bright chestnut eyebrow starts at lores and supraloral, bright chestnut from chin to breast and sides; rest of underparts deep chestnut-brown but not as dark as upperparts; lacks barring on undertail coverts.	Nape and mantle streaked with long white "teardrops", postocular white eyebrow washed chestnut, lower breast and upper belly pale buffy, breast-sides, flanks and lower belly to undertail-coverts brown with black streaks on sides; barring on undertail coverts	4
<i>Microcerculus bambla</i>	<i>M. b. albigularis</i>	<i>M. b. bambla</i>	Similar to <i>bambla</i> , but evenly and finely barred from forehead to uppertail-coverts; very pale grey chin and throat; grey breast and sides	Slightly greyish-brown above with regular and even black bars on rump to uppertail-coverts, throat broadly mauve-grey.	4
<i>Turdus albicollis</i>	<i>T. a. spodiolaemus</i>	<i>T. a. phaeopygus</i>	More rufous -olive above and heavier throat streaking; lower mandible yellow; legs and feet dark horn.	Bill black, legs and feet grey.	4
<i>Lanio fulvus</i>	<i>L. f. peruvianus</i>	<i>L. f. fulvus</i>		Generally more fulvescent, with only nape bright yellow.	2
<i>Tachyphonus surinamus</i>	<i>T. s. brevipes</i>	<i>T. s. surinamis</i>	Male: buffy-white pectoral tuft. Female: paler below, creamy buff to pale cinnamon on undertail-coverts.	Male: crest longer with a few black tips to central feathers, pectoral tufts white. Female: pale cinnamon below with cinnamon undertail coverts; eye-ring more prominent.	2
<i>Cyanocompsa cyanooides</i>	<i>C. c. rothschildii</i>	<i>C. c. rothschildii</i>	No differences reported.	No differences reported.	1