

## **Birds observed along the road Vallegrande - Masicurí, dpto. Santa Cruz, Bolivia, in 1991-3**

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### **Table of Contents**

Table of Contents.....	1
List of Updates.....	1
Introduction .....	2
Summary.....	2
Area Description.....	3
Itineraries.....	4
Species List.....	6
Mammals .....	24
References .....	24

### **List of Updates**

September '93:

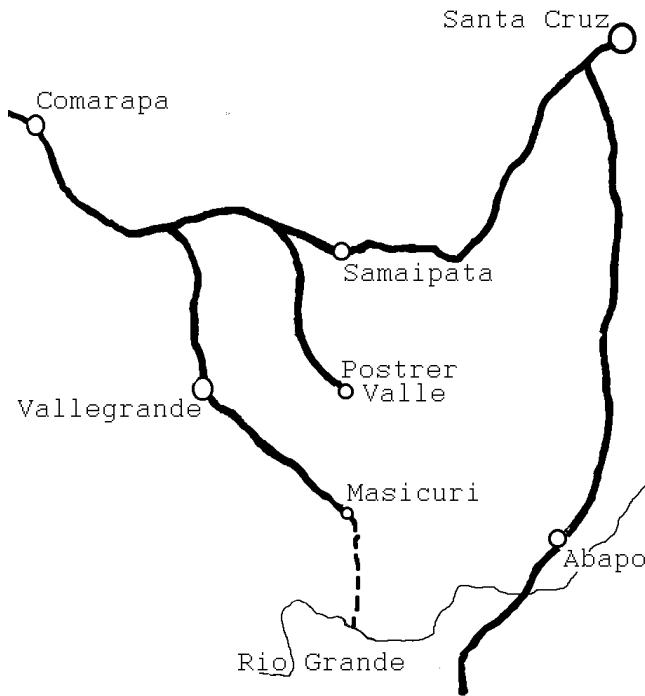
- A mystery song taped near the Rio Piraymiri turned out to be that of *Coryphospingus cucullatus* Red-crested Finch.
- A mystery call taped at Dionisos turned out to be of *Myiodynastes chrysocephalus* Golden-crowned Flycatcher.

June '94:

- The mystery song taped by Sjoerd near Loma Larga, which was at first thought to have possibly been made by *Nothura darwinii* Darwin's Nothura, turned out to be that of *Melanopareia maximiliani* Olive-crowned Crescentchest.
- Mystery calls taped by Sjoerd on several occasions turned out to be the "song" of the highland race of *Rhynchosciurus rufescens* Red-winged Tinamou.

## Introduction

This report describes the birds found during several birding trips along the road from Vallegrande to Masicurí, covering several types of montane forest and some other habitats as well. This area is especially interesting because it is here that two rather different avifaunas meet: the avifauna of the southern Bolivian-Tucuman montane forests and the avifauna of the more humid montane forests further north.



## Summary

The main body of this trip report is a full species list with notes on localities, habitats, abundance and sound recordings. It is preceded by an area description and a description of the itineraries.

Several species were found that are listed by ICBP as Near-threatened (Ref 2): *Harpyhaliaetus solitarius*, *Oraetus isidori*, *Falco deiroleucus*, *Penelope dabbenei*, and *Amazona tucumana*.

10 species were observed which were not previously recorded in Santa Cruz, according to the checklist (Ref 13). However, 5 of them were observed by others in other areas in the department since the checklist's publication. Species which were sound recorded are marked with (S), species which were not already recorded by others (as far as we know) are marked with (N): *Phalcoboenus megalopterus* Mountain Caracara, *Penelope dabbenei* Red-faced Guan (S,N), *Amazona tucumana* Alder Parrot (S), *Otus ingens* Rufescent Screech-Owl (S,N), *Otus hoyi* Montane-forest Screech-Owl (S,N), *Glaucidium jardinii* Andean Pygmy-Owl (S), *Ciccaba albiceps* Rufous-banded Owl (S,N), *Grallaria guatimalensis* Scaled Antpitta (S), *Sicalis citrina* Stripe-tailed Yellow-Finch (S), *Piranga olivacea* Scarlet Tanager (N).

Northward range extensions were found for the following species: *Penelope dabbenei* Red-faced Guan, *Amazona tucumana* Alder Parrot, *Otus hoyi* Montane-forest Screech-Owl.

Not having access to all the literature, it is in most cases not possible for us to determine with certainty which records constitute southward range extensions. In the following list, we assume that the observations listed in this trip report constitute southward range extensions for all species which are not listed for the departments of Chuquisaca and Tarija in (Ref 13), and were not observed in those departments since the checklist's publication according to (Refs 4 and 7).

With this assumption, southward range extensions were found for: *Crypturellus obsoletus* Brown Tinamou, *Odontophorus speciosus* Rufous-breasted Wood-Quail, *Falco deiroleucus* Orange-breasted Falcon, *Otus ingens* Rufescent Screech-Owl, *Aulacorhynchus coeruleicinctis* Blue-banded Toucanet, *Xiphorhynchus ocellatus* Ocellated Woodcreeper, *Lepidocolaptes affinis*

Spot-crowned Woodcreeper, *Sclerurus albicularis* Gray-throated Leafscraper, *Thamnophilus palliatus* Lined Antshrike, *Dysithamnus mentalis* Plain Antvireo, *Chamaeza campanisona* Short-tailed Anthrush, *Grallaria guatimalensis* Scaled Antpitta, *Thryothorus genibarbis* Moustached Wren, *Piranga olivacea* Scarlet Tanager, *Ramphocelus carbo* Silver-beaked Tanager, *Tangara xanthocephala* Saffron-crowned Tanager, *Tangara argyrofenges* Green-throated Tanager.

In the afternoon of March 12 '93, a flock of 10.000 - 13.000 *Buteo swainsoni* Swainson's Hawks headed north, in a continuous stream which lasted for about an hour.

Sound recordings of 105 species were made, about 7 hours in all.

## Area Description

Vallegrande is located in a wide valley. The ridges which shelter this valley from the rains coming in from the eastern lowlands are rather low, so that the valley is rather more green and more humid than the valleys further north (eg. the valleys of Comarapa and Mataral). Vallegrande: coordinates 18°29'S, 64°06'W, elev. 2050m.

Just before reaching a village called Guadalupe, the road to Masicurí forks off and starts leading up a ridge to a pass called Abra Tabla. The western slopes are rather dry, and have shrubby areas and grassland. The eastern slopes are more humid. The higher reaches have dense, low forest with *Podocarpus* and *Polylepis* in the highest parts, where not cleared. Abra Tabla: coordinates 18°36'S, 64°03'W, elev. 2450m.

The road now descends into the valley of the Rio Piraymíri. This valley is quite deep (the bridge is at 1630m), and sheltered from the rains by the high ridge to the east, which causes it to be relatively dry at the bottom. Quite a few people live here, and level areas are cultivated or converted to grassland. Drier foothill forests are found on the slopes, most heavily disturbed. Sjoerd camped here on his first walking trip. Camping spot: coordinates 18°38'S, 63°59'30"W, elev. 1850m.

From the river the road now ascends a ridge with a highest elevation of 2688m. The road leads gradually through more humid and forested habitats, until it reaches the cloud forests on the ridge itself. A large area of cloud forest is found near the estancia San Lorenzo (2300-2500m), where we spent several days altogether. The forest where we birded is rather low. It is not as wet as some other forests in the area, because it is located just west of the ridge itself, and thus more protected from the fog which often builds up on the eastern side. Many trees in this forest have a smooth, brown bark which seems to frequently peel off, thus preventing epiphytes from taking a hold. There was little undergrowth. It may be that this forest was cut a long time ago, because there were no really big trees. On the steep eastern slope taller and more diverse looking forest was visible. Camping spot: coordinates 18°39'30"S, 63°55'30"W, elev. 2350m.

