THE AUK
A QUARTERLY JOURNAL OF
ORNITHOLOGY

VOL. 108 APRIL 1991 No. 2

NANNOPSITTACA DACHILLEAE, A NEW SPECIES OF PARROTLET FROM EASTERN PERU

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ABSTRACT.—We describe a new species of parrotlet, *Nannopsittaca dachilleae*, known from several localities in southeastern Peru and northwestern Bolivia. Its characters place it in the genus *Nannopsittaca*, which was formerly considered to be monotypic and restricted to the Pantepui region of northern South America. The two species probably form a superspecies.
Received 26 July 1990, accepted 8 January 1991.

IN 1985 Munn saw a small group of green parrotlets along the Río Manu in the Parque Nacional del Manu in eastern Peru. The birds were assembled with other parrots and parakeets at a cliff where these birds frequently come to eat clay. Their general size and shape were that of members of the genus *Forpus*, but they exhibited no sexual dimorphism and could not be assigned to any species recorded within the park or nearby lowlands of eastern Peru. The distinguishing marks were a powder blue wash on the forehead and crown, a pale bare area around the eye, and a pinkish flesh beak and tarsi (see Frontispiece). The birds were photographed, and in later years they were seen repeatedly by Munn and his colleagues. In 1987 O'Neill and colleagues from the Museo de Historia Natural de San Marcos (Lima) and from the Louisiana State University Museum of Natural Science traveled to the upper Río Shesha, Dpto. Ucayali, Peru, to conduct an ornithological survey of the hills and low mountains on the Peru-Brazil border. Their first camp on the banks of the Shesha was near a clump of tall bamboo (*Guadua* sp., aff. *angustifolia*, A. Gentry in litt.) that was in seed. Several species of parrots fed upon the abundant bamboo seeds, and on 3 July 1987 two specimens of a suspected *Forpus* were collected by Pete Marra and Tony Meyer. In the hand, the powder-blue crown was evident and led to the suspicion that these specimens represented the same species that Munn and others had first seen along the Río Manu in 1985. Through the course of the expedition additional specimens were obtained, and it became clear that the bird was probably not a member of the genus *Forpus* and represented an undescribed species. Subsequently, O'Neill determined that the new parrotlet belongs in the genus *Nannopsittaca*, whose only previously known species (*N. panychlora*, the Tepui Parrotlet) is confined to the Pantepui region of southern Venezuela, northern Brazil, and western Guyana. We hereby describe the new bird as follows.

Nannopsittaca dachilleae sp. nov.
Amazonian Parrotlet

Holotype.—Museo de Historia Natural de San Marcos (MHN-SM) No. 11614, adult female, collected ca. 65 km ENE of Pucallpa, right bank of the Río Shesha, Dpto. Ucayali, Peru (8°8'S, 74°2'W), 300 m elevation, collected 29 July 1987

FRONTISPIECE. Two adult Amazonian Parrotlets (*Nannopsittaca dachilleae*), a new species of parrotlet from eastern Peru, pictured along the upper Río Shesha. From a mixed media painting by John P. O'Neill. Publication of this Frontispiece was supported by the Donald L. Bleitz Fund.

by Gabriel Ballón S., and prepared by Cecilia Fox (personal catalog number 235).

Description of the holotype.—Upperparts, including nape, auriculars, dorsum, tertials, wing coverts, rump, upper-tail coverts and rectrices, bright green, nearest Parrot Green or Rinneman's Green (capitalized colors are from Ridgway 1912). Forehead, anterior crown, and lores pale, powdery blue, nearest Deep Bluish Glaucous or Lumiere Blue, which fades imperceptibly into the green of the nape. Below, including malar area, breast, belly, and under-tail coverts paler, more yellowish green, nearest Mineral Green. Chin greenish yellow, between Bright Chalcedony Yellow and Chalcedony Yellow. Primaries and secondaries dusky black on inner webs, but bright green, between Parrot Green and Meadow Green, on outer webs. Soft part colors: iris "gris parduzco" (grayish brown), bill and feet [incl. tarsi] "rosadas" (pinkish).

Measurements (mm) of the holotype.—Wing (chord) 81.2; exposed culmen 11.0; depth of maxilla at base 5.3 (culmen/depth maxilla 2.1); tail 46.5; tarsus 12.1; outer toe without claw 13.0; weight 41.0 g.

