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OTUS PETERSONI, A NEW SCREECH-OWL FROM THE EASTERN ANDES, WITH SYSTEMATIC NOTES ON *O. COLOMBIANUS* AND *O. INGENS*

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ABSTRACT.—*Otus petersoni*, the Cinnamon Screech-Owl, is described and named in honor of Roger Tory Peterson. This small owl is now known from ten specimens and four localities in the cloud-forests of extreme northern Peru and southern Ecuador. Its plumage variation, reproductive information, habitat and ecology, voice, and systematic relationships are discussed. The closest living relative of the new form appears to be *O. colombianus*, the Colombian Screech-Owl, until now thought to be a subspecies of *O. ingens* but recognizable as a distinct species, primarily by its large size and proportionately long, bare tarsi. We suggest that *petersoni* and *colombianus* are sister taxa within a species-group of brown-eyed forms, including two other Andean taxa (*ingens* and *marshalli*) and a lowland, Amazonian species (*watsonii*). The names "*aequatorialis*" and "*minimus*" are synonyms of nominate *ingens*. *Received 11 Nov. 1984, accepted 31 Oct. 1985.*

In 1976 a joint field party from Princeton University and Louisiana State University returned to the Cordillera del Cóndor, a mountain ridge in extreme northern Peru where two undescribed bird species had been discovered the previous year (Bar-winged Wood-Wren [*Henicorhina leucoptera*], and Royal Sunangel [*Heliangelus regalis*], Fitzpatrick et al. 1977, 1979). This second expedition proved equally rewarding, producing numerous southerly range extensions of known Ecuadorian forms (see Parker et al. 1985) and two additional undescribed species (including the Cinnamon-breasted Pygmy-Tyrant [*Hemitriccus cinnamomeipectus*], Fitzpatrick and O'Neill 1979). Here we describe the second of these new species, a small screech-owl (see Frontispiece) that has since been collected at three other sites in Peru and southern Ecuador. The species may even

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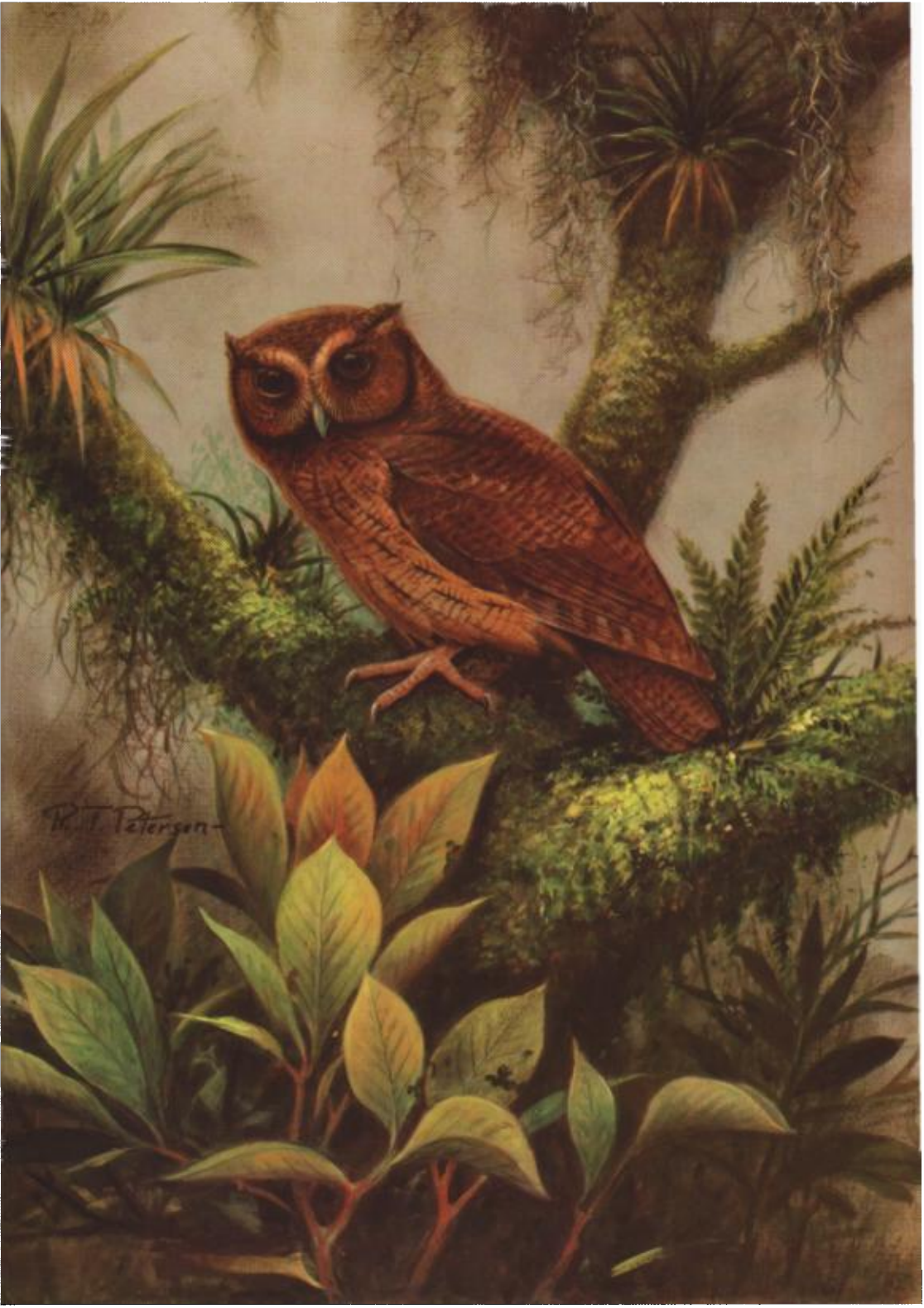