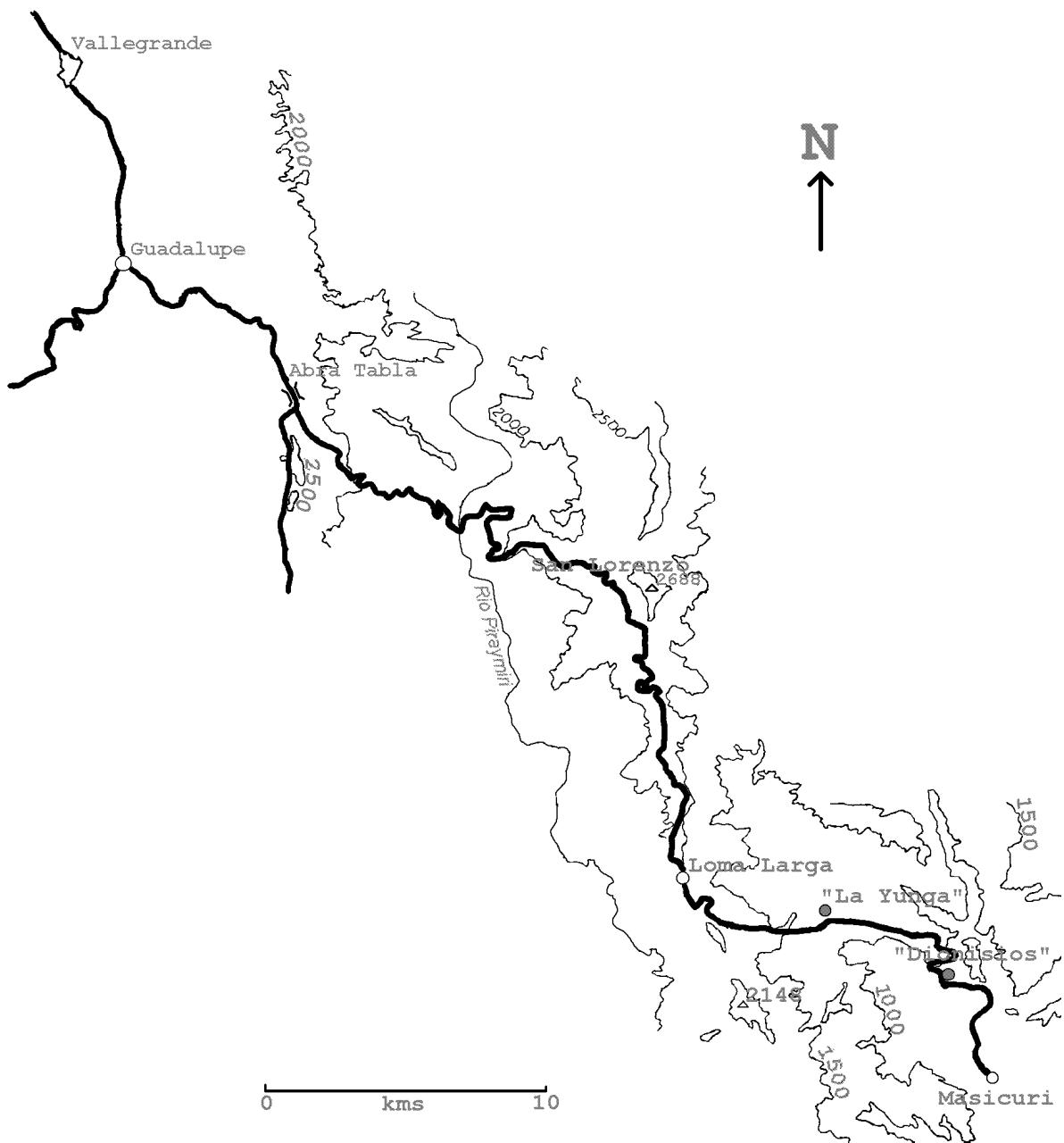
From San Lorenzo, the road follows the ridge to the village of Loma Larga (1950m). The road stays on the western side of the ridge. Some people live here. It seemed that all the bigger trees on the entire ridge had been removed, apparently a long time ago, because most forest was rather low and dense (a sawmill is still functioning lower down on the western slope). We did not see any really big *Podocarpus* trees, only lots of smaller ones. The forest is sometimes more moss-covered than at San Lorenzo.

Occasionally it is possible to see the ridges to the east. All these ridges have a north-south orientation (all the way down to Argentina), and become gradually lower when going east. All seem to be completely covered with dense forest, from top to bottom, with only some grassy areas on the highest, more level parts, and a few clearings lower down.

From Loma Larga, the road starts traversing down along the eastern slope. Sjoerd camped here on his first walking trip. Camping spot: coordinates 18°46'30"S, 63°53'W, elev. 1850m.

At about 5 kms from Loma Larga, the road starts winding down a gentle south facing slope. Someone said this location is called "La Yunga", and it bears this name in the remainder of this report. The slope is mostly covered with secondary forest, although impressive tall forest is visible not much lower down. A few people live here, and there are several clearings. The entire slope is apparently used for slash-and-burn agriculture (except the tall forest below). This forest has a tropical appearance, because *Heliconias* are so common. We birded this area for several days altogether. Coordinates: 18°47'S, 63°51'W, elev. 1450m.

The road keeps winding down and about 4 kms further on Sjoerd placed his tent along the road during his second trip. Close to this location the road is cut out of a vertical rock face, and there is a great view over the deep valley lower down. A little further there are some scattered houses, and this place seems to be called "Dionisios". This name will be used in the remainder of this report. Coordinates: 18°48'S, 63°47'30"W, elev. 1050m.



## Itineraries

On 5 and 6 December 1991, Mette and Elin paid a first visit to the area, watching birds in several of the described localities.

From 19 to 25 January 1992, all three authors birded the area again. The first two days were spent in the cloud forest area of San Lorenzo, and a third day was spent at "La Yunga". Sjoerd then left on January 22, whereupon Mette and Elin stayed another day at San Lorenzo and another day at "La Yunga".

From 2 to 9 February 1993, Sjoerd birded the area on foot:

- The first night he camped about 3 kms NW of the bridge over the Rio Piraymiri, at 1850m, along the road, on a slope with shrubs, small trees and a meadow.
- The cloud forest of San Lorenzo was reached the next day, and two nights were spent here. The tent was pitched near the forest edge, at about 2350m.

- On February 5 the tent was placed along the road about 3 kms S of the village of Loma Larga, at 1850m, on a wet slope with steep grassland higher up, shrubs and patches of dense forest along the road, and forest with clearings lower down.

On February 6 the tent was pitched along the road at a place called La Yunga, at 1450m. Here, the road winds down on a forested slope with scattered clearings. 3 nights were spent here. However, on the second day a "Sur" came in, bringing much rain and lower temperatures.

On the early morning of February 9 he returned to Vallegrande.

From 10 to 15 March 1993, Sjoerd made another trip to the area. During this trip, most species were less active than during the February trip. This was due to a combination of several factors: it was already quite late in the breeding season, it was very hot, it did not rain ,and it had not rained for quite some time. Even at dawn several normally vocal species remained nearly silent.

- On March 10, he hitchhiked up to Abra Tabla, and walked back to Guadalupe.
- On March 11, he went on local transport to "La Yunga", and placed the tent in the same location as on February 6-9.
- On March 13 he walked down to Dionisios, from where he went on local transport to Masicurí on March 15, and returned to Vallegrande the same day.

## Species List

The order of the checklist (Ref 13) is followed. Species which are insufficiently certain are between "(" and ")" brackets.

♦ This sign means that a sound recording was made.

♣ This sign means that either the checklist does not mention the species for the department of Santa Cruz, or that the present record constitutes a range extension. Note: it is not always possible for me to be absolutely certain whether a record constitutes a southward range extension or not.

### 1. *Crypturellus obsoletus* Brown Tinamou.

Birds were calling at San Lorenzo, 2350m, near Loma Larga, 1850m, at La Yunga, 1450m, and at Dionisios, 1050m.

♦ Taped at all locations. A recording was made with both this species and *C. tataupa* calling!

♣ The present records constitute probably a southward range extension.

### 2. *Crypturellus tataupa* Tataupa Tinamou.

Birds were calling in the valley of the Rio Piraymiri, at elevations of up to 2100m, and at all sites from Loma Larga onwards, all below 2000m. Also seen while crossing a road leisurely. Always a very common bird, except at higher elevations.

♦ Often taped.

### 3. *Rhynchotus rufescens* Red-winged Tinamou.

- Sjoerd tape recorded the "song" near Guadalupe on February 2, 1993. However, as the song carries very far, it may have come from a nearby ridge.
- Observed by Mette and Elin near San Lorenzo, January 1992. The "song" was taped near the same location by Sjoerd, on February 4, 1993.
- ♦ Songs were taped.

### 4. *Nothoprocta pentlandii* Andean Tinamou.

Heard only.

- A bird was heard calling on the valley floor near Vallegrande, 2000m, on February 2, 1993.
- Several birds were calling halfway Guadalupe and Abra Tabla, at 2200m, on March 10, 1993.
- At least 10 birds were heard calling before dusk near the campsite at 1850m near the Rio Piraymiri. It was heard a few times at night as well (it was almost full moon).
- ♦ Taped.

### 5. *Nothura darwinii* Darwin's Nothura.

A pair and a single bird were flushed from underfoot in dense, low grassland on top of the ridge south of Abra Tabla, at 2300-2450m, on March 10, 1993.

### 6. *Coragyps atratus* Black Vulture.

Occasionally seen in ones or twos, in all locations.

### 7. *Cathartes aura* Turkey Vulture.

Often seen in all locations.

### 8. *Vultur gryphus* Andean Condor.

- At least 5 were seen near Abra Tabla, on February 2, 1993. 4 were adults and 1 was immature. 2 nests of probably this species were seen in steep rock faces. A family of 2 adults and an immature was seen in the same location on March 10, 1993.
- Two adults were seen near San Lorenzo, on February 2, 1993.
- At least 3 were seen halfway San Lorenzo and Loma Larga, in January 1992.

### 9. *Sarcoramphus papa* King Vulture.

Two separate birds were gliding and soaring high above Dionisios, 1050m, at 11.00h on March 14, 1993. Also seen by Mette and Elin near the same location in January 1992.

### 10. *Elanoides forficatus* Swallow-tailed Kite.

A common bird over forested areas.

♦ Taped during their evening gatherings, high up in the air.

11. *Elanus caeruleus* Black-shouldered Kite.

One was seen hovering near Vallegrande, 2050m, on February 2, 1993.

12. *Ictinia plumbea* Plumbeous Kite.

Several were seen above La Yunga, 1450m, in December and January 1992.

13. *Accipiter striatus/bicolor* Sharp-shinned/Bicolored Hawk.

- A pair was seen soaring over the campsite near the Rio Piraymiri, at 1850m, in the morning of February 3, 1993. They were probably *A. bicolor*, to judge from their size.
- One crossed the road between San Lorenzo and Loma Larga, at 2100m, on February 6, 1993.

14. *Asturina nitida* Gray Hawk.

One was seen near Masicurí, 700m, on March 15, 1993.

15. *Harpyhaliaetus solitarius* Solitary Eagle.

A pair was present along the road at La Yunga, 1450m, on January 21/22, 1992. On the afternoon of January 21, both birds perched in trees close to the road and even overhanging the road, screaming all the time. The next morning we saw the same pair soaring.

- ◆ Excellent recordings.

16. *Buteo magnirostris* Roadside Hawk.

Common.

- ◆ Taped.

17. *Buteo platypterus* Broad-winged Hawk.

One was seen above La Yunga, 1450m, on January 25, 1992.

18. *Buteo swainsoni* Swainson's Hawk.

