

PROCEEDINGS
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NOTES ON RARE AND LITTLE KNOWN
NEOTROPICAL PYGMY OWLS

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RECENT efforts to identify certain pygmy owls of Guatemala and eastern Panama, and to discover what were definite specific and racial characters in the group, involved study of so much material outside of Guatemala that the results obtained are more appropriately published separately in advance of my report on the Dwight Collection.

THE STATUS OF *GLAUCIDIUM COBANENSE* SHARPE

In August, 1930, I found one of these little owls roosting in a small pine tree in the mountains above Panajachel, Guatemala. It proved to be an extreme of the hepatic phase, and corresponded minutely with the original description and plate of Sharpe's *cobanense*, which Salvin and Godman ignored as a trivial variation of *gnoma*.

My specimen, however, upon comparison with typical *gnoma* from Mexico, showed that this disposition of the case

was quite untenable. Not only was my bird smaller, but the flanks, sides and under parts were much more heavily or broadly washed with darker. As there were no other specimens of this species from Guatemala in American museums, I turned to Dr. Percy R. Lowe of the British Museum for assistance. An interesting and profitable correspondence ensued, and I am greatly indebted to him for his kindness in the matter, and also for loaning me various extreme specimens from the great collection in his care. I believe we are in entire agreement on the facts and their proper treatment in nomenclature. Briefly they are as follows.

The species *gnoma* decreases in size from north to south, but I do not find any appreciable size differences between specimens from southern Mexico and Guatemala. There are, however, interesting variations in the phases of coloration, which can be grouped in three divisions.

1. Birds from the western United States are almost all in the gray phase, and there is no hepatic phase. An occasional specimen is in an intermediate or 'mongrel' phase, but this is so rare that it is usually not described in current works. The tail is relatively longer.

2. In the southern half of Mexico more than half of existing specimens are in the mongrel or intermediate phase, but the gray phase also is common. An extreme specimen in the British Museum is practically hepatic. The tail is relatively shorter.

3. All specimens (seven in all) from Guatemala are in an extreme hepatic phase, and the other phases consequently are unknown. The tail is relatively still shorter.

On this basis alone it would be entirely justifiable to regard the Guatemala bird as a distinct subspecies.

There are, however, other differences between the Guatemala specimens and all more northern examples of *gnoma*, and here we become involved with another species, long known as *pumilum* Lichtenstein, now *minutissimum* Wied.

As currently understood, the species *gnoma* and *minutissimum* differ in the following respects: the back and sides of the

breast are more or less spotted or striped in *gnoma*, and the tail has from five to eight white or cinnamon transverse series of spots; in *minutissimum* the back is uniform, the sides of the breast are plain, solid gray, brown or rufous, and the tail is relatively shorter, with only four light bars. It so happens that the Guatemala *cobanense* connects these two species, as it has the tail bars of *gnoma*, but the back and sides of *minutissimum*, while the tail proportions are intermediate.

THE STATUS OF GLAUCIDIUM FISHERI AND GLAUCIDIUM PALMARUM

It is a curious fact that Ridgway (Birds N. and Mid. Amer., pt. 6, 1914, pp. 785-792) failed to describe the juvenal or immature plumages of *gnoma*. Failure to appreciate this has led to the description of other so-called species, which in turn has concealed the relationships of those two with which we are primarily concerned.

Nestlings of *G. gnoma* in the Museum of Comparative Zoology from California, differ from adults in having the forehead *streaked* with whitish, the pileum otherwise *uniform gray in sharp contrast* to the color of the back, which also is unspotted. This plumage persists the first year, so that fully grown birds from Arizona and California, labelled juvenal or immature by dissection, also have gray unspotted pileums and backs. In the series of *G. minutissimum* which I have assembled, exactly the same thing occurs, and the immature plumages of *gnoma* and *minutissimum* are identical.

These differences usually have been regarded as specific characters in the genus. Thus Sharpe described *griseiceps* from Guatemala as differing from *pumilum* in having a uniform gray head, but both types of coloration occur in Coban trade-skins before me. The species *G. fisberi* Nelson and Palmer is nothing but an immature *gnoma*, and, once we eliminate the supposed specific character, we discover that *fisberi* has not a single char-

acter of even racial value. The other so-called species, *palmarum* Nelson, is of greater interest. The two known specimens are adults in the mongrel phase. The back is virtually unspotted (only a few minute longitudinal flecks); the sides are more heavily marked, as in *minutissimum*; the tail is proportionately a little shorter; and there are five bars. The species *palmarum* is consequently a well-marked subspecies, primarily of the Tropical Zone, connecting the species *gnoma* and *minutissimum*, just as *cobanense* is the Temperate Zone connecting link.

X With all these facts in mind, I do not see how *gnoma* and *minutissimum* can be kept specifically distinct. The one character remaining, which has not been bridged by racial or individual variation, is *one less tail band in minutissimum*, but this breaks down in Brazil, where typical *minutissimum* frequently has a five-barred tail. We really have but one stock, represented in the Temperate Zone by *gnoma* and other races, and in the Humid Tropical Zone by *minutissimum* and its variations. A glance at another species, *G. brasilianum*, helps, I think, to decide this question, as it furnishes an excellent example of what real specific differences are in this genus. In Central America, at least, *G. brasilianum* and *G. minutissimum* divide the Tropical Zone between them. The latter is a rare bird of the humid rain-forests, and *brasilianum* occurs everywhere else, including deserts. There is a remarkable degree of parallelism in the geographic distribution of the color phases of these two species. In *brasilianum*, too, the hepatic phase is unknown at the northern limit of its range, and in both species the hepatic and mongrel phases predominate in eastern and southeastern Brazil.