Cinnamon Screech-Owl, *Otus petersoni,*
a new species from the eastern Andean cloud forest.
Painting by Roger Tory Peterson after whom the species is named.

occur as far north as Colombia, based on the recent discovery by M. Robbins of an old "Bogota" specimen in the collection of the Academy of Natural Sciences of Philadelphia.

An investigation of the systematic relationships of the new species led us to discover that the form currently known as the Rufescent Screech Owl (*Otus ingens*) actually constitutes two full species, one of them endemic to the Pacific slope cloud forests of Colombia and Ecuador. Relationships in this species group and within *O. ingens* are discussed following our description of the new form.

Otus petersoni sp. nov.

CINNAMON SCREECH-OWL

HOLOTYPE.—American Museum of Natural History No. 824049; adult male from the Cordillera del Cóndor, above San José de Lourdes, Dept. Cajamarca, Peru, 5°02'S, 78°51'W, elevation 1950 m; collected and prepared 17 July 1976 by John W. Fitzpatrick, field number 76-041.

DIAGNOSIS.—A small *Otus* characterized by warm buffy-brown plumage throughout, ear tufts of medium length, a narrow, buffy nuchal collar, nearly fully feathered tarsi, and dark brown irides. Strikingly similar in coloration to *Otus "ingens" colombianus* but much smaller (wing chord 153.0–165.5 mm versus 176.5–192.0 mm, Table 1), distal half of tarsus sparsely feathered nearly to toes instead of bare, legs and toes of dried specimens proportionately shorter and more slender, ear tufts less pronounced, facial disc slightly darker with more conspicuous blackish edges, and breast less vermiculated. Differs from *O. ingens* by much smaller size (Table 1), breast and belly feathers much less vermiculated, warm buffy-brown rather than dark brown dorsal plumage, and by complete absence of white on any body or wing feathers, the palest color on *petersoni* being a rich, warm buff. Best distinguished from *O. watsonii* (red phase is most similar) by sparse rather than ample feathering on distal portion of tarsus, and by ear tufts of short to medium length and buffy-brown instead of long, pointed, and blackish on most specimens of *watsonii*; also by generally warmer buff coloration, less conspicuous blackish edge of facial disc, and nasal and inter-orbital tufts pale buff, not blackish as in most *watsonii*. Best distinguished from the similar-sized *O. marshalli* by absence of large white spots, separated by dark transverse barring, on the underparts; also lacks the contrasting black rim around facial disc and the white scapular spots of *marshalli*.

DISTRIBUTION.—Forested eastern foothills of the Andes from southern Ecuador (Cordillera del Cutucú) south to northern Peru in the departments of Piura (Playón), Cajamarca (type locality), and Amazonas (12–20 km east of La Peca), at elevations between 1690 and 2450 m. Possibly the Andes of Colombia ("Bogota" trade skin).

DESCRIPTION OF THE HOLOTYPE.—Dorsal coloration cinnamon-brown, closest to Raw Umber (Color 223; capitalized colors from Smithe 1975, 1981) but slightly buffier; feathers of crown and dorsum finely vermiculated with double, wavy bars, alternating between dark brownish and paler, buffy brown, the distal darker bars breaking up into mottling on most feathers. Nuchal collar pale buff, these feathers tipped with one to three darker-brown bars. Crown only slightly darker brown than back, but lacking the soft buffy undercoat present throughout the dorsum. Ear tufts of moderate length (longest feather 29 mm), buffy at base and brownish, mottled blackish, toward tips. Scapulars largely unmarked, closest to pale Cinnamon (Color 123A), forming a row of rich, light buffy patches between dorsum

TABLE 1

MEASUREMENTS (MM) OF *OTUS PETERSONI*, *O. COLOMBIANUS*, AND *O. I. INGENS*[a]

	Wing chord	Tail	Tarsus	Middle toe[b]	Culmen	Weight[c]
Males						
petersoni (6)	157.0 (153–165.5)	85.6 (81–90)	27.2 (25–29)	20.2 (19–22)	21.5 (21–22.5)	97 (6) (88–119)
colombianus (4)	181.5 (175–186)	93.5 (90–96)	35.8 (34–37)	24.2 (23–25)	25.4 (24–27.5)	153 (2) (150–156)
i. ingens[d] (19)	192.0 (183.5–200)	101.2 (94–106)	32.2 (31–34.5)	24.8 (23.5–26)	24.2 (23–26.5)	154 (7) (134–180)
Females						
petersoni (3)	157.3 (155–161.5)	86.8 (85–90.5)	27.5 (26.5–29)	19.3 (18–20)	21.5 (21–22)	98 (3) (92–105)
colombianus (5)	181.2 (176.5–185)	98.5 (95–103)	34.2 (33–36)	23.6 (23–24)	24.8 (24.5–25)	"210" (1) (210)
i. ingens[d] (9)	196.0 (188–208)	106.1 (102–112)	33.1 (32–34.5)	25.5 (24–26)	24.1 (23–25.5)	182 (5) (140–"223")
Unknown sex						
petersoni (1)	165.0	85.0	29.0	19.5	20.5	–
colombianus (1)	185.0	95.0	33.0	23.0	23.5	–

[a] Means are shown with ranges in parentheses below each entry; coefficients of variation ranged from 2 to 6%.