From 14.00h to 15.00h on March 12, 1993, during hot and sunny weather, a narrow and near-continuous stream of Swainson's Hawks passed overhead to the north, riding the thermals. The highest density of birds was in the front end of the flock, the stream thinning gradually with some small gaps. At the end, with a larger gap of about 5 minutes, the final "little" flock of 130 birds appeared, performed some confused movements and then disappeared to the east. The initial bulk of the flock consisted of roughly 5000 birds, followed by another more spread-out 5000. Actually, I spoke all the numbers into my tape recorder, which later turned out to add up to exactly 9.900! However, this seeming accuracy is not real. I "lost my count" several times, also due to the conversation with a passer-by who was certain that all those birds moved in a huge circle, sneaking around us behind the ridge! I think the real number was not lower, because my experience is that when I recount a flock of whatever species more accurately, then the number almost invariably turns out to be higher. So, I would say that this flock consisted of 10.000 to 13.000 birds.

19. *Buteo polyosoma/poecilochrous* Red-backed/Puna Hawk.

- An adult was seen just outside Vallegrande, 2050m, on March 10, 1993.
- An immature was seen halfway Guadalupe and Abra Tabla, 2200m, March 10, 1993.
- One light-phase bird was seen sailing high above San Lorenzo, 2400m, on February 5, 1993.

20. *Oroaetus isidori* Black-and-chestnut Eagle.

An adult was seen well while soaring above La Yunga, 1450m, at about 09.00h on March 13, 1993.

21. *Phalcoboenus megalopterus* Mountain Caracara.

- An adult bird was seen near Abra Tabla, at 2400m, on February 2, 1993 and March 10, 1993.
- Seen by Mette and Elin near San Lorenzo, January 1992.
- ♣ The checklist does not mention this species for Santa Cruz, but note that it was observed before by Clarke (Ref 1).

22. *Micrastur ruficollis* Barred Forest-Falcon.

- 1 was calling near the tent at San Lorenzo, 2350m, on February 3-5, 1993. It called in the forest edge, and once from a small patch of shrub and low trees surrounded by grass (but close to the forest). Once it called at 17.50h, while the sun was still shining strongly, instead of at dawn as it normally does.
- At most 2 were calling at La Yunga, 1400-1500m, on February 6-9, 1993 and on March 11-13, 1993.
- One was heard calling at Dionisios, 1050m, on March 14, 1993.
- ◆ Taped.

23. *Falco sparverius* American Kestrel.

Fairly common, in open areas at all elevations.

24. *Falco deiroleucus* Orange-breasted Falcon.

One was seen at La Yunga, 1450m, in the morning of March 12, 1993. It was perched for some time on the highest (dead) branch of a big tree.

It was the first time I saw one, and I did not realize that I ought to look for the color of the light barring on the black vest. However, the black vest was narrow, particularly in the center, and above it there was a rather broad band of rufous. Also, the bird looked quite large, not neat and compact like the Bat Falcons which I have seen quite often. So I guess it must have been OB Falcon.

25. *Ortalis motmot* Speckled Chachalaca.

Two birds together were seen at La Yunga, 1450m, on March 12, 1993.

26. *Penelope dabbenei* Red-faced Guan.

We find it hard to understand why these big birds which are so easy to hunt are still easy to find at one site at San Lorenzo:

- January 1992: a single bird and a pair were chased near the highest point of the road at San Lorenzo, 2500m. Another bird was heard calling one morning near the only house at San Lorenzo, (where we had pitched our tents), about 1 km from the other location.

- February 1993: in the same spot as the previous year, ie near the highest point of the road at San Lorenzo, at dusk on February 4, two birds were calling at about 400m from each other, emitting monotonous series of barks. One of the birds called interminably, like a *Micrastur ruficollis*. A third bird was encountered in the same location on the roadside, which showed the same behaviour as in Tarija and Chuquisaca, ie after being chased it made an incredible amount of noise while perched conspicuously up in a tree.

◆ Sjoerd's best recordings of this species yet.

♣ The checklist does not mention this species for Santa Cruz. The present records constitute a northward range extension.

27. (*Penelope obscura* Dusky-legged Guan).

Not certain at all. Sjoerd heard and taped some gruffy calls in the valley of the Rio Piraymiri, 1850m, at dusk, that may have been this species. Local people said that the species occurred in the valley.

◆ One of the calls was recorded.

28. *Odontophorus speciosus* Rufous-breasted Wood-Quail.

- At least two parties were heard calling at La Yunga, 1450m, January 1992 and February/March 1993.

- It was heard in three locations at Dionisios, 1050m, in March 1993.

◆ Sound-recorded.

♣ The present record constitutes probably a southward range extension.

29. *Columba fasciata* Band-tailed Pigeon.

- About 15 in all were seen on the slope west of Abra Tabla, 2300-2400m, March 10, 1993. Some were performing display flights.

- A common bird at San Lorenzo. Sang often, all day.

- Several were seen flying over the campsite south of Loma Larga, 1850m, on February 5/6, 1993.

◆ The song and the growl were sound-recorded.

30. *Columba cayennensis* Pale-vented Pigeon.

One was heard singing at the campsite south of Loma Larga, 1850m, on February 5/6, 1993.

31. *Zenaida auriculata* Eared Dove.

Several were seen halfway Guadalupe and Abra Tabla, at about 2250m, March 10-11, 1993.

32. *Columbina talpacoti* Ruddy Ground-Dove.

Observed by Mette and Elin at lower elevations, December 1991 and January 1992.

33. *Columbina picui* Picui Ground-Dove.

Common near Vallegrande, 2050m.

34. *Leptotila megalura* Large-tailed Dove.

A common bird, especially on slopes. Many were singing February 1993, and some March 1993.

◆ Taped.

35. (*Geotrygon frenata* White-throated Quail-Dove).

See the text under the following species. Although the birds near Loma Larga and at La Yunga were possibly the next species, I think that the bird taped at San Lorenzo belonged very probably to the present species, because of the altitude and the habitat ("cloud" forest). The song taped at San Lorenzo is too weak to compare.

- 1 sang at San Lorenzo, at 2500m, February 1993.
- 1 sang uninterrupted, all late afternoon and all morning, near the campsite south of Loma Larga, 1850m, February 1993. Possibly Ruddy QD.
- 1 sang at La Yunga, 1450m, February 1993. Possibly Ruddy QD.
- ◆ All birds were taped. The La Yunga recording is very good.

36. *Geotrygon montana* Ruddy Quail-Dove.

◆ A pair was seen repeatedly at La Yunga, 1450m, on March 11-12, 1993. They were always present in the same patch of forest, where the soil was completely "ploughed over" by pigs. In the same location, a Quail-Dove song was taped a few weeks before, on February 6-7. When comparing this song with the songs on the ARA tape (Ref 14), it is nearly identical to that of White-throated QD, and not to the song of Ruddy QD (the song doesn't "moan", ie is short and on the same pitch).

37. *Ara militaris* Military Macaw.

- Altogether 32 were seen by Mette and Elin at La Yunga and Dionisios, December 1991. 27 of them flew in the same direction to roost.
- A pair, more probably 2 or 3 pairs, were usually present near Dionisios, 1050m, March 13-15, 1993. Often heard, but not often seen. Sjoerd's impression was that they moved up into the valley at about 09.00h in the morning, and moved down again in the late afternoon. All birds were heard near the bottom of the valley, near the river, except for the sighting of a high flying pair that headed north.
- Also, near Abapó, about 40km SEE of Masicurí, on the highway from Santa Cruz to the Argentine border, at about 400m, Mike Brady and SM saw a party of 6 and one or two pairs on May 2-3, 1993.
- ◆ Calls of flying and perched birds were taped.

38. *Ara auricollis* Golden-collared Macaw.

Seen often at La Yunga, 1400-1500m, and at Dionisios, 1050m, always in single pairs, flying over or perching high up in trees.

- ◆ Taped.

39. *Aratinga mitrata* Mitred Parakeet.

- Calling birds were taped high in the east-facing rock faces south of Abra Tabla, at 2400-2500m, March 10, 1993.
- Several flocks, ranging from 8 to 40 birds, were seen in the valley of the Rio Piraymíri and at La Yunga. Possibly also at Dionisios, but never with certainty.
- ◆ Calls were taped.

40. (*Aratinga leucophthalmus* White-eyed Parakeet).

Several flocks, especially in the morning, flew around noisily at Dionisios, 1050m, in March 1993. However, I never identified them with certainty.

41. *Pyrrhura molinae* Green-cheeked Parakeet.

Fairly common at San Lorenzo, La Yunga and Dionisios, usually in the form of small, dashing, screeching flocks. Sometimes they perched in a tree close to an observer, watching with curiosity.

- ◆ Taped.

42. *Bolborhynchus aymara* Gray-hooded Parakeet.

Two were seen near Vallegrande, 2050m, and a party of 9 halfway Guadalupe and Abra Tabla, at 2250m, all on March 10, 1993.

43. *Pionus maximiliani* Scaly-headed Parrot.

- About 10 were seen near the Rio Piraymíri, at 1850m, on February 3, 1993.
- Seen near San Lorenzo by Mette and Elin, January 1992.
- Fairly common at La Yunga, 1400-1500m, and at Dionisios, 1050m, during all visits.

44. *Amazona tucumana* Alder Parrot.

- A common bird at San Lorenzo, both in 1991/2 and in 1993.

In the early morning and the late afternoon, small parties composed of one or several pairs, would fly around noisily, occasionally perching in a tree, making more noise. In February 1993, a flock of about 50 wandered about, just before dusk.

During the daytime birds were much more quiet. In January 1992 we observed a flock of about 25 in dense, low forest along the road, at about 3 or 4 o'clock in the afternoon.

- *Amazona sp.* heard at La Yunga, 1400-1500m, were possibly this species.

◆ Excellent recordings were made of flying and perched birds.