Distribution.—Known in Peru from the type locality and along most of the length of the Río Shesha (Dpto. Ucayali), the middle Río Manu, the region of the Explorer's Inn in the Tambopata Reserve (on the Río Tambopata), and the middle Río Heath (all Dpto. Madre de Dios), and in Bolivia along the middle Río Heath (Dpto. La Paz). The Río Heath records, both in Peru and in Bolivia, are sight records by T. A. Parker III (Remsen and Traylor 1989).

Etymology.—We take great pleasure in naming this new parrotlet after our dear friend and colleague in conservation, Barbara D'Achille, who died tragically on 31 May 1989 while investigating reforestation projects in the mountainous Peruvian Department of Huancavelica. A native of Latvia, she spent most of her 48 years in western Europe, Brazil, Argentina, and Peru. Before 1983 she devoted her efforts primarily to her family, but did volunteer conservation work in Brazil, Argentina, and Peru. From 1983 until her death, she wrote hundreds of detailed, firsthand investigative reports on ecology, conservation, and rural development for Peru's leading newspaper and news magazine. By the last three years of her life she had gained a worldwide reputation as Latin America's most committed, most effective, and most published environmental journalist. During this time she became a key consultant for the World Wildlife Fund, the United Nations, and the Canadian and American development agencies. Her prodigious energy and courage in the field, often in remote or dangerous areas, led her to break new ground in scientific reporting on the increasingly threatened world-record biological diversity of Peru. In 1986, her compelling reporting from the remotest mountains and forests of the country earned her the coveted Koepcke Prize for Environmental Journalism. Appropriately, Barbara wrote many of her finest articles while on expeditions to the rain forests of Pucallpa, Tambopata, and Manu, where she was among the first investigators to see the new species of parrotlet we name in her honor. We hope that naming this parrotlet after Barbara will keep her memory alive and inspire young journalists in Latin America and around the world to follow her example and fight for the survival of our planet's threatened biota.

REMARKS

Relationships.—Specimens of *Nannopsittaca dachilleae* show all of the characters of the genus as described by Ridgway (1916; see Appendix), although a review of the limits and relationships of the genera *Bolborhynchus* (including the subgenera *Amoropsittaca* and *Psilopsiagon*), *Touit*, *Forpus*, *Nannopsittaca*, and *Brotogeris* is needed. We first thought that the new bird was an undescribed member of the genus *Forpus*, but its relatively small bill and total lack of bright blue in the plumage were obvious even in the field. Once specimens were available, the length of the under-tail coverts (as long as the tail in *Nannopsittaca*, but much shorter in all other related genera but *Touit*; Ridgway 1916) was also obvious. Other characters that Ridgway (1916) used to characterize *Nannopsittaca*, and which are all evident in *N. dachilleae*, include the following: a narrower, more slender maxilla (7.5 mm for a male *N. dachilleae* vs. 9.0 mm for individual males of *Forpus sclateri* and *F. xanthopterygius*, and up to 14.5 for a male *Bolborhynchus orbygnesius*); the depth of the maxilla at the base is equal to or much less than half the length of the culmen, and the culmen is less strongly curved; the tarsus is as long as the outer front toe without the claw; and the tenth (outermost) primary has the inner web emarginate near the tip (in *Nannopsittaca* and *Bolborhynchus* the outermost primary is less emarginate than in *Forpus* and farther from the tip, being only in the distal few millimeters in *Forpus*). Although the orbital

region is supposed to be wholly feathered, the new bird in life had an obvious but narrow, bare, pinkish flesh eyering that is made up of skin more than just that which forms the eyelids. This seems to also be present in *N. panychlora*, but is difficult to see in the specimens at hand, in which no obvious extra care went into putting in the eye cotton. The rectrices are wholly green, and there is no hint of bright blue or green on the rump.