[b] Middle toe measured from distal end of tarsus to base of nail.

[c] Weight in grams; sample sizes for body weights precede the range, all other sample sizes in parentheses following name of taxon; weights in quotes represent females with yolking eggs in oviduct.

[d] *Otus i. ingens* includes "*minimus*" and "*aequatorialis*," but not *venezuelanus*; represents all specimens from Colombia (except Cerro de Perijá), Peru, and Bolivia.

and wing. Tertials and wing coverts same pattern as back, but background color slightly paler brown, the wavy crossbars not as dark. Outer webs of remiges banded with alternating bars of pale Antique Brown (Color 37) and dark Raw Umber to blackish, each bar about 6 mm wide. Inner webs mostly dusky, broken by increasingly pronounced bars of pale Antique Brown along distal third, the final bar (11–13 mm) forming a broad pale tip finely mottled with dusky flecks. Tail banded brown and blackish (eight bands of each), the distal darker bands breaking up into indistinct mottling. Facial discs warm brown like back, most feathers finely barred blackish (4–5 bars on each feather), discs becoming blackish near rims. Superciliary area and interorbital tufts pale, warm buffy tipped with brownish mottling; facial tufts with long, dark brown rachises forming stiff bristles about bill. Entire underparts strongly and uniformly suffused with rich, warm buffy, closest to Cinnamon (Color 39). Feathers of throat and breast finely mottled with wavy bands of warm, dark brown; lower breast, belly, and flanks almost solid Cinnamon, but each feather with a conspicuous dark brown shaft streak and one to three thin, wavy transverse brown bars near the distal end. Belly and crissum solid Cinnamon. Tarsi feathered to within 5 mm of toes, Cinnamon faintly mottled brownish, distal feathering becoming sparse. Soft part colors in life: irides dark brown, bill pale grey-green, toes pale pinkish flesh.

MEASUREMENTS OF HOLOTYPE.—Wing chord 156.0 mm; central rectrices 87.0 mm; tarsus 26.5 mm; culmen, base to tip 21.5, anterior edge of nostril to tip 10.3 mm; weight 88 g.

SPECIMENS.—Peru: AMNH (holotype); FMNH 317314 (♂) from type locality, 2450 m; LSUMZ 87093 (♂), -94 (♀), -95 (♀), -96 (♂), from 12–20 km by trail east of La Peca, Dept. Amazonas, 1830–2030 m; LSUMZ 87097 (♀) from Playón, 2 km south of El Carmen on Río Samaniego, Dept. Piura, 1695 m. Ecuador: ANSP 176694 (♂) and -95 (♂), both from west slope of Cordillera del Cutucú, south of trail from Logroño to Yaupi, 2225 m. Colombia?: ANSP 2439 (unsexed), from "Bogota."

ETYMOLOGY.—We are pleased to name this species in honor of Roger Tory Peterson, in recognition of his many lasting contributions to field ornithology, conservation, and wildlife art, both to us personally and throughout the world.

REMARKS

Variation among paratypes.—Nine specimens are available from four known localities. A tenth specimen, labelled "Bogota," recently was discovered by M. Robbins within a tray of unidentified *Otus* at ANSP. The otherwise typical body plumage of one male (FMNH 317314) includes numerous downy feathers that are paler and more heavily barred than on other specimens. Its testes were small (2 × 1 mm). Presumably this specimen was completing first prebasic body molt when collected. All other specimens appear to be in adult plumage. Sexual dimorphism, if present at all, is slight (Table 1).

As is typical in most *Otus,* substantial individual variation exists in details of adult plumage. Discrete color phases are less apparent than in many species, perhaps masked by the strong suffusion of cinnamon throughout all specimens. The specimens, however, do span a range from "brown" through "red" color types. The extremes are nearly as different from one another as the color phases in truly polymorphic screech-owls.

In *petersoni,* however, most specimens exhibit mosaics of intermediate characters. In the brownest extreme (the holotype), the dark shaft streaks on breast and belly are thin, fine lines transversed by numerous, well-defined brown cross-bars. On most other specimens, especially the reddish ones, these shaft streaks are broad and the crossbars are diffuse and less numerous. In the reddest specimen (ANSP 176694) the cross bars are mostly replaced by broad, diffuse patches of dark rufous, making the breast and upper belly almost solid rufous-brown. In this specimen, the crown, mantle, and inner remiges are dark rufous-brown, almost lacking any crossbars. In contrast, the brownest specimens are highly vermiculated dorsally and on the exposed edges of the remiges. Those specimens with the reddest facial discs lack the fine, dark facial barring of the browner specimens. In general, the obsolescence or loss of fine barring and dark vermiculations among the reddest specimens matches the pattern found among other, polymorphic *Otus* in which red phases occur (Marshall 1967).

