name. In context, however, it is clear that he was proposing *sarothrura* as the name of a species of *Monacanthus*. It is presently a junior synonym, but I do not know of which species. A search of various websites of fish names and synonyms yielded no hits. Peculiarities in van Hasselt's names have created problems elsewhere, and have led to Kottelat (1987).

Thus there is no justification whatsoever for the new generic name *Daseioura* that I proposed in the version published in vol. 123: 133-45, and the names published on page 40 containing *Daseioura* should all revert to *Sarothrura*. I maintain, however, my argument that Slender-billed Flufftail *S. watersi* should be allocated to a distinct genus, *Lemurolimnas* Salomonsen 1934.

Acknowledgements

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The *Hon. Editor* apologises for this error; the revised paper was received after the original version had gone to press and the "in press" copy was not replaced.

New records of birds from the summit of Cerro Guaiquinima, Estado Bolívar, Venezuela

by Jorge Pérez-Emán, Christopher J. Sharpe, Miguel Lentino R., Richard O. Prum & Irving J. Carreño F.

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Cerro Guaiquinima, located in the Paragua river basin in the Estado Bolívar, is one of the largest isolated sandstone mesas of the Pantepui region, with an estimated summit area of 1,096 km^2 (Mayr & Phelps 1967, Berry *et al.* 1995). It lies between the eastern and western tepui clusters, isolated from them respectively by the basins of the Caroní and Paragua rivers. No ornithological accounts of Cerro Guaiquinima have yet been published. Floristic and palaeoecological data have been reported by Steyermark & Dunsterville (1980), Rull (1991), and Berry *et al.* (1995). Herpetological accounts have been provided by Donnelly & Myers (1991) and Mägdefrau *et al.* (1991).

The summit of Cerro Guaiquinima was first explored ornithologically by the topographer, Félix Cardona, who reached it in October 1943 and returned in June-July 1944, obtaining a collection of 208 bird skins of 40 species collected above 1,000 m altitude. A year later, in January-February 1945, an ornithological expedition by the Colección Ornitológica Phelps made an important bird collection of 416 specimens of 60 species from the upper slopes (above 1,000 m) and summit of the mountain. All these collections were made in the south-western corner of Cerro Guaiquinima. These data were used in biogeographical analyses by Mayr & Phelps (1967) and Cook (1974) with the assumption that they provided fairly complete knowledge of the Guaiquinima avifauna.

Cerro Guaiquinima was not further explored until February 1990, when ornithologists from the American Museum of Natural History (Jeffery Woodbury and ROP) and Colección Ornitológica Phelps (MLR) visited its summit in an expedition sponsored by the Fundación para el Desarrollo de las Ciencias Físicas, Matemáticas y Naturales (FUDECI). A general description of this expedition has been reported elsewhere (de Bellard Pietri 1990), but the ornithological results of the expedition have not yet been reported in the literature. Two base camps were established in the north-eastern and north-central parts of the summit respectively. The position of Camp 1 was 5°50'00"N, 63°40'00"W at an elevation of 1,030 m while Camp 2 was located at 5°57'46"N, 63°28'20"W and 1,150 m altitude; a detailed description of these camps can be found in Donnelly & Myers (1991). The expedition collected 145 specimens of 52 species and a few additional species (including two new to the mountain) were recorded visually or by vocalizations.

Ten years later, as part of a biogeographical study of the Pantepui avifauna, a group of ornithologists (JPE, CJS & IJCF) visited the south-western corner of the tepui, setting up camp between 20 and 30 March 2000 at a locality close to the summit collecting sites used between 1943 and 1945. The base camp (West Aberaima Camp: 5°46'59"N, 63°47'07"W, 1,300 m) was located on the summit 1 km west of the Río Aberaima Canyon and gave access to dense humid low forest on a sandstone outcrop, gallery forests and a *Stegolepis* (Rapateaceae) meadow. A total of 40 specimens of 20 species were collected and a further 25 species were seen or heard.

The latter two expeditions recorded birds based on observations and collection using both shotguns and mist nets. In addition, 114 tape recordings, equivalent to 4½ hours of audio tape, were made by the 2000 expedition. Tape recordings will be archived at the Library of Natural Sounds (LNS), Cornell University, Ithaca, New York. The specimens are deposited in the Colección Ornithológica Phelps (COP), American Museum of Natural History (AMNH), Museo de Biología de la Universidad Central de Venezuela (MBUCV) and Museo de la Estación Biológica Rancho Grande (EBRG). Subspecies are indicated when determined. A museum acronym indicates where voucher specimens are deposited.

