

from Chapada, Matto Grosso, agree in color and size (♂: wing, 155–157; tail, 82–83 mm.) with the small, comparatively pale and lightly marked *decussatus*, of which we have an excellent topotypical series. A fourth Chapada specimen resembles the others in size but is in an extreme ochraceous-tawny phase of plumage. The rest of our South American specimens of this species I provisionally refer to *crucigerus*.

THE *Glaucidium brasilianum-nanum* GROUP

In determining the relationships of the form of *Glaucidium brasilianum* inhabiting the upper life-zone on Mt. Duida, I have of necessity examined our large series of this group and I present here some of the results of this study including the description of a very distinct form from the upper Amazon which, because of the wide variation prevailing amongs these owls, has heretofore been confused with true *brasilianum*.

Glaucidium brasilianum duidae, new subspecies

SUBSPECIFIC CHARACTERS (brown phase).—Upperparts more richly colored than in the other races of this group, varying from Saccardo's umber (one specimen) to warm olive-brown (three specimens), nearly as dark as some specimens of *G. jardini*; all five specimens with as much black in the nuchal ring as *jardini*; back immaculate without even concealed markings; crown from bill to nape with fine white or ochraceous shaft-streaks; tail black with five white, incomplete bars, exclusive of rudimentary basal bar and tip; rectal bristles and ear-coverts largely black; Saccardo's umber markings of underparts of about the same shade as in the corresponding phase of *b. brasilianum*, but much more extensive, occupying a greater area than the white markings and almost meeting on the breast to enclose a white chest-spot. Five males: wing, 95–101; tail, 55–62 mm.

TYPE.—No. 245,915, Amer. Mus. Nat. Hist.; ♂ ad.; Mt. Duida, Venezuela, 4700 ft.; February 22, 1929; Olalla Bros.

RANGE.—Subtropical Zone, Mt. Duida, Venezuela.

In some respects this very distinct zonal race is between *brasilianum* and *jardini*, a fact which suggests that the latter may also be a zonal representative of *brasilianum*. The round spots on the crown which characterize *jardini* are not a constant marking, for we have specimens from Baeza, eastern Ecuador (1), and Mérida, Venezuela (3), in which the crown is more finely streaked than in the average specimen of *brasilianum*. I am not sure, indeed, that the Mérida bird is not separable.

It is interesting to observe that the zonal form of *brasilianum* in northern Argentina, *G. b. tucumanum* from Rosario de Lerma (4800 ft.), Salta, is also a deeply colored race, the upperparts being fuscous with barely a tint of brown. In our three specimens of this bird, however, there is almost no indication of black in the nuchal band and the crown-

stripes are mere hair-lines. As in *duidæ*, the back in *tucumanum* is unmarked, but so great is the variation in this group it by no means follows that an immaculate back is a constant characteristic of either of these two races.

***Glaucidium brasilianum ucayalæ*, new subspecies**

SUBSPECIFIC CHARACTERS (red phase, 11 specimens. No gray phase ?).—Upperparts bright argus brown, crown uniform with back, shaft-streaks barely evident or wholly absent; nuchal collar with more or less black; tail somewhat brighter than back, bars poorly developed or almost wanting; darker markings below of about the same color as the back, as heavily developed as in *G. b. duidæ*. 3 ♂: wing, 98–106, tail, 59–62. 5 ♀: wing, 99–106; tail, 58–65 mm.

(Brown phase, 2 specimens).—Less rufescent than red phase, Brussels brown rather than argus brown; shaft-stripes present as hair-lines; tail like back, the black bars faint but complete, markings below the same color as back, and of same extent as in red phase. Averaging slightly larger than *brasilianum*.

TYPE.—No. 237,712, Amer. Mus. Nat. Hist.; ♂ ad.; Sarayacu, Rio Ucayali, Peru, April 19, 1927; Olalla Bros.

RANGE.—Eastern base of eastern Andes from southeastern Colombia to Peru.

Glaucidium brasilianum is a bird of open, scattered growth rather than of heavy forests. We have a large series from the arid Tropical Zone in western Ecuador, but have yet to take a single specimen in eastern Ecuador. From the banks of the Marañon and Ucayali the Olallas have recently sent us a series of a strongly marked form which in its rich, saturated colors appears to express the influences of the humid region in which it lives. Here, also, obviously belongs a specimen from southeastern Colombia, the rich color of which has long excited my interest.

The range of this race is evidently bounded on the west by the extent of the humid Tropical Zone, for as soon as we reach the arid tropics at the Rio Chinchipe in the lower Marañon Valley, we find a bird I am unable to separate from true *brasilianum*. This race is apparently, therefore, segregated in western Ecuador and western Peru from the main area it occupies. In tracing its range southwest in western Peru I have encountered the question of its relationships to *Glaucidium nanum*. Hence, the following notes.

Compared with *Glaucidium b. brasilianum*, the characters of *Glaucidium nanum nanum* (King) and *G. n. vafrum* Wetmore, as shown by 20 specimens, are greater extent of the dark markings below (in this respect resembling *duidæ*), and heavy spotting on the sides of the breast (present in *jardini* but not (?) in *duidæ* and only rarely in *brasilianum*);