Despite the variation from reddish to brownish, all ten specimens share the rich cinnamon undercoat, down, and background coloration. Except for a few small, whitish feather tips in the malar region of the reddest specimens (especially ANSP 176694), no specimen has any white on it whatsoever. In general, the intensity of the cinnamon-buff ground coloration is uniform across the underparts of each specimen, and it matches the color of the unbarred scapulars in each case. The darkest underparts belong to the reddest specimens, and the palest belong to a light reddish-brown male (LSUMZ 87093).

Breeding and molt.—All specimens were collected between 7 July and 16 August (in 1976, 1978, and 1984). The largest testes (those of the holotype) measured 7 × 4 mm on 17 July 1976. Those of the five other males varied from 1 × 2 mm to 4 × 4 mm. The ovaries of one female (LSUMZ 87097) collected 11 July 1978 appeared slightly enlarged, but no follicles exceeded 2 mm. We surmise that July and August, which are dry season months, are substantially past the annual breeding season of *O. petersoni.* This is supported by the existence of a first-year individual nearly in adult plumage on 28 July 1976, as mentioned above. Furthermore, light body molt was present on virtually all the specimens. One of the Ecuadorian specimens was replacing its innermost three pairs of rectrices, and the other had newly emerged ninth and tenth primaries (both specimens collected on 10 July 1984).

Habitat and ecology.—The habitat at the type locality is described in detail in Fitzpatrick et al. (1977, 1979). The Cordillera del Cóndor is an isolated ridge rising to about 2500 m, forming a border between Peru and Ecuador over most of its length. It is capped by subtropical forest, en-

shrouded by clouds over much of the day above 1900 m. The exposed, leached sandstone ridges harbor an unusually stunted forest that is poor in both bird and plant diversity (Fitzpatrick et al. 1977). The Cordillera del Cutucú, due north of the C. del Cóndor, is a northerly massif of the same line of isolated ridges. These two sister ridges are separated by a deep valley at the headwaters of the Rio Santiago. The habitat on the Cutucú at 2225 m was humid, mossy cloud forest (M. Robbins, T. Schulenberg, and F. Gill, pers. comm.). Southeast of the type locality, across the Río Marañon, lies another, even larger isolated massif east of Bagua (Cordillera Colán). In 1978 an LSUMZ party collected four specimens of *petersoni* between 1830 and 2030 m, also in cloud-forest.

An important additional specimen (LSUMZ 87097) was mist-netted "in second growth" at about 1695 m on the eastern slopes of the main Andes (Playón), approximately 50 km west of the type locality. This specimen indicates that *petersoni* is not entirely restricted to the isolated eastern ridges (Fig. 1), as certain other taxa in this region appear to be.

At two localities in Peru and the single locality in Ecuador (Fig. 1), the closely related *O. ingens* was collected along with *petersoni.* Overall, specimen records indicate that *ingens* occupies elevations slightly below those of *petersoni* (Fig. 2). Although they were collected at identical sites in three places, we suspect that *petersoni* generally occurs slightly higher on the mountain than does *ingens* where the two species are sympatric. In this respect, *petersoni* probably geographically replaces the newly described Cloud-forest Screech-Owl (*O. marshalli*), which occurs above *ingens* on eastern Andean massifs in the Peruvian departments of Pasco and Cuzco (Weske and Terborgh 1981, Schulenberg et al. 1984) (Fig. 1).

Voice.—On 23 July 1976 O'Neill recorded vocalizations of an unidentified screech-owl in the vicinity of the type locality, at 2200 m. These sounds are similar to a distant recording made by Schulenberg and Robbins on the Cordillera del Cutucú, uttered in response to playback by a male *petersoni* that was collected (ANSP 176694). O'Neill's excellent recording (Cornell Laboratory of Natural Sounds No. 18048) contains ten full, natural songs and several shorter phrases that apparently represent a second call type. All the songs are similar, consisting of a simple, long series of separate notes (range = 29–39, $\bar{x}$ = 34) delivered in rapid succession (0.15-sec intervals) sliding slightly up the scale about half a musical note, holding there for about 20 notes, then fading and sliding back to the original pitch. The entire phrase lasts 4.8–5.8 sec depending on the