♣ The checklist does not mention this species for Santa Cruz, but it was observed before in the same area by Guy and Jane Cox (pers. comm.). The present records constitute a northward range extension.

45. *Amazona aestiva* Turquoise-fronted Parrot.

- Birds of probably this species were heard while flying to their roost, at the campsite in the valley of the Rio Piraymiri, before dusk on February 2, 1993.

- Seen by Mette and Elin near Masicurí, 1 in December 1991 and 10 in January 1992.

46. *Piaya cayana* Squirrel Cuckoo.

Seen by Mette and Elin near San Lorenzo, January 1992. One was seen in the valley of the Rio Piraymiri, at about 1800m, in February 1993. Several were heard, and one seen, at La Yunga, 1450m, and two were heard at Dionisios, 1050m, March 1993.

◆ Its probable alarm calls were taped.

47. *Crotophaga ani* Smooth-billed Ani.

A band of at least 6 in a large clearing at Dionisios, 1050m, March 1993. Observed in the same area by Mette and Elin, December 1991 and January 1992.

◆ Taped.

48. *Otus choliba* Tropical Screech-Owl.

One sang at the campsite near the Rio Piraymiri, at 1850m, on February 2, 1993.

◆ Taped.

49. *Otus ingens* Rufescent Screech-Owl.

Songs and calls were recorded at La Yunga, 1450m, on January 21, 1992, and on February 6 and March 11-12, 1993. Birds sang two different songs:

- Song A: a trill, usually rather long. The trill is similar to the song of *O. hoyi*, but is slower, slightly higher-pitched, and less a trill than a succession of neat short notes. However, it shares the acceleration halfway with *O. hoyi*. This is the song that is described in the Colombia guide (Ref 5).

- Song B: the song of the ARA tape (Ref 15), consisting of around 5 spaced notes followed by a short and quick, somewhat descending and slowing down succession of about 10 notes.

Sjoerd has a recording of a bird starting with the trills of song A, then after some time changing over to song B. One singing bird, and once two birds singing from both sides of the road, were taped. Also, weird wailing calls were recorded. Identical wailing calls are heard in the background of the ARA tape recording of *Otus colombianus* Colombian Screech-Owl, a closely related (sub)species.

◆ Songs A, B and the wailing calls were taped. Excellent recordings.

♣ The checklist does not mention this species for Santa Cruz. The present record constitutes a southward range extension.

50. *Otus hoyi* Montane-forest Screech-Owl.

• A singing bird was taped in the forest edge close to the tent at San Lorenzo, 2350m, on both evenings of February 3 and 4, 1993, about 1 or 2 hours after sunset. About 1 km. from this spot, on February 4 at 19.15h (ie just after sunset), unknown soft calls were taped. These calls are very similar in pitch and "quality" to wailing calls taped by me in Tarija, which were probably made by *O. hoyi* (Ref 7), and were produced at the same time of day, so I suspect that the present calls were *O. hoyi* calls as well, although they are not "wailing".

• A pair was taped at the campsite south of Loma Grande, 1850m, after dusk on February 5, 1993. The second bird called only once: a "song" very similar to the "Response to Playback" of *O. hoyi* on the ARA tape (Ref 15).

◆ Excellent recordings.

♣ The checklist does not mention this species for Santa Cruz. The present records constitute a northward range extension.

51. *Bubo virginianus* Great Horned Owl.

A bird sang at La Yunga, 1450m, after dusk on February 6, 1993.

◆ Taped.

52. *Glaucidium jardinii* Andean Pygmy-Owl.

A bird sang every day at dusk and dawn, near the tent at San Lorenzo, 2350m, in the forest edge or just inside the forest, on February 3-5, 1993. The only song heard (and taped) was the one that consists of series of whistles, described as song B in the Taiquia report (Ref 7).

◆ Taped.

♣ The checklist does not mention this species for Santa Cruz, but note that it was already observed before, see Parker, Bates and Cox (Ref 10).

53. *Glaucidium brasiliatum* Ferruginous Pygmy-Owl.

A singing bird was often heard at Dionisios, 1050m, March 1993. It was never heard at night, only at dusk and during the day!

◆ Taped.

54. *Ciccaba huhula* Black-banded Owl.

Pairs were taped at La Yunga, 1450m, and at Dionisios, 1050m. See (Ref 6) for a description of calls and songs.

◆ Songs and calls were both taped. Excellent recordings.

55. *Ciccaba albifrons* Rufous-banded Owl.

Several times heard at San Lorenzo, 2350m, on February 3-5, 1993. Both the song and the series-of-"whoo" call were heard. See (Ref 6) for a description of calls and songs.

◆ Only a single song was taped, and it is barely audible.

♣ The checklist does not mention this species for Santa Cruz. The present record does not really constitute a southward range extension, because it was also recorded in cloud forest in southern Chuquisaca (Refs 4 and 6).

56. *Nyctibius griseus* Common Potoo.

A bird was singing at La Yunga, at 1400m, in the night of January 21, 1992.

57. *Streptoprocne zonaris* White-collared Swift.

Flocks were seen above San Lorenzo, 2350m, near Loma Larga, 1850m, and above La Yunga, 1450m. Every evening a flock of up to 150 birds wheeled and dashed around high above Dionisios, 1050m, from about 18.00h until at least 18.30h (when it was quite dark already). Most of the time they were silent, but at regular intervals many, if not all, birds called loudly.

◆ Taped.

58. *Aeronautes montivagus* White-tipped Swift.

● A nest was found high on the slope east of Abra Tabla, at about 2300m, on February 2, 1993. It was located in a vertical crack in an almost overhanging rock face of about 20 meters high, about 12 meters from the base of the face. The rock faced east, and overlooked a steep grassy slope. An adult bird visited the nest every few minutes (the intervals were not measured). The young in the nest were probably quite grown up already, because they often burst out in loud calling bouts, calls which were very similar to the calls which Sjoerd recorded from a flock in Chuquisaca in March 1992. Other birds were probably nesting nearby, because once a party of 11 birds wheeled overhead.

● A small flock of at least 5 was seen close to the Rio Piraymiri, at about 1750m, on February 3, 1993.

● Up to 17 birds were seen at midday at Dionisios, 1050m, on March 14 and 15, 1993.

59. *Phaethornis* sp. Hermit sp.

Two were seen near Loma Larga at 1850-1900m, several were seen at La Yunga, 1400-1500m, and it was often seen and heard at Dionisios, 1050m, in February and March 1993. All birds were traplining. They called often, the call being a loud squeak. They had a long white tail.

◆ Flight calls were taped.

60. *Colibri thalassinus* Green Violetear.

In January 1992, this species was very common in the ubiquitous *Brachyotum* sp. near the highest part of the road at San Lorenzo, at about 2500m. Several were seen again in the same area in February 1993.

61. *Chlorostilbon aureoventris* Glittering-bellied Emerald.

Several were seen near Vallegrande, 2050m, in February and March 1993.

62. *Thalurania furcata* Fork-tailed Woodnymph.

Altogether 3 birds were seen at La Yunga, 1400-1500m, on February 8-9, 1993.

63. *Amazilia chionogaster* White-bellied Hummingbird.

- Several were seen in the valley of Vallegrande, 2050m, February 2, 1993.
- One was singing at San Lorenzo, at 2500m, February 4, 1993.
- One was seen at La Yunga, 1450m, March 12, 1993.
- ◆ The singing bird was taped.

64. *Adelomyia melanogenys* Speckled Hummingbird.

- A very common bird in the ubiquitous *Brachyotum sp.* near the highest part of the road at San Lorenzo, at about 2500m.
- One was seen at the campsite south of Loma Grande, 1850m, February 6, 1993.
- Several were seen at La Yunga, 1400-1500m, February 6-9 and March 11, 1993.
- One was seen at Dionisios, 1050m, March 13, 1993.
- ◆ Calls were taped.

65. *Eriocnemis glaucopoides* Blue-capped Puffleg.

Several were seen at San Lorenzo, most of them in the ubiquitous *Brachyotum sp.* near the highest part of the road at about 2500m, both in January 1992 and in February 1993.

- ◆ Calls and wingsound were taped.

66. *Sappho sparganura* Red-tailed Comet.

Several were seen in the valley of the Rio Piraymiri, and 1 was seen at San Lorenzo, February 2-5, 1993.

67. *Trogon personatus* Masked Trogon.

A common and vocal bird in humid forest at all levels (ie from 2500m down to 1050m).

- A singing bird was heard in low dense forest not far below Abra Tabla, on the eastern slope, February 1993.
- Often heard singing in forests at San Lorenzo, February 1993. One or two birds were seen here in January 1992.
- Several singing at the campsite south of Loma Grande, February 6, 1993.
- Often singing at La Yunga, February 6-9, 1993. Also seen.
- One bird was singing at Dionisios, 1050m, March 15, 1993.
- ◆ Many sound recordings.

68. *Ceryle torquata* Ringed Kingfisher.

Observed by Mette and Elin near Masicurí, December 1991.

69. *Chloroceryle americana* Green Kingfisher.

Observed by Mette and Elin near Masicurí, January 1992.

70. *Nystalus maculatus* Spot-backed Puffbird.

One or more probably two birds were calling near Guadalupe, about 2000m, February 2, 1993.

71. *Aulacorhynchus coeruleicinctis* Blue-banded Toucanet.

- Two or three were repeatedly seen at La Yunga, 1450m, in February and March 1993.
- Two were seen halfway La Yunga and Dionisios, at 1350m, March 13, 1993.
- ◆ Taped.
- ♣ The present records constitute probably a southward range extension.

72. *Pteroglossus castanotis* Chestnut-eared Aracari.

Observed by Mette and Elin near Masicurí, December 1991.

73. *Picumnus cirratus dorbygnianus* Ocellated Piculet.