THE VARIATIONS OF GLAUCIDIUM MINUTISSIMUM WIED

This rare and little known bird apparently has an interrupted distribution, and there are no definite locality records outside of the humid tropics. Typical *minutissimum* is recorded from

Brazil (Bahia, Matto Grosso, and eastern Amazonia) and British Guiana (Camacusa). The species reappears in Central America, from Guatemala to eastern Panama. I have discussed the relationships of the species to *gnoma*, but we must now consider the relationships of all Central American specimens to Brazilian birds. I am most grateful to the authorities of the American Museum of Natural History for permission to re-examine their material, including the two types of *minutissimum*. Measurements are stated in millimeters.

***Glaucidium minutissimum minutissimum* (Wied), 1830**

Type locality. Interior of Bahia, Brazil.

Range. Recorded from southern and eastern Brazil and Camacusa, British Guiana.

Diagnostic characters. Hepatic phase predominating, no gray phase seen; hepatic phase not complete as in *cobanense*, in that pileum is grayish brown not rufous, and the tail bands are pure white; spots on pileum very minute round dots; sides of breast always obviously streaked; back uniform, unspotted; tail bands four or five; tarsus lightly feathered, the toes with weak, slender bristles; intermediate or brown phase relatively more rufescent, less brown, the streaking on the under parts more rufescent than the color of the upper parts.

Measurements. Two probable females: wing, 90; tail, 52-54; one probable male: wing, 85, tail, 50.

Specimens examined. Brazil, four; "Paramaribo, Surinam," one (this locality probably erroneous). Four, hepatic phase; one, intermediate phase.

***Glaucidium minutissimum rarum* subsp. nov.**

Type, no. 155,189, Mus. Comp. Zoöl., male adult, intermediate phase; Permé, Caribbean slope, extreme eastern Panama; July 14, 1929; H. Wedel.

Diagnosis. Hepatic phase unknown, gray phase present; resembling typical *minutissimum*, but coloration above and below darker; intermediate phase, pileum darker, but grayer, less brown; back darker, but browner, less rufescent; striping below darker, but browner, less rufescent; in all

phases of plumage differing absolutely and constantly, in that the spots on the pileum are much larger and more abundant and the streaking below much heavier, the sides of the breast with a large area solidly brown; larger, but tail proportions similar.

Measurements. Three males, wing 88-94.5; tail 51-60.

Specimens examined. Eastern Panama: Permé, one male; Obaldia, one male; Tacarcuna, one female (A. M. N. H., no. 135,358). Costa Rica: Vijagua, one male. Three in intermediate phase, one in gray phase.

Also recorded from western Panama.

***Glaucidium minutissimum griseiceps* Sharpe, 1875**

Type locality. Guatemala; I designate tropical lowlands of Alta Vera Paz.

Range. Humid Tropical Zone: eastern Guatemala, British Honduras, and eastern Honduras.

Diagnostic characters. Resembling *rarum* in general characters rather than *minutissimum*, but smaller and much paler, the paler coloration less marked in the intermediate phase, but obvious in the gray phase, especially in the streaking below; tail proportionately shorter, about half as long as wing, rather than five eighths to two thirds, as in the two preceding races; size as in *minutissimum*.

Specimens examined. Honduras: Yaruca, one male, one female. Guatemala, four. Two in intermediate phase, four in gray phase.

Described originally by Sharpe as a distinct species, founded on the immature characters, but his inappropriate name must be continued. The Honduras specimens approach *rarum* in their larger size and longer tails, but resemble Guatemala birds in coloration.

***Glaucidium minutissimum palmarum* Nelson, 1901**

Range. Known only from the Tropical Zone of southwestern Mexico in Tepic and Guerrero.

Diagnostic characters. Connecting *griseiceps* with *gnoma* and more northern races; back unspotted, but tail with five bars, and proportion-

ately much longer than in *griseiceps*; in other respects sharing the characters of the tropical members of the group.

Glaucidium minutissimum cobanense Sharpe, 1875

Range. Confined to higher altitudes in the highlands of western and eastern Guatemala.

Diagnostic characters. Known only in an extreme hepatic phase; also connecting *griseiceps* with *gnoma* and other northern races; back unspotted, but tail bars seven or eight; sides heavily marked; tarsus much more heavily feathered, the toes with numerous stout bristles; size larger, as in *gnoma*, the tail two thirds the length of the wing.

Glaucidium minutissimum gnoma Wagler, 1832

Type locality. "Mexico"; I suggest mountains of Vera Cruz.

Range. Generally throughout the tableland of Mexico, south to the mountains of Chiapas.

Diagnostic characters. Hepatic phase unknown; gray and intermediate phases about equally abundant; back always spotted with white in adults, and sides less heavily marked; in other general characters resembling *cobanense* and differing from all the tropical races in the same respects.

There are five other subspecies north of Mexico, with which we are not here concerned. Size increases slightly northward, and in *boskinsii* Brewster of Lower California the tail is three fourths the length of the wing. North of Mexico the intermediate phase becomes rare and exceptional. The immature plumage of *gnoma* has been described as *G. fisberi* Nelson and Palmer.