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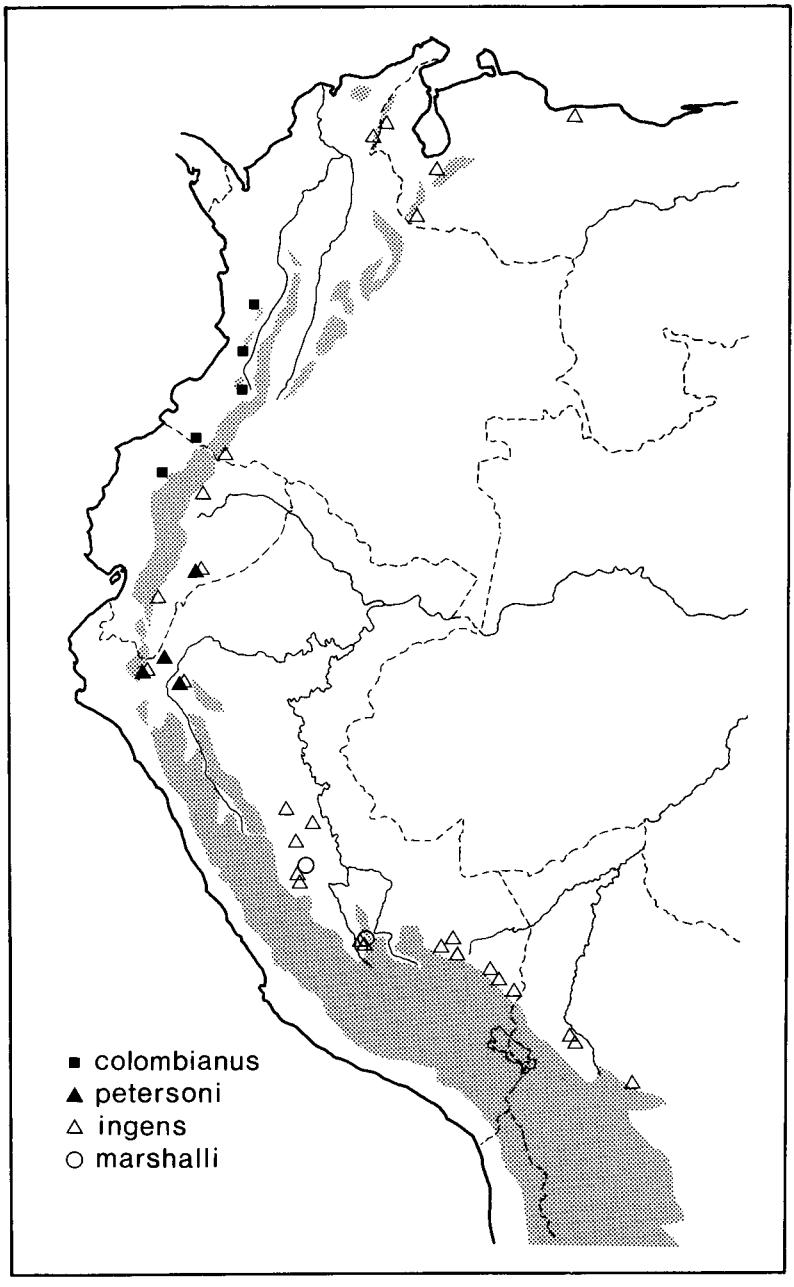
FIG. 1. Known distributions of four Andean species of *Otus* that possess dark-brown eyes. Individual localities are plotted for all specimens known to the authors (voice recordings



only for one locality of *ingens* in Venezuela). Stippling delineates area above 3000-m elevation.

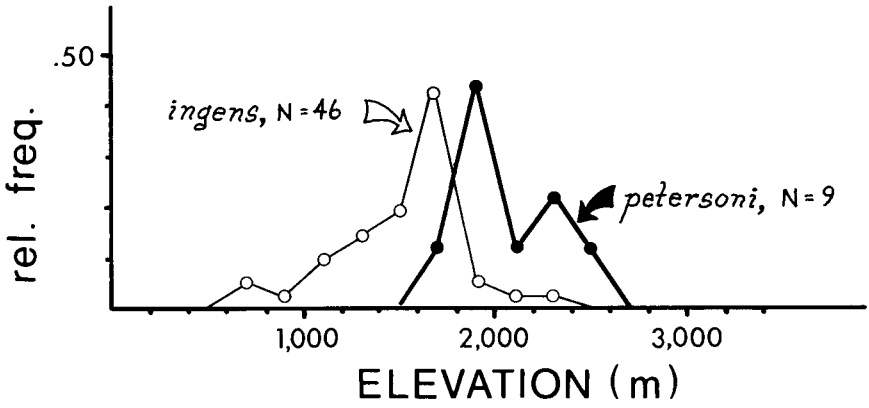


FIG. 2. Relative frequency of occurrence at different elevations (200-m intervals) for 46 specimens of *Otus ingens* and 9 specimens of *O. petersoni.*

number of notes uttered. No change in cadence occurs within the phrase. Volume increases gradually from quite faint introductory notes to a constant level at about the tenth note, in conjunction with the gradual, half-note increase in pitch. The pitch begins to descend at about note 27–30. The volume remains at its maximum for a few of these final notes, then fades off on the last two or three notes. Natural intervals between songs on O'Neill's recording range from 27 to 60 sec (mean = 44 sec). In Schulenberg's recording, the song is quieter, faster, and shorter than the one described above. It appears to be a "whisper-song," as the individual was at close range and was calling in response to playback of the second call type, described below (T. Schulenberg, pers. comm.).

The second call type consists of one to six notes that appear as inverted "U's" on the sonogram. These are longer notes than those in the primary song, each one an explosive whistle that rises and falls sharply. This note is uttered singly at several points on O'Neill's recording (perhaps by a second individual?). One time, a series of six such notes is uttered, about one note per sec, with the first and final ones softer than the middle four. A similar note appears in Schulenberg's recording of the Ecuadorian individual.