Nannopsittaca dachilleae differs from *N. panychlora* mainly in having no yellow feathering around the eye and in having the forehead and crown a powdery blue color. Most specimens of *N. panychlora* show some yellow edging to the outer under-tail coverts, which is not present in any of the *N. dachilleae*. Using standard wing, tail, and tarsus lengths, we found no discernible pattern of size differences. One species is slightly larger in some measurements, the other one in others. On average, *N. dachilleae* is larger in tail length and in the depth of the maxilla at its base, but *N. panychlora* is larger in wing chord and in the length of the exposed culmen. The two species differ little in tarsal length and in the length of the middle toe without the claw. Only a single weight is available for specimens of *N. panychlora* (a 42.0-g male), but it fits well within the range of 38.5–46.0 g for males of *N. dachilleae*, and is distinctly heavier than single males of *Forpus sclateri* (28.0 g) and *F. xanthopterygius* (30.5 g). Although *N. panychlora* is called the Tepui Parrotlet, it is now known to regularly inhabit the lowlands around the Venezuelan tepuis (Chris Parrish pers. comm., and recent specimens in the American Museum of Natural History collections from the base of Cerro de la Neblina, T. F. Amazonas, Venezuela). Thus, the lowland distribution of the new bird is not unique for the genus. We believe that because the two species are distinct in color and are not known to occur closer than 1,200 km to each other, they should be regarded as separate species. Comparable color differences define most species currently recognized in the genera *Forpus* and *Bolborhynchus*. There is a slight size difference between males and females, but no obvious color differences. In the sample available, females average just slightly larger than males in the depth of the maxilla at its base. Some of the brightest birds are females, including the holotype, but they can be matched by some males. Although there is no indication of age differences among most of the specimens, duller individuals may be younger. Because *N. panychlora* and *N. dachilleae* are so similar in overall structure but show consistent color differences, and because the two populations are completely allopatric, we believe that they must be treated as separate species. Their similarities indicate a close relationship that is best described by treating them as members of a superspecies.

Because of the difference between the way colors are expressed in Spanish versus in English, we include some of the notes on soft parts taken from the catalogs of English-speaking members of the expedition. Iris: "cinnamon," "buff," "brown"; bill: "pale horn, base of maxilla salmon," "pale horn color," "pinkish flesh"; toes and tarsi: "vinaceous pink," "horn color," "pinkish flesh." These different descriptions mainly reflect different interpretations of the same colors by different preparators.

Natural history.—Nannopsittaca dachilleae is common to abundant on the upper and middle Río Shesha, but we did not see it on the lower Shesha where the habitat is altered both by man and by the influence of the nearby Río Ucayali. In these areas, where *N. dachilleae* is absent, *Forpus xanthopterygius* is common. In totally forested hills near the type locality, we did not see *N. dachilleae*. *Nannopsittaca dachilleae* gathered in flocks of as many as a dozen birds. At the Explorer's Inn in the Tambopata Reserve, the presence of *N. dachilleae* was confirmed first by Theodore A. Parker III on 16 July 1988. In the Manu and Tambopata areas, the species is seen daily in flocks that range from 5 to 12 individuals. In Manu, the species is seen regularly perched in small flocks in the tops of trees across from the Altamira beach, approximately 25 min upstream from the Manu Lodge. In July 1988, K. V. Rosenberg found small groups of *N. dachilleae* feeding in seed-laden *Guadua* bamboo (probably not the same species that was found along the Río Shesha) in the forest at the Tambopata Reserve. While feeding, the birds crept about like small arboreal mice and made no sounds. If one bird made even a slight vocalization it was usually the beginning of vocalizations for the entire flock, and they promptly flew away. In March 1986, Munn, D. G. Ricalde R., and B. Ribeiro do Valle repeatedly observed the species at the Altamira beach location in Manu while the birds ate the ripe fruits of a common species of *Coussapoa* (Moraceae) vine. In November 1985, during 2 weeks of continuous observations at a small clay lick on a stream bank 1 h up the Manu River from Cocha Cashu

Biological Station, 5–7 *N. dachilleae* appeared every second or third day at about midday with groups of *Forpus sclateri, Brotogeris sanctithomae,* and *B. cyanoptera,* and ate clay for 30 min or more (photographs on file in the VIREO collection, Acad. Nat. Sci. Philadelphia).

We found no evidence of nesting on the Río Shesha. A presumed nest of *N. dachilleae* was observed at the Tambopata Reserve by K. V. Rosenberg, J. Rowlett, and R. A. Rowlett on 25 July 1988 in the base of a large clump of bromeliads and other epiphytes. Three individuals were "billing," allopreening, and pulling at rootlets. In September 1990, Munn and naturalists of the Explorer's Inn at the Tambopata Reserve observed birds entering a hole in the side of a clump of epiphytes near the top of a 25-m tree, and assumed this to be the same possible nesting site found by Rosenberg et al. in 1988.

The vocalization of the new parrotlet can best be described as like that of a group of peeping domestic chicks (*Gallus gallus.*) Flocks can produce a peeping or squeaking chatter. A single note may be written as a sharp "peek," "peet," or "peep." The notes are reminiscent of those of *Forpus xanthopterygius,* but unlike the "grating" or gravelly "jiit" or "dziit" notes of *F. sclateri. Nannopsittaca dachilleae* is syntopic with *F. sclateri,* but has not yet been found in the more open and disturbed habitats with *F. xanthopterygius.*

Specimens examined.—All material used in the description is from the following institutions: American Museum of Natural History (AMNH), Louisiana State University Museum of Natural Science (LSUMZ), and Museo de Historia Natural de San Marcos (MHN-SM).