Here we report on 47 species recorded for the first time from the summit of Cerro Guaiquinima by the 1990 FUDECI expedition and the 2000 expedition, ten of which were considered members of the Pantepui avifauna by Mayr & Phelps (1967); these are denoted with the symbol § in the main text. After the 1943-45 fieldwork, the total number of species known from the summit of Cerro Guaiquinima was 66.

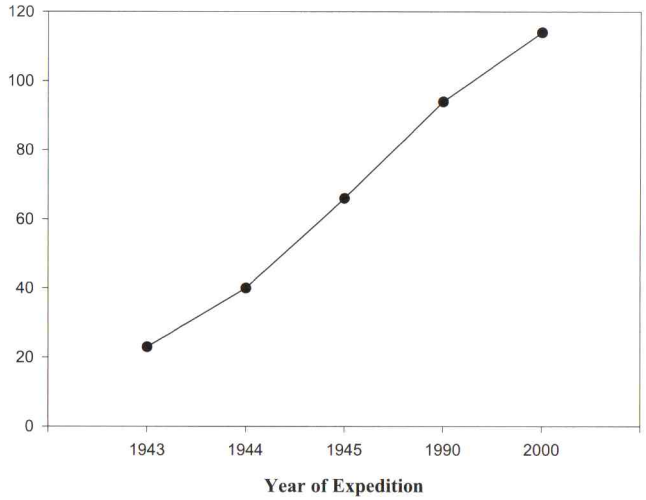

Figure 1. Species accumulation curve showing the increase in ornithological knowledge over time for Cerro Guaiquinima: cumulative number of species recorded by consecutive ornithological expeditions is used as an indicator of ornithological knowledge.

The 1990 FUDECI expedition added 27 species to the summit avifauna over 19 man days, whilst the 2000 expedition found a further 20 new species in 30 man days. A species accumulation curve produced from the results of the five expeditions that have been made to Cerro Guaiquinima (Fig. 1) shows that knowledge of the Pantepui avifauna is far from complete, as has been pointed out elsewhere (Dickerman & Phelps 1982, Barrowclough *et al.* 1995, 1997). A complete list of birds known from the summit and upper slopes of Cerro Guaiquinima is included in the Appendix.

Species accounts

LITTLE TINAMOU *Crypturellus soui*
One was heard one hour before first light, probably in gallery forest, and on another occasion one was heard and tape-recorded an hour after dawn in dense humid forest at the base of a rock outcrop, both near the West Aberaima Camp. This species has been recorded in Pantepui at upper elevations of 1,280 m on Cerro Urutaní (Dickerman & Phelps 1982), 1,300 – 1,600 m on the south-west slopes of Ptari-tepui and at 1,220 m on the north slope of Cerro Camani (COP specimens).

TURKEY VULTURE *Cathartes aura*
Pairs and single birds were seen quartering over the summit vegetation on three occasions close to West Aberaima Camp and within one hour of midday. All birds showed the white nape patch characteristic of the resident subspecies *ruficollis*. The species is widespread in Venezuela.

SWALLOW-TAILED KITE *Elanoides forficatus*
Pairs or single birds were observed hunting over various types of forest canopy near the West Aberaima Camp on four occasions.

BICOLOURED HAWK *Accipiter bicolor*
One immature was observed carefully from a distance of 20 m when it landed briefly on an interior forest perch in dense humid forest near the West Aberaima Camp. The bird was larger than Plain-breasted Hawk *A. ventralis* (at least 30 cm from crown to tail tip when perched) and dark grey above with a creamy-white belly, thighs and undertail coverts. A large *Accipiter* seen on several occasions flying to and from a small patch of trees in the same area, twice with small prey items as if to a nest, was probably also this species. Likewise, a tape recording of an unseen *Accipiter* calling from the same group of trees closely resembles *Accipiter bicolor* vocalizations from Costa Rica (Ross & Whitney 1995).