Systematic relationships.—The closest relatives of *petersoni* appear to be the other brown-eyed *Otus* of South America: *ingens, watsonii* (Tawny-bellied Screech Owl), and *marshalli.* As discussed below, the form described as *Otus ingens colombianus* by Traylor (1952) also belongs in this group, as a full species. Among New World *Otus,* the only other brown-eyed species is *flammeolus* of North and Middle America, a tiny species

whose systematic affinities within the genus remain unclear. The South American brown-eyed forms all have tawny-buff down and under-color, instead of whitish as in most members of the genus. They also have moderate to long ear tufts, and their primary songs—so far as known—consist of series of simple notes uttered nearly on a monotone and without sharp changes in cadence. (*O. ingens* has an alternate, shorter call that ends in a faster series.)

The following shared characters strongly suggest that the sister taxon to *petersoni* is *colombianus,* a form now known from ten specimens (plus a downy chick) and six localities in the western Andes of Colombia and Ecuador (Fig. 1). Iris color of *colombianus* also is brown (FMNH labels on 5 specimens; also Hilty 1977), confirming its membership in the brown-eyed assemblage. Based on the specimens at hand, *petersoni* and *colombianus* appear to be the only two taxa of Neotropical screech-owls to lack virtually any trace of white in the plumage. In both species, pale patches or bars—white in most other *Otus*—are solid cinnamon-buff. In the two brownest specimens of *colombianus* (including a long-misidentified specimen in the Paris Museum) the nuchal collar is nearly white, but all other pale areas remain tawny. Variation from reddish to brownish, as noted above for *petersoni,* is precisely replicated in *colombianus.* The rich tawny undercoat persists throughout both these series. Compared to *O. ingens* from east of the Andes, both *colombianus* and *petersoni* show substantially reduced transverse barring or vermiculations on the breast and belly feathers. The reddest specimens virtually lack this character altogether in *petersoni.* As described below, all other brown-eyed taxa show more ample tarsal feathering than do *colombianus* and *petersoni.*

In plumage pattern and color, *colombianus* and *petersoni* are so nearly alike as to suggest they could be conspecific. For the following reasons we suggest treating them as separate species, but we emphasize that based upon present data the question cannot be settled unequivocally. In linear measurements, *O. colombianus* is roughly 15 percent larger than *petersoni* (Table 1). Moreover, their proportions are not identical, with *colombianus* being relatively shorter-tailed and longer-legged than *petersoni.* As shown in Fig. 3, the ratio of these two characters is roughly similar within the brown-eyed assemblage, except for *colombianus.* Not only are the tarsi and feet of *colombianus* unusually long and robust for an *Otus,* but the tarsi are bare over much of their length and only sparsely feathered proximally (Fig. 4). This character is not present in any other South American *Otus* except *clarkii.* Indeed Hekstra (1982a, b) incorrectly proposed close affinities between *colombianus* and *clarkii* (yellow eyes, quite different plumage) based upon this character. While *petersoni* shows some reduction in tarsal feathering (Fig. 4), most specimens have at least a few sparse

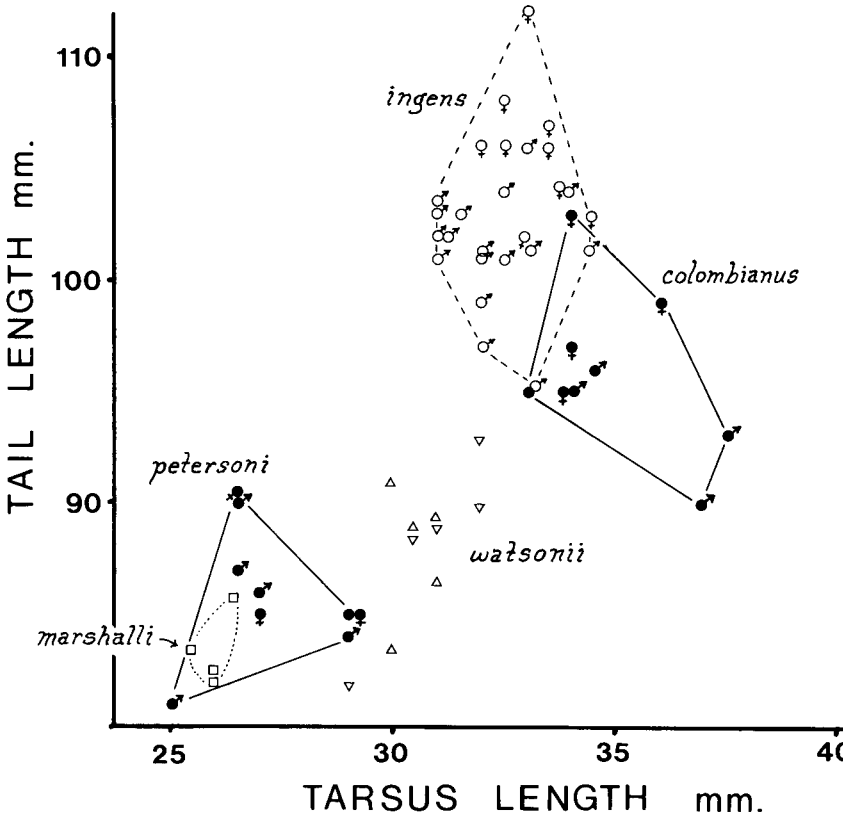


FIG. 3. Tail length plotted against tarsus length in five brown-eyed *Otus* of South America. Data are plotted for all available specimens of *petersoni, colombianus,* and *ingens.* Four males of *marshalli* and five of each sex of *watsonii* (upward-pointing triangles = males) are shown for comparison.

