



**POPULATION STATUS OF THE RUFIOUS-FRONTED PARAKEET  
(*BOLBORHYNCHUS FERRUGINEIFRONS*), A COLOMBIAN ENDEMIC**

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The Rufous-fronted Parakeet (*Bolborhynchus ferrugineifrons*) is endemic to high-elevation shrubland in the Central Cordillera of the Colombian Andes. Little is known about its behavior or ecology, and no more than five specimens with locality data exist in museum collections (Meyer de Schauensee, 1949; Forshaw, 1973; Ridgely, 1980; ICBP Bird Red Data Book, 1981; Hilty and Brown, 1986). *B. ferrugineifrons* has been sighted or collected in only two areas: (1) the Nevado del Ruiz- Nevado del Tolima volcanic complex lying on the junctures of the Departments of Caldas, Risaralda, Quindío, and Tolima; (2) and the slopes of Volcán Puracé, Department of Cauca (ca. 280 km south-southwest of Nevado del Tolima). The failure of the prolific expeditions of the American Museum of Natural History to encounter this parakeet in the Quindío Andes in 1910-1912 (Chapman, 1917), suggests that even then it was uncommon. The last definite record was of a single bird (USNM 459502 ♂) collected by M. A. Carriker, Jr. on 25 February 1955 at Gabriel Lopez ("9,300 ft"), Department of Cauca. The only subsequent report that probably pertains to this species was of "a few small parrots at about 4000 m on the Nevado del Ruiz" seen by Peace Corps and INDERENA personnel in 1975 (Ridgely, 1980: 309). The status of *B. ferrugineifrons* was listed as "indeterminate" in the Red Data Book (1981), but Ridgely (1980) recommended that it be upgraded to "vulnerable." Here we report details of recent sightings and specimen records of *B. ferrugineifrons*.

Giraldo reports that *B. ferrugineifrons* is fairly common in the vicinity of Laguna de Otún (3,950 m), southwest of Nevado de Santa Isabel, Department of Risaralda. The parakeets, which usually occur in noisy flocks of 10-15 individuals, are easily approached and have been observed feeding on grass seeds. Three specimens have been recently collected (deposited in the collection of INDERENA, Bogota), two from Laguna de Otún (August 1985) and one from Hacienda Indostán, municipality of Anzoátegui, Department of Tolima (3,280 m). Farmers in the region consider them to be very common and occasionally keep them as pets.

In January 1986, Graves surveyed bird populations on the north flank of Nevado del Ruiz along a transect that passed through the zone affected by the 13 November 1985 eruption. On 22 January (09:30), he observed three of these parakeets on the Manizales- Ruiz road at 3,540 m elevation. They were heard call-

ing about 90 seconds before he spotted them flying over the valley below the road. The chattering calls were moderately pitched, and from memory, similar to those of *Bolborhynchus orbynesius* of the southern Andes. From a distance of 2-300 m with 10 × 40 binoculars they appeared to be uniformly green without contrasting black, yellow or red markings. The flight profile was somewhat stocky, with a short pointed tail; the wing beats were rapid. Habitat in the vicinity was a mosaic of tall, moist, infrequently grazed grassland punctuated with wooded ravines, scattered shrubs and *Espeletia* sp. Undisturbed stunted forest was restricted to steep slopes and cliff faces.

Daniel Uribe and Graves saw a pair of *B. ferrugineifrons* at 09:00 on 28 January on the Río Guali-Libano road on the northwest flank of the volcano at 4,000 m elevation. As before, we were alerted to their presence by loud chattering calls almost 30 seconds before we saw them. They flew directly overhead, about 50 m above us, in direct sunlight. The habitat here was open moist paramo, grazed and burned in places, with scattered shrubs in ravines and extensive stands of *Espeletia* sp. Patches of cloud forest were visible 2-3 km down slope at 3,500-3,600 m elevation. This location lies on the northern boundary of the Parque Nacional los Nevados, which primarily encompasses the paramo and super-paramo zones of the Ruiz-Tolima volcanic complex. No other psittacids were seen above 3,000 m elevation in the Nevado del Ruiz area.