ROADSIDE HAWK *Buteo magnirostris*
A pair appeared to be on territory in gallery forest near West Aberaima Camp: one was seen and tape-recorded displaying in a high flight 300 m above gallery forest, a pair was seen flying together in the same place and one was heard there on another occasion.

BLACK-AND-WHITE HAWK EAGLE *Spizastur melanoleucus*
One was observed for 30 min from West Aberaima Camp at a distance of *c.* 1 km. It was displaying over tall humid forest in the canyon of the Río Aberaima. The bird soared in circles above the canopy, gaining height. From 300 m up it executed a very fast, shallow dive over the canyon, then gained height once more and was lost among the clouds.

LITTLE CHACHALACA *Ortalis motmot*
At least one pair heard 1.5 h after dawn in dense humid forest at the base of a rock outcrop near West Aberaima Camp. The birds appeared to be over 300 m away.

SPIX'S GUAN *Penelope jacquacu*
One was heard vocalizing from gallery forest near West Aberaima Camp. It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945).

§FIERY-SHOULDERED PARAKEET *Pyrrhura egregia*
Flocks were commonly seen at Camp 1; a male, body mass 66 g, with undeveloped testes and no moult was collected (COP). This species is found on many of the eastern tepuis, but this is the first record west of the Río Caroní (Mayr & Phelps 1967). The specimen collected in Guaiquinima corresponds to the subspecies *obscurus*, which is widely distributed in the eastern tepuis with the exception of Roraima (Meyer de Schauensee & Phelps 1978).

RED-AND-GREEN MACAW *Ara chloroptera*
Daily sight records of two pairs at West Aberaima Camp. They were always seen flying to and from the cliffs of the canyon of the Río Aberaima, perhaps to feeding or to roosting sites. They were observed in the 1945 Phelps Expedition on the south-western slope of the mountain but were not previously reported in the literature (William H. Phelps field notebooks).

§TEPUI PARROTLET *Nannopsittaca panychlora*
Heard or seen every day at West Aberaima Camp. The birds were always flying fast and high either singly or, more usually, in groups of two to five, often so high that they were hidden by low cloud. Except for two observations at 1000 h and 1400 h, flying birds were recorded mainly between 0620 h (20 minutes after dawn) and 0730 h. They occasionally appeared to land in dense humid forest at the top of a rock outcrop. Nine voucher tape recordings were made and identification of the birds was confirmed by comparison of sound spectrograms with recordings made by David Ascanio-Echeverría and Gustavo A. Rodríguez in the eastern tepuis of the Gran Sabana.

ORANGE-WINGED PARROT *Amazona amazonica*
A small group appeared to be resident in gallery forests near West Aberaima Camp where noisy flocks of three to nine were seen daily. The species is widespread in the lowlands and has also been recorded at 1,100 m on Auyan-tepui (Gilliard 1941, COP specimens).

SQUIRREL CUCKOO *Piaya cayana*
A male was tape-recorded and collected (COP) at the edge of dense humid forest at the base of a rock outcrop near West Aberaima Camp. The bird, body mass 69 g, had an unossified skull and undeveloped testes and was in wing, tail and body moult.

TROPICAL SCREECH-OWL *Otus choliba*
A male and female were mist-netted alongside a small stream near Camp 2. The male (AMNH), body mass 119 g, had developed testes and showed no moult. The female (MBUCV) had a body mass of 153.4 g. The specimens belong to the *crucigerus* subspecies rather than the Pantepui form *duidae* reported for Duida, Jaua, and La Neblina (Chapman 1931, Phelps 1977, Willard *et al.* 1991). The subspecies *crucigerus* is widely distributed in lowland South America (Marks *et al.* 1999) and has also been recorded on the summit of Cerro Yapacana at 1,200 m (Chapman 1931).

STYGIAN OWL *Asio stygius*
At least one pair was heard or observed daily at dawn and dusk in a mosaic of forest and *Stegolepis* meadow north of West Aberaima Camp. Vocalizations were of two types: a) a series of 10-20 low rhythmic hoots (*whoop*) delivered at an interval of 5.8 sec, represented by examples 1, 2 and 5 on Hardy *et al.* (1999); and b) a cat-like wail (*wherr* or a thinner *week*) similar to, but lower-pitched than example 3 on Hardy *et al.* (1999). The latter (tape-recorded twice) was given spontaneously throughout