Two separate birds were observed near the Rio Piraymiri, at 1750m and at 1850m, 2 birds were seen at San Lorenzo at about 2400m, 1 was probably heard at La Yunga, 1450m, and 1 was seen at Dionisios, 1050m, all in February/March 1993. Only the birds at San Lorenzo and at Dionisios were identified with certainty as belonging to this species.

- ◆ Calls of probably this species were taped (fast, high-pitched, descending series of short notes).

74. *Veniliornis fumigatus* Smoky-brown Woodpecker.

A female was seen at La Yunga, 1450m, March 11, 1993.

75. *Veniliornis frontalis* Dot-fronted Woodpecker.

A pair was present, noisily, at the campsite in the valley of the Rio Piraymiri, at 1850m, February 3, 1993.

76. *Piculus rubiginosus* Golden-olive Woodpecker.

- Observed by Mette and Elin near San Lorenzo, January 1992.
- One was seen near the campsite south of Loma Grande, 1850m, February 5, 1993.

77. *Dryocopus lineatus* Lineated Woodpecker.

One was seen near the Rio Piraymíri, at 1650m, a male was seen and up to 2 drumming birds were heard repeatedly at La Yunga, 1450m, in February/March 1993.

- ◆ The drums were taped.

78. *Campetherus melanoleucus* Crimson-crested Woodpecker.

- Observed by Mette and Elin near San Lorenzo, January 1992.

- A party of up to 4 birds was often present in or near a certain tree at La Yunga, 1450m, where they (or at least one of them) were sometimes very noisy, emitting interminable series of the "chis-sic" call mentioned in the Colombia guide (Ref 5), probably the alarm call.

- ◆ Excellent recordings.

79. *Sittasomus griseicapillus* Olivaceous Woodcreeper.

Common at La Yunga, 1400-1500m, and at Dionisios, 1050m.

- ◆ Taped.

80. *Xiphorhynchus ocellatus* Ocellated Woodcreeper.

A pair was seen at La Yunga, 1450m, March 11, 1993.

81. *Lepidocolaptes affinis* Spot-crowned Woodcreeper.

Several were seen in mixed flocks at San Lorenzo, at 2300-2450m, and 1 was seen at La Yunga, 1450m, all in January 1992. No mixed flocks were seen in 1993, and neither was this species.

- ♣ The present records constitute probably a southward range extension.

82. *Campylorhamphus trochilirostris* Red-billed Scythebill.

Two birds, pres. a pair, were seen at La Yunga, 1450m, and a bird sang each morning at sunrise in the same location, on February 7-9. The singing bird would sing only a few times from each perch, before moving on to the next perch.

- ◆ The song was taped. It is similar in quality to the song from Brazil that is found on the ARA tape (Ref 16), but shorter, consisting of only 5 notes (but after playback the songs became longer, up to 15 notes).

83. *Synallaxis azarae* Azara's Spinetail.

Although 2 of the birds were identified as certainly this species (1 at San Lorenzo, 2350m, and 1 near Loma Larga, 1850m), and although all birds heard in humid habitats were probably this species, it may be that there were also birds belonging to *S. frontalis* Sooty-fronted Spinetail, particularly in less humid habitats near Vallegrande and in the valley of the Rio Piraymíri.

Several were heard on the valley bottom near Vallegrande, and it was common on both slopes of the ridge between Guadalupe and Piraymíri, at up to 2500m, in the valley of the Rio Piraymíri, at San Lorenzo, at the campsite south of Loma Larga, 1850m, at La Yunga, 1450m. It was not observed at Dionisios, however.

- ◆ Taped several times.

84. *Poecilurus scutatus* Ochre-cheeked Spinetail.

One was present near Loma Larga, at 1850m, it was very common at La Yunga, 1450m, and several were heard at Dionisios, 1050m.

- ◆ Often taped, both the "song" and a kind of alarm call.

85. *Phacellodomus striaticeps* Streak-fronted Throtnbird.

- A singing pair of probably this species was heard halfway Guadalupe and Abra Tabla, at 2250m, March 10, 1993.
- A singing bird was heard high on the slope east of Abra Tabla, at roughly 2300m, February 2, 1993. (The typical "laughing" thornbird song preceded by clicks).

86. *Phacellodomus (striaticollis) maculipectus* Spotted-breasted Throtnbird.

Often heard (and once seen well), on the slopes of the ridge between Guadalupe and Piraymíri, and several times heard and once seen in the valley of the Rio Piraymíri. The song is a rather short version of the typical "laughing" thornbird song.

87. *Syndactyla rufosuperciliata* Buff-browed Foliage-Gleaner.

Several were heard in the valley of the Rio Piraymíri at 1850m, it was common at San Lorenzo at 2350m, and 1 was heard south of Loma Larga at 1850m, and 1 at La Yunga, 1450m.

- ◆ Calls and "songs" were taped.

88. (*Philydor rufus* Buff-fronted Foliage-Gleaner).

Repeatedly seen, but not well enough, at the same spot at La Yunga, 1450m, January 1992 and February/March 1993. Good recordings were made, but we have no other recordings to compare them with, yet.

- ◆ Taped.

89. *Xenops rutilans/minutus* Streaked/Plain Xenops.

Two birds were seen halfway La Yunga and Dionisios, at 1300m, March 13, 1993. Also probably heard repeatedly at La Yunga, 1450m, and at Dionisios, 1050m.

- ◆ I taped what was probably the song.

90. *Sclerurus albicularis* Gray-throated Leafscraper.

Common at La Yunga, 1400-1500m, in February/March 1993. At least 3 birds were heard singing near the campsite. The loud song consists of rapid ascending series of 5 or 6 notes, repeated without intervals. The last 1 or 2 notes of each series are scratchy and short. When excited, eg because of a nearby observer or because of someone playbacking its song, sharp trills are emitted between the series. A sharp "tsik" is the alarm call.

The song descriptions in both the Colombia guide (Ref 5) and in the High Andes guide (Ref 3) fit the present song as well.

- ◆ Songs and calls were taped.
- ♣ The present record constitutes probably a southward range extension.

91. *Lochmias nematura* Sharp-tailed Streamcreeper.

- One was seen by Mette and Elin at San Lorenzo, above 2300m, in January 1992.

92. *Batara cinerea* Giant Antshrike.

A surprisingly common bird. All were heard, none were seen.

- One was heard singing near Vallegrande, 2050m, February 2, 1993.
- At least 10 were heard singing in the valley of the Rio Piraymiri, below 1900m, February 3-4, 1993.
- One was heard singing at the campsite south of Loma Larga, 1850m, February 6, 1993.
- ◆ Many were taped.

93. *Thamnophilus palliatus* Lined Antshrike.

Fairly common at La Yunga, 1450m, February 1993, and at Dionisios, 1050m, March 1993.

- ◆ Songs and calls were taped.
- ♣ The present record constitutes probably a southward range extension.

94. *Thamnophilus caerulescens* Variable Antshrike.

Common everywhere (except at Dionisios), in all habitats, at least down to 1300m.

Note: songs at La Yunga were twice as slow as those higher up! Maybe this has to do with subspecific differences, birds higher up being of ssp. *dinellii* and those at La Yunga of *connectens* (or the other way round)?

- ◆ Recordings of songs and calls.

95. *Thamnophilus ruficapillus* Rufous-capped Antshrike.

A bird of less humid habitats than the previous species:

- Common in the valley of Vallegrande, on the slopes of the ridge between Guadalupe and Piraymiri, and in the valley of the Rio Piraymiri, February/March 1993.
- One was singing at San Lorenzo, at 2500m, February 1993.
- At least one sang at the campsite south of Loma Larga, 1850m, February 6, 1993.
- ◆ Excellent recordings of the song.

96. *Dysithamnus mentalis* Plain Antvireo.

Singing birds were taped in three different locations at La Yunga, 1450m, and at one location at Dionisios, 1050m. A pair was seen at one of the locations at La Yunga.

- ◆ Recordings of songs and probable calls.
- ♣ The present record constitutes probably a southward range extension.

97. *Herpsilochmus pileatus* Black-capped Antwren.

- At least 2 pairs were seen or heard at La Yunga, at 1400m, in January 1992, and several were heard in the same location, higher up at 1450m, in February/March 1993.
- Two were seen or heard between La Yunga and Dionisios, at around 1300m, March 13, 1993.
- Heard and/or seen in three places at Dionisios, 1050m, March 15, 1993.
- ◆ Taped, including alarm calls.

98. *Pyriglena leuconota* White-backed Fire-eye.

- A pair was seen in shrub along the road, near the campsite south of Loma Grande, 1850m, February 1993.
- Singing birds were heard in 3 locations at Dionisios, 1050m, March 14-15, 1993. This includes two pairs around the tent.
- ◆ Melodious alarm calls of the female were recorded, also shorter staccato calls and songs.

99. *Chamaeza campanisona* Short-tailed Antthrush.

A very common bird at San Lorenzo, 2350m, at the campsite south of Loma Grande, 1850m, at La Yunga, 1400-1500m, and at Dionisios, 1050m. A vocal species, its song was often heard and its loud calls even more so. The song is as described in the Colombia guide (Ref 5), but the initial rising trill consists of many more notes than the 10 notes described in that book. Two calls were heard: the sharp "quock" alarm call described in the Colombia guide and a loud bubbling trill, often heard, and probably also sort of an alarm call. Song and calls were identical to those taped by Sjoerd at Miguelito, halfway Cochabamba and Villa Tunari.

Sjoerd also saw several times a bird walking unconcerned over the forest floor.

- ◆ Many good recordings.
- ♣ The present record constitutes probably a southward range extension.

100. *Grallaria guatimalensis* Scaled Antpitta.

One bird called near the tent at San Lorenzo, 2350m, 1 called at the campsite south of Loma Grande, 1850m, and at least 2 at La Yunga, 1400-1500m, all in February/March 1993.