Although *B. ferrugineifrons* has been taken as low as 2,835 m, Ridgely (1980) is probably correct in suspecting that its habitat preferences resemble those of *B. orbynesius* (i.e. shrubland and sparsely wooded slopes near timberline). Despite the severe deforestation of the Central Cordillera below 3,300 m, much habitat above this level is more or less intact and is exploited mainly by firewood cutters and grazing. The nest of this species has not been described, but it seems likely to be a burrow in an earthen bank or cliff-face, as in other Andean members of the genus (Forshaw, 1973). This suggests that cavities in old-growth vegetation are not necessary as nesting sites. *B. ferrugineifrons* is probably a low density resident (less than one pair/km) of the temperate forest/paramo ecotone from 3,200-4,000 m elevation in the Central Cordillera from Nevado del Ruiz south to Nevado de Huila and Volcán Puracé. Using a conservative estimate of one individual/km, the total population could easily number up to 1-2,000 individuals. If this estimate is reasonably accurate, *B. ferrugineifrons* should probably be considered as "rare." The scarcity of recent sightings and the low number of specimens in museums is no doubt a reflection of the remoteness of its restricted geographic and elevational range.

#### SYSTEMATIC RELATIONSHIPS

Miller (1919: 110) correctly ascertained that "*B. ferrugineifrons* is most nearly allied to *B. andicola* [= *orbynesius*]." At the time, *B. ferrugineifrons* was known only from the type ("Bogota") in the American Museum of Natural History.

Miller's statement, however, falls short of indicating the close phylogenetic relationship between the two species as indicated by biogeography, behavior, habitat, and morphological similarity. With the exception of ochraceous-rufous feathers above the nostrils, in the loreal region, and on the upper throat, *B. ferrugineifrons* differs from *B. orbynesius* only in being slightly larger. Except at close range, this species is probably indistinguishable in the field from *B. orbynesius*. William Cooper's (in Forshaw, 1973) painting of both species suggests that *B. ferrugineifrons* may have a darker bill. There is much individual variation in bill color among specimens of both species. The bill of the USNM specimen of *B. ferrugineifrons* is dull white (= ivory) with a dark "horn-colored" base, which is identical in color and pattern to that found in many specimens of *B. orbynesius*.

It has now become fashionable to group closely related species with allopatric distributions in superspecies with variable regard for the magnitude of evolutionary divergence among taxa (American Ornithologists' Union, 1983). The result is an inconsistent usage of the superspecies concept. *B. orbynesius* and *B. ferrugineifrons* appear to form a superspecies in the narrow sense, by being recently derived sister taxa that occupy similar habitats and have similar behaviors, in addition to having allopatric distributions.

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#### SUMMARY

The Rufous-fronted Parakeet (*Bolborhynchus ferrugineifrons*), a rare endemic of the Central Cordillera of the Colombian Andes, has been recently observed and collected at 3,280 to 4,000 m in the vicinity of Laguna de Otún and on Nevado del Ruiz. Based on density estimates of 1 individual/km<sup>2</sup>, the total population probably numbers 1-2,000. *B. orbynesius* of the southern Andes and *B. ferrugineifrons* form a superspecies.



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## SAMENVATTING

*Bolborhynchus ferrugineifrons*, een zeldzame endemische parkietensoort van de centrale Cordillera van de Columbiaanse Andes, werd onlangs waargenomen en verzameld tussen 3280 en 4000 m in de nabijheid van Laguna de Otún en op de Nevado del Ruiz. Indien men zich steunt op een dichtheidsschatting van 1 exemplaar/km<sup>2</sup>, kan de totale populatie geschat worden op 1000 à 2000 exemplaren. Samen met *B. orbynesius* van de zuidelijke Andes vormt *B. ferrugineifrons* een superspecies.

## RÉSUMÉ

Le Toui à front roux (*Bolborhynchus ferrugineifrons*), psittacidé endémique rare de la Cordillère centrale des Andes colombiennes, a été récemment observé et collecté entre 3280 et 4000 m à proximité de la Laguna de Otún et sur le Nevado del Ruiz. En se basant sur une densité de 1 individu au km<sup>2</sup>, l'on peut avancer que la population totale est vraisemblablement comprise entre 1000 et 2000 individus. *B. orbynesius* de la partie sud des Andes et *B. ferrugineifrons* forment une super-espèce.

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