feathers all the way to the foot. Within the species group, this character state occurs as a graded series. Distally, the tarsus is totally bare in *colombianus,* sparsely feathered in *petersoni,* fully feathered in *ingens* and *marshalli,* and thickly, amply feathered to the foot in *watsonii* (Fig. 4). Finally, the plumages of *colombianus* and *petersoni* do show differences from one another in detail. In *colombianus* the ear tufts are slightly longer and more ample; the facial disc is less conspicuously edged blackish; and the underparts of all specimens show considerably more transverse barring, especially on the lower breast and belly, compared to *petersoni.*

In light of the above differences, our opinion is that *colombianus* and *petersoni* are best treated as two distinct members of a superspecies oc-

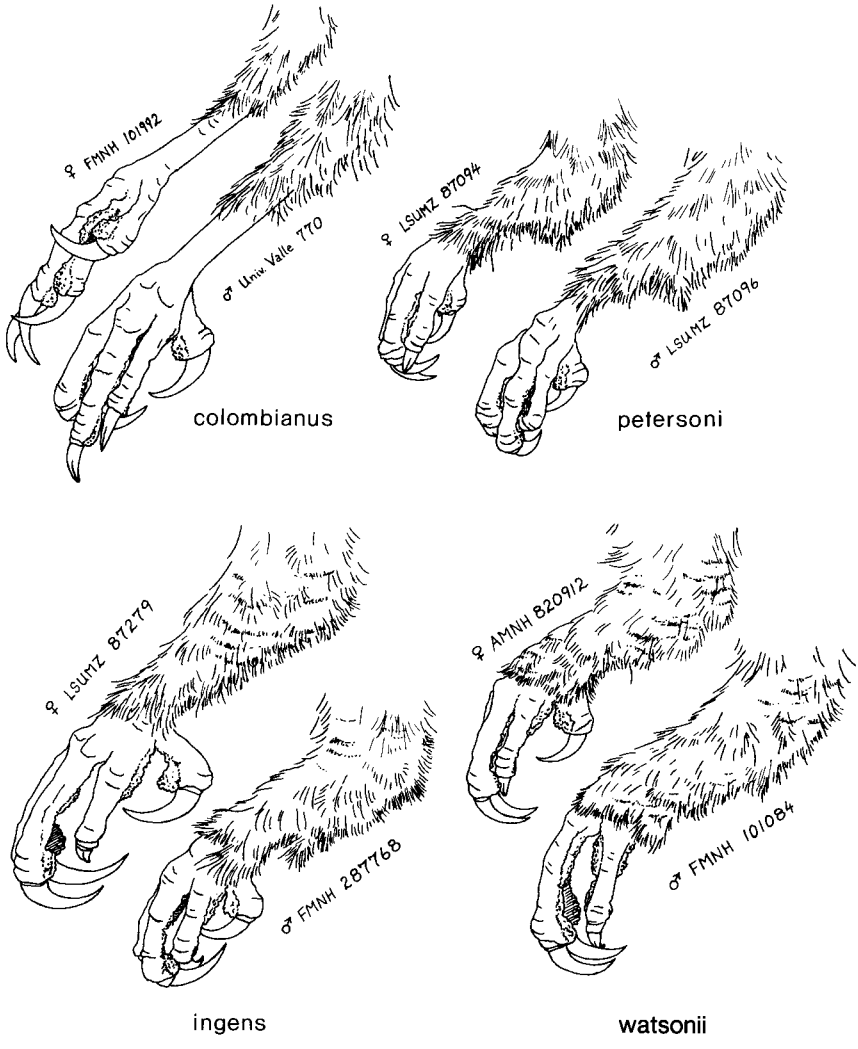


FIG. 4. Tarsi and feet of four brown-eyed *Otus* of South America, drawn from camera lucida. Female specimens are to the upper left in each pair. Museum catalog numbers are indicated for each specimen.

cupying the cloud-forests of the western and eastern Andes, respectively. The sister-relationships between these forms prove that both are specifically distinct from *ingens,* as *petersoni* is sympatric with *ingens.* We suggest that *O. colombianus* bear the English name Colombian Screech-Owl.