The bird at San Lorenzo called far more often than the others. The song was almost identical to those taped by Sjoerd at Miguelito, halfway Cochabamba and Villa Tunari. As at Miguelito, the bird did not respond to playback, could be approached very close and still was not seen! When approached too close, it would remain silent for some time, then suddenly its wonderful song would come from behind the observer's back!

- ◆ Excellent recordings.
- ♣ The checklist does not mention this species for Santa Cruz, but note that it was already observed before (Ref 12). The present record constitutes a southward range extension.

101. *Grallaria albicula* White-throated Antpitta.

- Three were heard on the slope between Abra Tabla and the Rio Piraymiri, at 2200m, 1900m and 1850m, February/March 1993.
- Two were heard between the Rio Piraymiri and San Lorenzo, at about 2100m, February 1993.
- It was common from Loma Larga, 2000m, to La Yunga, 1450m, February/March 1993.
- ◆ Taped.

102. *Melanopareia maximiliani* Olive-crowned Crescentchest.

- An alarming bird was found south of Abra Tabla, near the ridge top, skulking in the edge of a gully filled with dense brushes and little trees, bordered by grassland with weeds, at 2500m, on March 10, 1993. The alarm calls are described well by the song description in Fjeldså and Krabbe. The calls were clearly alarm calls, as the bird was very excited, came very close, showed itself well a few times, and had a white moth in its bill all the time, probably destined for its young in the nest nearby. Alarm calls from another bird were later heard along the road on Abra Tabla.
- A singing bird was taped on the steep grassy and shrubby slope above the camp near Loma Larga, at 1850m.
- ◆ Alarm calls and the song were taped.

103. *Scytalopus (femoralis) bolivianus* White-crowned Tapaculo.

- A common bird in humid forested habitats below 1850m.
- 2 or 3 were heard at the campsite south of Loma Grande, 1850m.
  - Very common at La Yunga, 1400-1500m, in February 1992 and February/March 1993. One bird was seen here as well.
  - Common at Dionisios, 1050m, in March 1993.

All birds were heard in dense vegetation in (patches of) forest. Birds in southern Chuquisaca were found in the same habitat (Refs 4 and 6).

The song starts with a few shrill notes, each slightly lower in pitch, immediately followed at a lower pitch by a trill. The trill rises slightly in pitch while slowing down, gradually changing in irregular series of staccato calls, which can continue for a long time. No difference was discerned with songs heard in southern Chuquisaca and songs taped in Cochabamba.

- ◆ Excellent recordings.

104. *Campstostoma obsoletum* Southern Beardless Tyrannulet.

- At least 3 were heard singing in the valley of Vallegrande, 2000-2500m, February 1993.
- 1 was heard singing near the Rio Piraymiri, 1700m, February 1993.
- 1 was heard singing at La Yunga, January 1992.

105. *Phaeomyias murina* Mouse-colored Tyrannulet.

About 6 times a bird was heard or seen in the valley of the Rio Piraymiri, below about 1900m. These birds are always very visible and noisy, gleaning high up or in the outer branches of scrub or small trees. They usually are in pairs.

106. *Elaenia albiceps* White-crested Elaenia.

- Several were seen on the higher slopes near Abra Tabla, February/March 1993.
- 1 was seen at San Lorenzo, at 2500m, February 1993. Also seen here in January 1992.

107. *Elaenia parvirostris* Small-billed Elaenia.

Several were seen and heard near Vallegrande, 2050m, February/March 1993. Probably also observed near the Rio Piraymiri, 1630m.

108. *Elaenia strepera* Slaty Elaenia.

Common in the valley of Vallegrande and on the slope between Guadalupe and Abra Table. 2 separate birds and a lek of 3-4 were heard and seen in the valley, and at least 5 were heard on the slopes. Also, 1 was probably heard on the slope east of Abra Tabla. All these records are from February 2, 1993, on March 10, 1993 none were heard!

◆ Taped.

109. *Elaenia obscura* Highland Elaenia.

- Several were seen or heard on the higher slopes near Abra Tabla, above 2300m, February/March 1993.
- Several were seen or heard at San Lorenzo and probably also along the road to Loma Larga, roughly above 2100m, January 1992 and February 1993.
- ◆ Calls were taped.

110. *Mecocerculus leucophrys* White-throated Tyrannulet.

- Two together were seen high on the ridge south of Abra Tabla, at 2450m, March 10, 1993.
- One was seen near the Rio Piraymiri, at 1850m, February 3, 1993.
- Common at San Lorenzo, and along the road to Loma Larga, all above 2100m, in 1992 and 1993.
- ◆ A dawn song was taped, which consisted of a persistently repeated sharp "tsip-it", where the "it" was a bit lower pitched. Sometimes the "it" was omitted. The bird sang from an exposed leafless branch, at 06.00h, ie at sunrise, while it was still quite dark. This song is very different from the one described in the Colombia guide (Ref 5).

111. *Stigmatura budytoides* Greater Wagtail-Tyrant.

A pair was seen and heard at the campsite near the Rio Piraymiri, 1850m, February 1993.

112. *Leptopogon amaurocephalus* Sepia-capped Flycatcher.

Common at La Yunga, 1400-1500m, during all visits. Even more common at Dionisios, 1050m, in March 1993.

This is a bit puzzling. According to the checklist (Ref 13), the birds should be *L. superciliaris*, which is listed for the Upper Tropical Zone (1100-1700m), whereas *L. amaurocephalus* is listed for the lowlands (lower than 1100m). In Colombia too they live in these same habitats (Ref 5). However, the birds seen at La Yunga had an obvious brown cap and a brownish tail, indicating *L. amaurocephalus*. Apparently, *L. amaurocephalus* replaces *L. superciliaris* in the Upper Tropical Zone in southern Bolivia.

◆ Calls were recorded: an emphatic, short 'che'. Also, alarm calls were recorded from a very excited bird at Dionisios.

113. *Phylloscartes ventralis* Mottle-cheeked Tyrannulet.

Several were seen in mixed flocks at San Lorenzo, at 2300-2500m, in January 1992. No mixed flocks were seen in February 1993, and only a single bird was seen.

◆ Calls were recorded, a sharp 'spit'.

114. *Todirostrum plumbeiceps* Ochre-faced Tody-Flycatcher.

- One was heard near the Rio Piraymiri, at 1750m, February 3, 1993.
- One was heard at Dionisios, 1050m, March 13, 1993.

115. *Tolmomyias sulphurescens* Yellow-olive Flycatcher.

Observed near Masicurí, December 1991.

116. *Myiophobus fasciatus* Bran-colored Flycatcher.

Two were seen near Vallegrande, at 2050m; two were seen in the valley of the Rio Piraymiri, at 1750m and at 1850m; and one was heard halfway La Yunga and Dionisios, at 1350m; all in February/March 1993.

117. *Pyrrhomystis cinnamomea* Cinnamon Flycatcher.

- Several were seen at San Lorenzo, 2300m-2500m, in December 1991/January 1992, and 2 were seen there at 2350m in February 1993.
- A pair were present along the road at the campsite south of Loma Larga, 1850m, February 1993.
- ◆ Calls were recorded. One of the birds near Loma Larga would call for long periods from the same perch, so the call serves probably also as a kind of song.

118. *Contopus borealis* Olive-sided Flycatcher.

One or two were present at La Yunga, 1450m, January 21-22, 1992 and March 11-13, 1993.

119. *Contopus fumigatus* Greater Pewee.

- One was seen near the Rio Piraymiri, at 1700m, February 1993.
- Up to two birds were seen at La Yunga, 1400m-1500m, both in January 1992 and February/March 1993.
- ◆ Calls were recorded.

120. *Myiotheretes straticollis* Streak-throated Bush-Tyrant.

Two birds, pres. a pair, were noisily present in a clearing in humid montane forest about 1 km. north of Loma Larga, at about 2100m, February 5, 1993.

121. *Knipolegus signatus* Plumbeous Tyrant.

- Several were seen at San Lorenzo, 2300m-2500m, both in January 1992 and in February 1993. In 1992, some were singing.
- 5 males were seen singing between San Lorenzo and Loma Larga, February 5, 1993.
- Several were seen at La Yunga, 1400-1500m, in January 1992.

122. *Knipolegus aterrimus* White-winged Black-Tyrant.

- A male was seen halfway Guadalupe and Abra Tabla, 2250m, March 10, 1993.
- A male of probably this species was seen near the Rio Piraymiri, at 1800m, on February 3, 1993.

123. *Satrapa icterophrys* Yellow-browed Tyrant.

Two birds, pres. a pair, were seen near Vallegrande, 2050m, February 2, 1993. One was seen near Vallegrande on March 10, 1993.

124. *Hirundinea ferruginea* Cliff Flycatcher.

Two birds of probably this species were seen near Abra Tabla, at 2300m; 2 or 3 on a steep rocky cliff along the road between the Rio Piraymiri and San Lorenzo, at 2100m; and at least 5 on the steep slope above the campsite near Loma Larga, 1850m.

125. *Sirystes sibilator* Sirystes.

One was perched on top of a lone tall tree in the midst of low secondary forest at La Yunga, 1450m, January 22, 1992.

126. *Myiarchus tuberculifer* Dusky-capped Flycatcher.

- A common bird at every site from San Lorenzo, 2500m, down to Dionisios, 1050m.
- ◆ Songs and calls were taped.

127. *Pitangus sulphuratus* Great Kiskadee.

- One was heard near Vallegrande, 2050m, March 10, 1993.
- One was seen near La Yunga, at 1350m, March 13, 1993.

128. *Myiodynastes chrysocephalus* Golden-crowned Flycatcher.

- Two birds, pres. a pair, were seen at La Yunga, at 1400m, February 8, 1993. One was seen at the same location on March 12, 1993.
- At least one calling bird was taped at Dionisios, 1050m, March 13-15, 1993.
- ◆ Calls were taped.