Nannopsittaca dachilleae (8♂♂, 12♀♀): PERU: Dpto. Ucayali, W bank Río Shesha, ca. 65 km ENE Pucallpa (MHN-SM, 4♂♂, 6♀♀; LSUMZ 4♂♂, 6♀♀).

Nannopsittaca panychlora (6♂♂, 5♀♀): "BRITISH GUIANA": Roraima (AMNH, 1♀); Carimang River (AMNH, 1♂). VENEZUELA: Mt. Auyantepui (AMNH, 1♀); Mt. Duida, high point camp (AMNH, 1♂, 1♀); Roraima, Summit Roraima (AMNH, 2♂♂, 1♀); Playa del Río, base Mt. Duida (AMNH 1♂, 1♀); Cerro de la Neblina, T. F. Amazonas (base camp) (AMNH, 1♂, skeleton and flat skin).

Bolborhynchus lineola (1♂, 1♀): PERU: Dpto. Ayacucho, Huanhuachayo (LSUMZ, 1♂); COSTA RICA: Prov. Cartago; La Georgina (LSUMZ, 1♀).

Bolborhynchus orbygnesius (1♂, 1♀): PERU: Dpto. Pasco; Millpo, E Tambo de Vacas (LSUMZ, 1♂, 1♀).

Forpus sclateri (1♂, 1♀): PERU: Dpto. Loreto [=Ucayali]; Río Curanja, Balta (LSUMZ, 1♂); BOLIVIA: Dpto. Pando, Prov. Nicolás Suarez, ca. 12 km by road S Cobija (LSUMZ, 1♀).

Forpus xanthopterygius (1♂, 1♀): PERU: Dpto. Loreto; Isla Pasto, Río Amazonas opposite Aysana, ca. 80 km NE Iquitos (1♂, 1♀).

Brotogeris cyanoptera (1♂, 1♀): PERU: Dpto. Loreto; 1 km N Río Napo, 157 km by river NNE Iquitos (LSUMZ, 1♂); Dpto. Loreto [=Ucayali], Río Curanja, Balta (LSUMZ, 1♀).

ACKNOWLEDGMENTS

Most importantly, we thank the National Geographic Society for a research grant (#3460-86) from its Committee for Research and Exploration, which supported the 1987 expedition to the Río Shesha. Our field colleagues, Cecilia Fox, Gabriel Ballón S., Angelo P. Capparella, Donna C. Schmitt, Peter P. Marra, Anthony S. Meyer, Paul Freed, Mara Freed, Manuel Sanchez S., Martha Chavez de Sanchez, and Magno Lazón, all worked hard under some very trying circumstances to make the trip a success. Wildlife Conservation International, a division of the New York Zoological Society, has funded Munn's research on parrots from 1983 to the present. The Dirección General Forestal y de Fauna of the Ministerio de Agricultura, Lima, has kindly granted authorization for Munn's work in Manu. J. V. Remsen and S. W. Cardiff of the Louisiana State University Museum of Natural Science, François Vuilleumier and Mary Lecroy of the American Museum of Natural History, and Gerardo Lamas of the Museo de Historia Natural de San Marcos kindly made needed specimens available. J. V. Remsen, T. A. Parker III, and D. E. Willard read the manuscript and made helpful suggestions.

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APPENDIX. Selected characters and measurements of *Nannopsittaca* and related genera. Measurements (mm) are sample size (range) mean ± 1 SD.