We have examined 36 of the 41 specimens of *O. ingens* of which we are aware; we assembled 30 of these, from all parts of the range, at the Field Museum. We concur with Bond (1951) and Traylor (1952) that *O. minimus* Carriker from the Andes of Bolivia is at best only barely distinct from nominate *ingens* of Peru and Ecuador, perhaps averaging paler and more finely vermiculated. Several specimens from central Peru match the Bolivian material at hand almost exactly. In addition, we find no characters that warrant continued recognition of the form *aequatorialis* described as a species by Chapman (1922; holotype examined). Adequate series of *Otus ingens* have accumulated only recently, and they indicate to us that the names "*minimus*" and "*aequatorialis*" were based upon individual variants within a highly variable but continuous population that runs from southern Colombia south to Bolivia (Fig. 1). The purported differences in size and plumage used by Hekstra (1982a) to distinguish *minimus* from nominate *ingens* are not apparent after controlling for sex and color phase. On the other hand, the smaller, paler *O. ingens venezuelanus* described by Phelps and Phelps (1954) warrants recognition. Recently, Fitzpatrick collected three additional specimens of *ingens* from the isolated coastal mountains north of Maracay, Venezuela (Pico Guacamayo, 1700 m; AMNH 824045, 824047, FMNH 317315). These represent a significant range extension of *ingens*. Whereas vocalizations of *ingens* are similar throughout the main Andes from Merida, Venezuela, south to Bolivia (personal observations, and recordings at Laboratory of Natural Sounds, Cornell University), the population atop the coastal mountains of Venezuela is vocally distinct, and may prove to be subspecifically separable even from *venezuelanus*.

Relationships among the dark-eyed *Otus* remain unclear to us, beyond the close affinities apparent between *petersoni* and *colombianus*. Despite differences in absolute size, proportions within the group are rather similar (e.g., Table 1). Although easily distinguished, certain reddish specimens of *O. watsonii* are astonishingly similar to *petersoni* and *colombianus*. Moreover, the primary song of *watsonii, north of the Amazon,* closely resembles that of *petersoni,* being slightly faster and longer. The song of southern *watsonii* consists of slow, low whistles, very different from its northerly populations, perhaps suggesting that two species are involved even within Amazonian *watsonii*. These observations raise the possibility that part or all of *watsonii* may be a lowland relative of *petersoni* and *colombianus,* with *ingens* and *marshalli* (and possibly *flammeolus*?) being more distant. Such conclusions are premature, however, until anatomical and vocal characters can be analyzed. Additional specimens and recordings are required, especially for *colombianus* and *marshalli,* before these phylogenetic analyses can be completed.

SPECIMENS EXAMINED

Otus petersoni: type series, see above.
O. colombianus: Colombia: Cauca, El Tambo, "5000–7000 ft" (FMNH, 1 ♂, 3 ♀♀); Cauca, San Antonio, "7000 ft" (FMNH, 1 ♀); Choco, Cerro del Torra, 1860 m (UValle, 1 ♂); Valle, 9 km NNW Dagua, 1700 m (UValle, sex?); Valle, R. Anchicaya, 1300 m (AMNH, 1 ♀); Nariño, Ricaurte, Riserva La Planada 1700 m (Ris. La Planada, 1 ♂, color photos of specimen).
Ecuador: Nanegal (MNHP, 1 ♂).
O. ingens: Venezuela: Aragua, Pico Guacamayo, 1750 m (FMNH, 1 ♀; AMNH 1 ♂, 1 ♀); Cesar, above Eroca, "5500 ft" (USNM, 1 ♂).
Colombia: Nariño, El Carmen, "5000 ft" (FMNH, 2 ♂♂).
Ecuador: Río Sardinas (AMNH 1 ♂); Ambato, E of Los Baños (AMNH, type of "aequatorialis").
Peru: Cajamarca, Playón, "5500 ft" (LSUMZ, 1 ♀); Amazonas, 20 km E La Peca, "6450 ft" (LSUMZ, 1 ♀); Huánuco, Cerros del Sira, 2220 m (AMNH, 1 ♂); Huánuco, Cushi Libertad, 1800 m AMNH, 1 ♂, 1 ♀); Pasco, Conchapen Mtn., "5000 ft" (FMNH, 2 ♂♂, 1 ♀); Junín, Chanchamayo, 1200 m (FMNH, 1 ♂); Ayacucho, Huanhuachayo, 1660 m (LSUMZ, 3 ♂♂, 1 ♀); Cuzco, Cordillera Vilcabamba, 1350–1510 m (AMNH, 3 ♂♂); Cuzco, Consuelo, 1400 m (FMNH, 1 ♂); Cuzco, Quincemil, 1000 m (FMNH, 1 ♀); Ucayali, Abra Divisoria, "5000 ft" (LSUMZ, 1 ♂); Madre de Dios, Cerro de Pantiacolla, 980–1050 m (FMNH, 2 ♂♂, 2 ♀♀); Puno, Río Inambari, "2200 ft" (AMNH, 1 ♀); Puno, San José, Río Huari, "4200 ft" (LSUMZ, 1 ♂); Puno, Abra Maruncunca, 2000 m (LSUMZ, 1 ♂).
Bolivia: La Paz, Serranía Bellavista, 1350–1650 m (LSUMZ, 2 ♀♀).
O. marshalli: Peru: Cuzco, Cordillera Vilcabamba, 1920–2240 m (AMNH, 7 ♂♂, 1 ♀); Pasco, Santa Cruz, 9 km SSE Oxapampa, 2050 m (LSUMZ, 1 ♂).

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COLOR PLATE

The Frontispiece painting of the Cinnamon Screech-Owl (*Otus petersoni*) has been made possible by an endowment established by George Miksch Sutton (1896–1982). The painting is by Roger Tory Peterson.