the one to two hours before dawn and the first hour or two after dusk, and the calls were sometimes strung together into a series of screams: *wher-wher-wher-wher*. The hoots were only given from dense vegetation in response to playback of the wails and were only definitely heard from one of the birds. Upon playback one or other of the birds would approach the recordist and pass low over his head, often beating the wings together below the body to produce a loud, hollow, knocking sound. The birds were never seen or heard in daylight and activity seemed to decline as the full moon waned. Copulation was observed in a tree at the edge of gallery forest one clear evening with a three-quarter full moon at 1900 h (20 minutes after dark). The pair flew out of humid forest and perched 5-6 m up (1 m from the top) in a sparsely leaved tree at the edge of the open *Stegolepis* meadow. Copulation lasted at least 5 sec and was accompanied by loud shrieks. This is a rare and local owl species (Hilty & Brown 1986) previously known from four scattered localities in Venezuela (Meyer de Schauensee & Phelps 1978, plus unpublished specimens from Los Palmares, Estado Trujillo, (COP 73156), and Misión Ocamo, Amazonas, (EBRG 7751).

§BAND-WINGED NIGHTJAR *Caprimulgus longirostris*
An unsexed bird (MBUCV), body mass 52 g, was mist-netted at a waterfall in a small stream at Camp 2. This specimen corresponds to the *roraimae* subspecies which is widely distributed in the Pantepui region (Willard *et al.* 1991, Medina-Cuervo 1992).

§RORAIMAN NIGHTJAR *Caprimulgus whitelyi*
A female was mist-netted across a stream near Camp 1. The specimen, body mass 47 g, was in light body moult with a developed ovary and a highly enlarged oviduct. To confirm identification, the specimen (AMNH 10470) was checked by ROP and compared to skins in the AMNH collection. This Venezuelan endemic was previously known from Roraima, Ptari-tepui, Urutaní, Jaua and Duida (Meyer de Schauensee & Phelps 1978, Dickerman & Phelps 1982, Cleere & Nurney 1998). This specimen from 1,030 m represents the lowest published altitude as well as the northernmost record for this species.

§TEPUI SWIFT *Cypseloides phelpsi*
This species has been included in a previous list for Guaiquinima (Willard *et al.* 1991), but we have been unable to ascertain the source, despite an exhaustive revision of museum material and field notebooks. It is a widespread inhabitant of Pantepui (Meyer de Schauensee & Phelps 1978). Flocks totalling 15-80 birds were seen every day over the West Aberaima Camp during March 2000. Several aerial matings were observed in which the pairs copulated on the wing for about three seconds, spiralling down from 50 m to 10 m above the ground before parting. Five voucher tape recordings of flight calls were made.

WHITE-COLLARED SWIFT *Streptoprocne zonaris*
As with the previous species, we consider the basis for previous inclusion of this species in the Guaquinima avifauna (Willard *et al.* 1991) to be doubtful. Flocks of

150-600 were seen every day over the canyon of the Río Aberaima. On 25 March 2000, several larger flocks totalling at least 1,400 birds were wheeling at great height over the Río Aberaima canyon. Three voucher tape recordings were made.

§**WHITE-TIPPED SWIFT** *Aeronautes montivagus*
Flocks of 5-30 were seen every day in the area of West Aberaima Camp, often flying low over the *Stegolepis* meadows. Three voucher tape recordings were made and a female, body mass 21 g, with a granular ovary and no moult was collected (COP). This species is locally distributed in the upper tropical and subtropical zone of Venezuela: in Pantepui it is known from Auyan-tepui, Duida, Yapacana, Urutaní and La Neblina (Meyer de Schauensee & Phelps 1978, Willard *et al.* 1991).

WHITE-NECKED JACOBIN *Florisuga mellivora*
A female, body mass 6.2 g, with no moult was mist-netted in the forest near Camp 1 (COP). It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945).

WHITE-CHINNED SAPPHIRE *Hylocharis cyanus*
A male, body mass 3.2 g, with no moult was mist-netted in scrub near Camp 1 (COP).

SAPPHIRE-SPANGLED EMERALD *Amazilia lactea*
A female, body mass 4.5 g, with moderately enlarged ovaries and light body moult was mist-netted at Camp 2 (AMNH). Previously known from Sarisariñama, Auyan-tepui and Cerro Perro on the Río Paragua (Meyer de Schauensee & Phelps 1978).