129. *Myiodynastes maculatus* Streaked Flycatcher.

Observed at La Yunga, 1450m, January 1992 and March 1993.

130. *Legatus leucophaius* Piratic Flycatcher.

Observed by Mette and Elin near Masicurí, December 1991.

131. *Empidonax varius* Variegated Flycatcher.

One or two were seen near the Rio Piraymiri, at about 1800m, February 3, 1993.

132. *Tyrannus melancholicus* Tropical Kingbird.

Two separate birds near Vallegrande, 2050m, March 10-11, 1993. Common near the Rio Piraymiri, below 1800m, February/March 1993.

133. *Tyrannus savana* Fork-tailed Flycatcher.

Two birds were seen separately at the edge of a meadow near the Rio Piraymiri, at 1850m, February 3, 1993; seven near Vallegrande, 2050m, March 10, 1993; 1 near Masicurí, at about 800m, March 15, 1993.

134. *Pachyramphus validus* Crested Becard.

- A female was seen at San Lorenzo, 2350m, in January 1992, and a male in the same location in February 1993.
- ◆ The song of what was probably this species was taped.

135. *Phytotoma rutila* White-tipped Plantcutter.

Common on the floor of the valley of Vallegrande, 2050m, at least 10 were singing along the road in the morning of February 2, 1993.

136. *Chiroxiphia boliviana* Yungas Manakin.

- At La Yunga, 1400m-1500m, this species was common and vocal in January 1992, but in February 1993 only a few birds were heard, which called infrequently.
- Also common along the road from La Yunga down to Dionisios and at Dionisios itself, 1050-1450m.
- ◆ Taped.

137. *Notiochelidon cyanoleuca* Blue-and-white Swallow.

Seen in many locations, from on top of the ridge near Abra Tabla at 2500m, down to Dionisios, 1050m. Particularly common in the town of Vallegrande. At least 5 pairs were seen entering nest holes in a vertical rock face along the road between the Rio Piraymiri and San Lorenzo, at 2100m, on February 3, 1993. A juvenile was also seen there.

138. *Thryothorus genibarbis* Moustached Wren.

Very common from the campsite south of Loma Larga, 1850m, down to Dionisios, 1050m.

- ◆ Many recordings.
- ♣ The present records constitute probably a southward range extension.

139. *Troglodytes aedon* House Wren.

Very common almost everywhere, except at La Yunga.

- ◆ Taped.

140. *Troglodytes solstitialis* Mountain Wren.

Several were observed at and near San Lorenzo, 2100m-2350m, and 1 was heard singing halfway San Lorenzo and Loma Larga, at about 2100m.

- ◆ It is possible that the often-taped, high-pitched, Euphonia-like 'tee-tee-tee' calls at San Lorenzo were made by this species. They were also often heard and taped in Chuquisaca and Tarija (Refs 6 and 7).

141. *Polioptila dumicola* Masked Gnatcatcher.

Observed near San Lorenzo, December 1991.

142. *Catharus dryas* Spotted Nightingale-Thrush.

- Fairly common at San Lorenzo at 2350m, in February 1993. At least 3 were heard in the forest near the campsite.
- 2 were heard singing between San Lorenzo and Loma Larga, 2100m, February 1993.
- Fairly common (at least 3 were heard (and taped) singing) at La Yunga, 1400-1500m, in February/March 1993.
- ◆ Some excellent recordings. What is not stated in the field guides (Refs 3 and 5) is that it sometimes (often?) sings while wandering over the forest floor. It will stand on a stone or a fallen log, sing a few phrases, and hop quietly to the next perch. I saw a singing bird wandering like this on two occasions.

143. *Catharus ustulatus* Swainson's Thrush.

- Quite common at San Lorenzo, 2300-2500m, in January 1992 and February 1993. One bird was heard and seen singing in 1992.
- Very common at La Yunga, 1400-1500m, in January 1992 and February/March 1993. It was heard singing several times, also lower down on the way to Dionisios, down to about 1300m.
- ◆ Calls and songs were recorded.

144. *Turdus chiguancio* Chiguancio Thrush.

Not very common.

- Several were seen on the ridge between Guadalupe and Piraymiri.
- Two were heard singing at San Lorenzo, at 2100m and 2350m, February 3-5, 1993. Also seen here in January 1992.
- Several were seen, and 1 or 2 were seen singing, at the campsite south of Loma Larga, 1850m, on February 6, 1993.
- ◆ Songs were taped.

145. *Turdus serranus* Glossy-black Thrush.

- A singing bird was taped in a small patch of low forest, west of Abra Tabla, at 2400m, March 10, 1993.
- Common at San Lorenzo, all singing at sunrise and sunset, in 1992 and 1993.
- Heard singing at the campsite south of Loma Larga, 1850m, on February 5, 1993.
- ◆ Songs and calls were taped.

146. *Turdus nigriceps* Slaty Thrush.

- 1 or 2 were heard singing, and taped, on the slope between Guadalupe and Abra Tabla, at about 2250m, on February 2, 1993. The birds were singing inside shrubby habitat. Also heard calling there on March 10, 1993.
- 2 birds were heard singing, and taped, at San Lorenzo, at 2500m, inside forest.
- ◆ Songs were taped. The songs are like the song from NW Argentina on the ARA tape (Ref 17).

147. *Turdus rufiventris* Rufous-bellied Thrush.

A common bird almost everywhere, particularly abundant in the valley of Vallegrande, on the ridge east of it, and in the valley of the Rio Piraymiri, but also fairly common at San Lorenzo (up to 2500m), near Loma Larga. Only a single bird was heard singing at La Yunga, at 1450m, both in 1992 and 1993. Often heard singing, or heard calling at dusk (esp. the "laughing" call described in Ref 3), but far less often seen.

- ◆ Often taped.

148. *Turdus amaurochalinus* Creamy-bellied Thrush.

- A common bird on the floor of the valley of Vallegrande, 2050m. Often seen, none were singing.
- One bird was heard singing in the valley of the Rio Piraymiri, at 1850m, on February 3, 1993.

149. *Turdus albicollis* White-necked Thrush.

Common at La Yunga, 1450, and at Dionisios, 1050m, February/March 1993. I saw it only once during the daytime, inside forest at La Yunga. However, at dusk their true numbers were revealed, when small parties of them would be calling loudly at short distances from each other along the roadside. Even then they did not show themselves, except for brief flights from dense vegetation into dense vegetation, agitated by my playbacks of their calls. They were often the last birds to stop calling at nightfall (just like *Turdus rufiventris* Rufous-bellied Thrush.).

- ◆ Taped.

150. *Cyanocorax cyanomelas* Purplish jay.

Noisy parties were encountered in all locations and in all habitats.

- ◆ Taped.

151. *Cyanocorax chrysops* Plush-crested Jay.

Less common than the previous species.

- Twice heard in the valley of the Rio Piraymiri, 1993.
- Observed near San Lorenzo by Mette and Elin, January 1992.
- Heard once at La Yunga, both in 1992 and 1993.
- A party of at least 5 was repeatedly seen/heard at Dionisios, 1050m, March 1993.

152. *Cyclarhis gujanensis* Rufous-browed Peppershrike.

Common in shrubby habitats.

- ◆ Excellent recordings.

153. *Vireo olivaceus* Red-eyed Vireo.

Common in the valley of Vallegrande, on the ridge between Guadalupe and Piraymiri, and in the valley of the Rio Piraymiri. Also seen in mixed flocks at La Yunga and Dionisios.

- ◆ Songs were taped.

154. (*Anthus hellmayri* Hellmayr's Pipit).

Two birds of probably this species were singing close to each other, on a grassy slope with scattered small shrubs, halfway Guadalupe and Abra Tabla, at about 2200m, on February 2, 1993. Several birds were flying around excitedly, uttering frequent chirping calls, and 2 sang often, on March 10, 1993.

- ◆ Songs and calls were taped. The chirping calls are rather similar to those of *Passer domesticus* House Sparrow. The song was very short, produced at short intervals, uttered while perched on a low shrub. Frequently birds embarked on song flights. During these flights the bird sang without interruption, repeating phrases similar to the short songs from the perched birds, interspersed by sucking 'zzz' notes.

155. *Zonotrichia capensis* Rufous-collared Sparrow.

Very common at all locations from Vallegrande up to San Lorenzo, but not observed from the campsite south of Loma Larga, 1850m, onwards.

- ◆ Taped often.

156. *Ammodramus humeralis* Grassland Sparrow.

At least 5 were heard singing in the valley of Vallegrande and on the slope leading up to Abra Tabla, at 2000-2200m, on February 2, 1993. One was seen on the same slope at 2200m on March 10, 1993. See the remark under *Sicalis citrina* Stripe-tailed Yellow-Finch.

157. *Lophospingus griseocristatus* Gray-crested Finch.

Two separate birds were seen less than 1 km from Vallegrande, 2050m, in February 1993. One was seen just outside Vallegrande on March 10, 1993.

158. *Poospiza hypochondria* Rufous-sided Warbling-Finch.

Two together (pres. a pair) and a party of 3 or 4 were seen on the slope between Guadalupe and Abra Tabla, at 2250-2450m, on March 10, 1993.

159. *Poospiza nigrorufa* Black-and-rufous Warbling-Finch.

- One was seen in the town of Vallegrande, two on the valley floor near Vallegrande, and a pair on the slope leading up to Abra Tabla, 2000-2200m, February 2, 1993. Several were seen, mostly when singing, in and near Vallegrande on March 10, 1993.

- A bird was seen singing at San Lorenzo, 2350m, January 20, 1993.

160. *Poospiza torquata* Ringed Warbling-Finch.

- It was common on the floor of the valley of Vallegrande and on the slope leading up to Abra Tabla, 2000-2200m, February 2, 1993. Three separate birds were seen on the same slope on March 10, 1993.
- Several were seen at the campsite near the Rio Piraymiri, 1850m, February 3, 1993.