Species	Sex	Weight (g)	Wing	Tail	Tarsus	Middle toe less claw
Nannopsittaca dachilleae	M	7 (38.5–46.0) 42.4 ± 2.45	8 (82.0–89.5) 84.4 ± 2.30	8 (42.5–49.5) 45.9 ± 2.34	8 (10.3–12.5) 11.7 ± 0.843	8 (13.0–14.5) 13.5 ± 0.524
	F	11 (37.5–43.8) 40.9 ± 1.90	12 (80.1–85.4) 82.2 ± 1.80	12 (40.2–46.9) 43.1 ± 2.50	12 (9.2–12.6) 11.2 ± 0.99	12 (11.0–13.5) 12.6 ± 0.641
N. panychlora	M	1 (42.0) —	6 (89.1–94.3) 91.8 ± 1.86	6 (40.5–43.4) 42.6 ± 1.10	6 (10.1–11.5) 11.0 ± 0.476	6 (10.8–14.8) 12.5 ± 1.35
	F	—	5 (88.4–93.5) 89.8 ± 2.10	5 (38.9–41.8) 40.2 ± 1.12	5 (10.5–11.8) 11.2 ± 0.485	5 (11.7–13.5) 12.6 ± 0.738
Bolborhynchus lineola	M	1 (66.5) —	1 (106.8) —	1 (62.6) —	1 (10.6) —	1 (16.2) —
	F	1 (61.3) —	1 (103.5) —	1 (57.6) —	1 (9.6) —	1 (15.5) —
B. orbygnesius	M	1 (48.0) —	1 (109.5) —	1 (73.0) —	1 (12.2) —	1 (16.1) —
	F	1 (50.0) —	1 (104.1) —	1 (62.7) —	1 (11.5) —	1 (15.5) —
Forpus sclateri	M	1 (28.0) —	1 (83.4) —	1 (37.7) —	1 (10.5) —	1 (13.5) —
	F	1 (26.5) —	1 (82.3) —	1 (40.9) —	1 (10.0) —	1 (14.2) —
F. xanthopterygius	M	1 (30.5) —	1 (79.2) —	1 (32.8) —	1 (9.2) —	1 (16.0) —
	F	1 (31.5) —	1 (75.7) —	1 (32.0) —	1 (9.5) —	1 (16.5) —
Touit huetii	M	1 (62.0) —	1 (113.0) —	1 (48.0) —	1 (14.5) —	1 (17.6) —
	F	1 (58.0) —	1 (112.1) —	1 (46.6) —	1 (13.6) —	1 (17.0) —
Brotogeris cyanoptera	M	1 (57.0) —	1 (117.5) —	1 (62.6) —	1 (11.6) —	1 (17.9) —
	F	1 (55.0) —	1 (110.7) —	1 (49.0) —	1 (10.9) —	1 (17.9) —

Species	Sex	Exposed culmen	Depth max. at base	Culmen/maxilla depth	Crown color	Under-tail covert length	Outer rectrices color	Emargination of inner web of outer primary	Rump color	Orbital feather color
Nannopsittaca dachilleae	M	8 (10.8–12.0) 11.9 ± 0.387	8 (4.7–5.7) 5.3 ± 0.338	8 (1.9–2.9) 2.2 ± 0.316	green & powder blue	= to tail	green	slight	green	green & powder blue
	F	12 (10.3–11.3) 10.8 ± 0.299	12 (5.1–5.8) 5.4 ± 0.205	12 (1.8–2.8) 2.1 ± 0.26						
N. panychlora	M	5 (12.5–14.1) 13.2 ± 0.635	5 (4.5–5.2) 5.0 ± 0.292	5 (2.5–2.8) 2.6 ± 0.114	green	= to tail	green	slight	green	yellow
	F	5 (13.1–14.3) 13.7 ± 0.534	5 (4.8–5.5) 5.1 ± 0.308	5 (2.6–2.7) 2.7 ± 0.055						
Bolborhynchus lineola	M	1 (13.0) —	1 (11.8) —	1 (11.8) —	green w/faint dusky barring	< tail	green	slight > none	green w/ dusky barring	green
	F	1 (12.2) —	1 (11.6) —	1 (11.6) —						
B. orbygnesius	M	1 (12.3) —	1 (6.6) —	1 (6.6) —	green	< tail	green	moderate	green	green
	F	1 (13.3) —	1 (6.8) —	1 (6.8) —						
Forpus sclateri	M	1 (13.3) —	1 (6.2) —	1 (6.2) —	green	< tail	green	strong	purple blue	green
	F	1 (12.2) —	1 (5.5) —	1 (5.5) —						
F. xanthopterygius	M	1 (12.6) —	1 (6.1) —	1 (6.1) —	green	< tail	green	strong	caerulean blue	green
	F	1 (12.5) —	1 (6.6) —	1 (6.6) —						
Touit huetii	M	1 (14.4) —	1 (7.6) —	1 (1.9) —	brassy yellow	= to tail	purple (M), or yellow (F), tipped black	slight	green	green
	F	1 (12.9) —	1 (6.7) —	1 (1.9) —						
Brotogeris cyanoptera	M	1 (16.8) —	1 (7.8) —	1 (2.2) —	green	< tail	green	moderate	green	green
	F	1 (15.5) —	1 (7.6) —	1 (2.0) —						