PLAIN XENOPS *Xenops minutus*
An unsexed individual, body mass 10.5 g, was mist-netted in the forest near Camp 1 (COP). It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945).

GUIANAN SLATY ANTSHRIKE *Thamnophilus punctatus*
Three males showing no moult were captured in mist nets in forest near Camp 1 (MBUCV, COP, AMNH). The body masses of two were 21 and 19 g. Two were found in forest and one in streamside cane.

BLACK-CHINNED ANTBIRD *Hypocnemoides melanopogon*
Two males with undeveloped testes and no moult and body masses 16.5 and 19 g were collected in forest near Camp 1 at 1,030 m (COP). This appears to be the highest elevation at which this species has been encountered: two specimens from the Wilhemina Mountains, Suriname at 700 m (FMNH) may be the highest records previously known (Mort Isler, pers. comm.). Four specimens from 660 m in the Serranía de Tapirapecó (MHNLS) are the highest previous records for Venezuela.

BLACK-THROATED ANTBIRD *Myrmeciza atrothorax*
Two females were collected at Camp 1 (COP, AMNH). One had granular ovaries and was moulting the primaries and secondaries, while the other showed no moult and had a body mass of 14.5 g.

SCALE-BACKED ANTBIRD *Hylophylax poecilinota*
One male and two females were taken in forest near Camp 1 (AMNH, COP). None showed signs of moult; of the two specimens examined for gonadal development, one female had developed ovaries and body mass 17.5 g and the male had undeveloped testes and body mass 17 g. The other female had a body mass of 16 g. This species had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945) but this is the first record from the summit.

WHITE-PLUMED ANTBIRD *Pithys albifrons*
One unsexed bird showing no moult was captured in a mist net at Camp 1 (COP). It had previously been collected by Cardona in 1943 at 500 m on the south-western slope of Cerro Guaiquinima but this is the first record from the summit.

RUFOUS-CAPPED ANTTHRUSH *Formicarius colma*
An unsexed bird, body mass 44 g, with no moult was mist-netted in forest near Camp 1 (AMNH). It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945) but this is the first record from the summit. Generally a lowland species, it is also known from Aprada-tepui and Auyan-tepui at 1,000 and 1,100 m respectively and Paurai-tepui at 860-1,000 m (COP specimens).

§**RUFOUS-CROWNED ELAENIA** *Elaenia ruficeps*
Three specimens, two females (COP), body masses 15.5 and 17.5 g, with granular ovaries and one unsexed (EBRG), body mass 18 g, were collected in scrub at Camp 1. This species is distributed in eastern Colombia, north and central Brazil, the Guianas and southern Venezuela, where it reaches the slopes of the tepuis (Meyer de Schauensee & Phelps 1978, Hilty & Brown 1986).

GOLDEN-CROWNED SPADEBILL *Platyrinchus coronatus*
A female, body mass 8.8 g, with no moult was captured in a mist-net in forest at Camp 1 (MBUCV). This species had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945) but this is the first record from the summit.

ROYAL FLYCATCHER *Onychorhynchus coronatus*
Two males and a female were captured in mist nets in forest at Camp 1 (AMNH, COP). One male, body mass 14.5 g, showed moult of the primaries and secondaries, while the other, body mass 16 g, showed extensive symmetrical tail moult and limited

forecrown moult. One male had undeveloped gonads. The female, body mass 13.5 g, had undeveloped gonads.

§RUFOUS-TAILED TYRANT *Knipolegus poecilurus*
Single birds were seen on several occasions at West Aberaima Camp and a male, body mass 14.6 g with developed testes, completely ossified skull and no moult, was collected (COP). Lone birds were typically observed perched in the treetops at the edge of gallery forest where they looked around actively for insects whilst periodically flicking up both wings together over the back. One was also observed as part of a mixed flock together with Swainson's Flycatcher *Myiarchus swainsoni* and Pearly-vented Tody Tyrant *Hemitriccus margaritaceiventer*. The Rufous-tailed Tyrant is distributed in the upper tropical and subtropical zones from Venezuela to Bolivia and Brazil (Meyer de Schauensee & Phelps 1978). It is represented in Pantepui by a handful of records for some fifteen tepuis. The male collected in Guaiquinima, though darker than any other specimen of the species deposited at COP, is tentatively assigned to the *salvini* subspecies; colour differences might be attributed to foxing in the older material, as is suspected for other recent collections (Dickerman & Phelps 1982, Lentino *et al.* 1998).

BRIGHT-RUMPED ATTILA *Attila spadiceus*
One to three were heard on several occasions and tape-recorded in tall humid forest in the canyon of the Río Aberaima, east of West Aberaima Camp.

GREYISH MOURNER *Rhytipterna simplex*
A female, body mass 34 g, with a granular ovary was captured in a mist-net in forest near Camp 1 (COP). It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945) but this is the first record from the tepui summit.

TROPICAL KINGBIRD *Tyrannus melancholicus*
Two specimens were captured in scrub near Camp 1 (COP). One was a male, body mass 41 g, with a completely ossified skull and worn plumage. The unsexed specimen had a body mass of 39 g.

THRUSH-LIKE SCHIFFORNIS *Schiffornis turdinus*
A male, body mass 28 g, with moderately enlarged testes and no moult was mist-netted at forest near Camp 1 (AMNH). It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945) but this is the first record from the tepui summit.

GOLDEN-HEADED MANAKIN *Pipra erythrocephala*
A male, body mass 10.5 g, with undeveloped testes, a completely ossified skull and no moult was captured in a mist net at Camp 1 (COP). It had previously been collected on the south-western base of Cerro Guaiquinima (Comején Camp, 370 m: Phelps Expedition, February 1945) but this is the first record from the tepui summit.

§ORANGE-BELLIED MANAKIN *Lepidothrix suavissima*
A male, body mass 8.5 g, with enlarged testes, a completely ossified skull and no moult was collected in a mist-net at the forest edge at Camp 1 (COP). This species is a locally common inhabitant of the Pantepui region of southern Venezuela, and northern Guyana and Brazil (Meyer de Schauensee & Phelps 1978, Ridgely & Tudor 1994).

WHITE BELLBIRD *Procnias alba*
The distinctive song of this species was often heard by ROP on the mountain summit below Camp 2. On one morning at least three individuals were singing. Many tape-recordings were made.

BARN SWALLOW *Hirundo rustica*
One was seen flying north-east over *Stegolepis* meadow at West Aberaima Camp on 20 March 2000. This was followed by fourteen flying north on 21 March and a single bird on 25 March 2000. No further migration was observed from 26 to 30 March.

GREY-CHEEKED THRUSH *Catharus minimus*
A male, body mass 28 g, with undeveloped testes and no moult was mist-netted in forest near Camp 1 on 24 February 1990 (MBUCV). This is the only record of this Neotropical migrant for Cerro Guaiquinima.

§PALE-EYED THRUSH *Platycichla leucops*
This species was common in forest near Camp 1; highly vocal flocks of 5-10 males and females were observed by MLR in the forest canopy and sub-canopy. Two males, body masses 60 and 67 g, and an unsexed bird of 60 g were collected (MBUCV, EBRG, AMNH). This is a species of the subtropical zone distributed from Colombia to Bolivia, including Venezuela, Guyana and northern Brazil (Meyer de Schauensee & Phelps 1978) and is widespread in the Pantepui region (Willard *et al.* 1991).

NORTHERN WATERTHRUSH *Seiurus noveboracensis*
Two males, body masses 14 and 14.5 g, with completely ossified skulls were collected along a small stream at the forest edge at Camp 1 in February 1990 (COP). This Neotropical migrant is found throughout Venezuela during the boreal winter; within Pantepui it has been collected on Auyan-tepui and Paurai-tepui at 460 and 860 m respectively (Gilliard 1941, COP specimens). The species is widespread elsewhere in Venezuela from sea level to over 2,000 m.

BURNISHED-BUFF TANAGER *Tangara cayana*
Birds were regularly seen by ROP in low shrubs and small trees around Camp 2.

GREEN OROPENDOLA *Psarocolius viridis*
A lone bird flew over an open meadow between two patches of forest near West Aberaima Camp in the twilight before dusk. A single *Psarocolius* song was heard in the same place several days later.

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Appendix. Complete list of birds known from the summit and upper slopes (above 1,000 m) of Cerro Guaiquinima. No symbol indicates that voucher specimens exist; where specimens do not exist * = sight record; # = sound record; + = voucher tape-recording. Taxonomic order is based on the Check-list of North American Birds (American Ornithologists' Union 1998).

Crypturellus soui+, Cathartes aura, Elanoides forficatus*, Accipiter bicolor*+, Buteo magnirostris*+, Spizastur melanoleucus*, Ortalis motmot#, Penelope jacquacu+, Odontophorus gujanensis, Columba fasciata, Pyrrhura egregia, Ara chloroptera*+, Nannopsittaca panychlora*+, Amazona amazonica*+, Piaya cayana, Otus choliba, Glaucidium brasilianum, Asio stygius*+, Caprimulgus longirostris, Caprimulgus whitelyi, Cypseloides phelpsi*+, Streptoprocne zonaris*+, Aeronautes montivagus, Phaethornis bourcieri, Doryfera johannae, Campylopterus duidae, Florisuga mellivora, Colibri delphinae, Colibri coruscans, Lophornis pavonina, Thalurania furcata, Hylocharis cyanus, Amazilia lactea, Amazilia tobaci, Heliodoxa xanthogonys, Trogon personatus, Capito niger, Aulacorhynchus derbianus, Veniliornis cassini, Piculus rubiginosus, Cranioleuca demissa, Xenops minutus, Dendrocincla fuliginosa, Sittasomus griseicapillus, Glyphorynchus spirurus, Xiphorhynchus pardalotus, Thamnophilus punctatus, Myrmotherula haematonota, Herpsilochmus roraimae, Hypocnemoides melanopogon,*

Myrmeciza atrothorax, Hylophylax poecilinota, Pithys albifrons, Formicarius colma, Chamaeza campanisona, Myrmothera simplex, Elaenia ruficeps, Elaenia pallatangae, Mecocerculus leucophrys, Mionectes macconnelli, Phylloscartes nigrifrons, Pogonotriccus chapmani, Zimmerius gracilipes, Hemitriccus margaritaceiventer, Platyrinchus coronatus, Onychorhynchus coronatus, Myiophobus roraimae, Hirundinea ferruginea, Contopus fumigatus, Knipolegus poecilurus, Attila spadiceus+, Rhytipterna simplex, Myiarchus swainsoni, Tyrannus melancholicus, Schiffornis turdinus, Procnias alba#, Rupicola rupicola, Pipra cornuta, Pipra erythrocephala, Lepidothrix coronota, Lepidothrix suavissima, Hylophilus sclateri, Hirundo rustica, Thryothorus coraya, Henicorhina leucosticta, Microcerculus ustulatus, Catharus minimus, Platycichla flavipes, Platycichla leucops, Turdus ignobilis, Setophaga ruticilla, Seiurus noveboracensis, Myioborus cardonai, Basileuterus bivittatus, Tachyphonus surinamus, Tachyphonus phoenicius, Piranga flava, Thraupis palmarum, Euphonia xanthogaster, Chlorophonia cyanea, Tangara guttata, Tangara gyrola, Tangara cayana*, Tangara velia, Chlorophanes spiza, Cyanerpes caeruleus, Cyanerpes cyaneus, Coereba flaveola, Atlapetes personatus, Zonotrichia capensis, Pitylus grossus, Icterus chrysocephalus, Psarocolius viridis*.*

N.B. *Chaetura cinereiventris*, *Dysithamnus mentalis* and *Notiochelidon cyanoleuca* are considered part of the Guaiquinima tepui montane avifauna by Willard *et al.* (1991), yet there appear to be neither specimens nor sight records of the latter two to support their inclusion, whilst the former has only been recorded from Salto Guaiquinima at an altitude of 300 m. Although their presence on Guaiquinima would not be unlikely, we prefer not to include them here. Similarly, Ridgely & Tudor (1989) mention the presence of *Myioborus miniatus* on Cerro Guaiquinima (discussing similar species to *Myioborus cardonai*), but there are no records of this species for this tepui.

A new extinct species of snipe *Coenocorypha* from Vitilevu, Fiji.

By Trevor H. Worthy

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The Fijian archipelago (320 islands, 18,270 km^2) has the largest area of land in the Central Pacific (Pernetta & Watling 1979). It would have been considerably larger when sea level was more than 100 m lower during Pleistocene glaciations and Vitilevu was linked with Vanualevu (Watling 1982, Gibbons 1985). Vitilevu is the oldest island in the archipelago, with rocks of the Yavuna Group of late Eocene to early Oligocene age (Rodda 1994). While there may have been land associated with these older rocks, emergent land was certainly present during the deposition of the Wainimala Group (late Oligocene-middle Miocene) and probably has been present continuously since about 16 million years ago (Chase 1971, Rodda 1994). Fiji therefore has a terrestrial biota older than any other Pacific oceanic landmass except New Zealand or New Caledonia and so may be expected to have a well-developed endemic faunal component.

The modern vertebrate fauna of Fiji is characterised by the absence of terrestrial mammals, as in other Pacific islands. Birds dominate the extant fauna but there is also a diverse herpetofauna of frogs (2 spp), iguanas (2 spp), geckos (10 spp; 4 presumed to be introduced by people prehistorically), skinks (12 spp), and snakes (2

spp) (Pernetta & Watling 1979, Watling & Zug 1998). Indigenous mammals are restricted to six species of bats (Flannery 1995). This Fijian fauna with its endemic frogs (*Platymantis* spp.), iguanas (*Brachylophus vitiensis, B. fasciatus*), and a snake (*Ogmodon vitianus*) has few equivalents on typical oceanic islands. The granitic Seychelles islands, with endemic snakes, lizards and amphibians but no terrestrial mammals (Stoddart 1984), are however similar to Fiji in this respect.

Throughout the Pacific, the fossil record of birds has revealed many extinct species and range reductions of others. In New Zealand, 39 species became extinct on the main North and South islands (Turbott 1990, Worthy 1999), but there are 66 extinct taxa known from the whole New Zealand archipelago (Worthy & Holdaway in press). Gigantism and flightlessness, as shown in New Zealand by the 11 species of moa (Dinornithiformes), large rail-like birds (Aptornithidae: *Aptornis*, two species), and waterfowl (Anatidae: *Cnemiornis*, two species), are common evolutionary trends on mammalian predator-free islands (Worthy & Holdaway 2002). The Hawaiian archipelago lost more than half its bird diversity (James & Olson 1991, Olson & James 1991), including at least four species of large, flightless, browsing anatids, called moa-nalos. Elsewhere in the Pacific, often up to half the species in the fossil record were found to be extinct, as in the Marquesas (Steadman 1989a, Steadman & Rolett 1996), Easter Island (Steadman 1995), Henderson Island (Wragg & Weisler 1994), Society Islands (Steadman 1989a), Samoa (Steadman 1994), and on the Tongan and Cook Island groups (Steadman 1989a, 1993, 1995). Amongst the extinct taxa are many species of rails, megapodes, columbids and parrots (Balouet & Olson 1987, Steadman 1987, 1989b, 1992, Steadman & Zarriello 1987). A similar history of avifaunal extinction has also been found in the western Pacific in New Caledonia (Balouet & Olson 1989) and there are indications of them in Micronesia (Steadman & Intoh 1994).

A total of 69 indigenous land bird species are known historically from the Fijian archipelago (Watling 1982). Vitilevu, which is the largest island, has the greatest diversity with 47 land birds. Some 56% of these land birds are endemic (Watling 1982), yet few described species are unusual or aberrant, which is unusual in avifaunas from older islands. It is even more unusual for an oceanic island to apparently have so few historical extinctions, there being only two, the Barred-wing Rail *Nesoclopeus poecilopterus*, globally extinct, and the Wandering Whistling-duck *Dendrocygna arcuata* whose population was extirpated in the late nineteenth century (Watling 1982).

Unlike the rich archaeological and palaeontological records from New Zealand and many other places in the Pacific, there are few indications of the prehistoric fauna from Fiji. An extinct *Ducula* and a megapode were recorded from an archaeological site on Lakeba (Lau Group) (Gibbons 1985, Balouet & Olson 1987, Steadman 1989b) and a megapode was reported from Naigani Island off the eastern coast of Vitilevu (Best 1981, van Tets 1985: 198). Both archaeological faunas were deposited by Lapita people at about 2,900-2,600 CAL yrs BP and therefore date to the earliest colonisation of Fiji by people (Anderson & Clark 1999).

The first fossil deposits in Vitilevu were revealed in 1999 (Worthy *et al.* 1999). They provided a spectacular assemblage of extinct species, including a terrestrial