161. *Poospiza melanoleuca* Black-capped Warbling-Finch.

One was seen at the campsite near the Rio Piraymiri, 1850m, February 3, 1993.

162. *Sicalis citrina* Stripe-tailed Yellow-Finch.

A singing bird was heard and taped on top of a rather steep, grassy slope with scattered small shrubs, halfway Guadalupe and Abra Tabla, at about 2200m, on February 2, 1993 and March 10, 1993. In the same small area there were also several *Anthus hellmayri* Hellmayr's Pipit, *Embernagra platensis* Great Pampa-Finch and *Ammodramus humeralis* Grassland Sparrow. The Pipit and the Pampa-Finch were not found in any other location either, so there must have been something special about this area.

◆ The song and calls were recorded. The song consists of two clear and drawn-out whistles, and is terminated with a short emphatic 'weet'. The second whistle is lower-pitched than the first, and it descends somewhat in pitch. The song is identical to song A recorded in Chuquisaca (Ref 6), except that the initial, sucking 'zzzzzzzz' is missing. This song was usually uttered during a short song flight. Song B was not heard.

♣ The checklist does not mention this species for Santa Cruz, but note that it was also seen by Parker and Bates near the Brazilian frontier (Ref 11). This is the first record for the Andean region in Santa Cruz, however.

163. *Sicalis flaveola* Saffron Finch.

Common in and around Vallegrande, 2050m, February/March 1993.

164. *Embernagra platensis* Great Pampa-Finch.

Three, including at least 1 juv., on the slope between Guadalupe and Abra Tabla, at about 2200m. In the same spot 2 were seen on March 10, 1993. See the remark under *Sicalis citrina* Stripe-tailed Yellow-Finch.

165. *Volatinia jacarina* Blue-black Grassquit.

Three were singing in and around a clearing at Dionisios, 1050m, March 1993.

◆ Taped.

166. *Sporophila caerulescens* Double-collared Seedeater.

- Very common in the valley of Vallegrande, on the slopes of the ridge east of it, in the valley of the Rio Piraymiri, up to San Lorenzo, 1630-2350m.
- One sang south of Loma Larga, 1850m, February 1993.
- ◆ Songs were taped.

167. *Catamenia analis* Band-tailed Seedeater.

Several were seen, sometimes while singing, on the slopes of the ridge between Guadalupe and Piraymiri, at San Lorenzo, and one was seen south of Loma Larga.

◆ The song was taped.

168. *Arremon flavirostris* Saffron-billed Sparrow.

- One was seen close to Vallegrande, 2050m.
- A pair was seen and 3 others were heard singing near the Rio Piraymiri, 1630m-1850m, February 3, 1992.
- Observed between La Yunga and Masicurí, January 1992.
- ◆ The high-pitched song was taped. The song conforms well with the description in the Colombia guide (Ref 5) of the song of the related species *Arremon aurantiirostris*.

169. *Atlapetes torquatus* Stripe-headed Brush-Finch.

- Several were seen at San Lorenzo, 2350m, in 1992 and 1993.
- One was seen south of Loma Larga, at 1850m, February 6, 1993. I did not pay much attention to this bird, but I did see that it was very dull-colored, the white stripes on the head being gray. It did not look as the juv. depicted in the High Andes guide (Ref 3).

170. *Coryphospingus cucullatus* Red-crested Finch.

Several were seen at the campsite near the Rio Piraymiri, 1850m, February 3, 1993.

- ◆ Its song was taped.

171. *Pheucticus aureoventris* Black-backed Grosbeak.

- Two birds, pres. a pair, of which 1 was singing, was present just outside Vallegrande, 2050m, March 10, 1993.
- Two were singing in the valley of the Rio Piraymiri, at 1800-1850m, February 2-3, 1993.
- ◆ Its rich song was taped.

172. *Saltator aurantiirostris* Golden-billed Saltator.

Very common in the valley of Vallegrande, on the slopes of the ridge between Guadalupe and Piraymiri, and in the valley of the Rio Piraymiri.

- ◆ Songs were taped.

173. *Cyanocompsa brissonii* Ultramarine Grosbeak.

- Several were heard singing in the valley of Vallegrande, 2050m.
- Several were heard and seen singing in the valley of the Rio Piraymiri, 1630-1850m.
- Two were singing south of Loma Larga, 1850m.
- ◆ Songs were taped.

174. *Chlorospingus ophthalmicus* Common Bush-Tanager.

Several were seen high on the slopes near Abra Tabla, and it was common at all locations from San Lorenzo onwards, down to Dionisios.

- ◆ Calls and accelerating trills were recorded.

175. *Hemithraupis guira* Guira Tanager.

Three times 1 or 2 birds were seen in mixed flocks at La Yunga, at 1450m, on January 21, 1992, on February 8, 1993 and on March 12, 1993.

176. *Trichothraupis melanops* Black-goggled Tanager.

One was seen in a mixed flock at Dionisios, 1050m, March 15, 1993.

177. (*Piranga flava* Hepatic Tanager).

A female of probably this species was seen halfway La Yunga and Dionisios, at 1300m, March 13, 1993.

178. *Piranga olivacea* Scarlet Tanager.

A full-blown male and a dingier bird were seen by John Chainey and Anna McGrane about 16 km north of the village of Masicuri, on February 15, 16 or 17, 1993. This location is probably somewhat lower and further south than La Yunga. John's address: John Chainey, Natural History Museum, Cromwell Road, South Kensington, SW7 5BD London, U.K.

- ♣ The checklist does not mention this species for Santa Cruz. The present record constitutes a southward range extension.

179. *Piranga leucoptera* White-winged Tanager.

Several times seen and heard at La Yunga, 1450m: A pair was seen in a mixed flock on January 21, 1992. A female was seen singing from the top of a tree, about 10 meters tall, while another bird (probably the male), or possibly more birds, was singing nearby, on February 7, 1993. A pair was seen in a mixed flock on March 12, 1993, and birds were heard singing later that day.

- ◆ The song was taped. It is similar to the one described in the Colombia guide (Ref 5), except that the emphasis is on the first note and that the following notes are equal : "sée-se-se-se-se".

180. *Ramphocelus carbo* Silver-beaked Tanager.

Several were seen at La Yunga and at Dionisios, 1050m-1500m.

- ♣ The present record constitutes probably a southward range extension.

181. *Thraupis sayaca* Sayaca Tanager.

Several were seen and heard at locations in the whole altitudinal range covered.

- ◆ Songs were taped.

182. *Thraupis bonariensis* Blue-and-yellow Tanager.

Several were seen in the valley of Vallegrande, 2050m, and a small party was also seen at Abra Tabla, 2430m, on February 2, 1993.

183. *Anisognathus flavinuchus* Blue-winged Mountain-Tanager.

Very common at all locations from San Lorenzo onwards, down to La Yunga, 1500-2500m. Also seen at Dionisios, 1050m. Much more heard than seen.

- ◆ Excellent recordings of songs.

184. *Pipraeidea melanonota* Fawn-breasted Tanager.

Observed by Mette and Elin at San Lorenzo, January 1992.

185. (*Euphonia chlorotica* Purple-throated Euphonia).

Probably this species was heard at La Yunga, 1450m, February 7, 1993, and at Dionisios, 1050m, March 15, 1993.

186. *Euphonia musica* Blue-hooded Euphonia.

Observed by Mette and Elin somewhere between La Yunga and Masicurí, January 1992.

187. *Chlorophonia cyanea* Blue-naped Chlorophonia.

A party of about 10 was seen at La Yunga, 1450m, on February 21, 1992.

188. *Tangara xanthocephala* Saffron-crowned Tanager.

One was seen at La Yunga, at 1450m, on January 21, 1992, and two birds (pres. a pair) were seen in the same *Cecropia* tree on February 7, 1993. Nearby a presumed pair were seen on March 11, 1993.

- ♣ The present records constitute probably a southward range extension.

189. *Tangara argyrofenges* Green-throated Tanager.

- A pair was seen at San Lorenzo, 2350m, on January 19-20, 1992, and two separate males were seen in the same location, at 2250m and 2500m, on February 3-4, 1993.
- A female was seen with a party of *Anisognathus flavinuchus* Blue-winged Mountain-Tanagers, at La Yunga, 1450m, on February 7 and 9, 1993. Also seen here by Mette and Elin in January 1992.
- ♣ The present records constitute probably a southward range extension.

190. *Tersina viridis* Swallow-Tanager.

- A pair was seen high in a tree at La Yunga, 1450m, on March 12, 1993
- A large, scattered flock of 25 to 50 birds was seen halfway La Yunga and Dionisios, at about 1300m, on March 13, 1993. Nearly all birds were females, I only saw 1, maybe 2, males!
- A little flock of 4 females and 1 male was seen flying through the valley below Dionisios, at about 950m, on March 14, 1993.

191. *Parula pityayumi* Tropical Parula.

Two were heard or seen in the valley of the Rio Piraymiri, at 1750-1800m, several were seen or heard singing at La Yunga, 1450m, on the way to Dionisios, and at Dionisios itself, 1050m. Also observed by Mette and Elin near San Lorenzo, above 2300m, January 1992.

192. *Geothlypis aequinoctialis* Masked Yellowthroat.

- Two or three were seen in the valley of the Rio Piraymiri, at 1700-1850m, February 2-3, 1993.
- Observed near San Lorenzo, above 2300m, January 1992.
- Observed between La Yunga and Masicurí, January 1992.

193. *Myioborus brunniceps* Brown-capped Whitestart.

Quite common everywhere, in all habitats and at all altitudes.

- ◆ Songs were taped.

194. *Basileuterus bivittata* Two-banded Warbler.

- At least 2 were singing at the campsite near the Rio Piraymiri, 1850m, February 3, 1993.
- Very common from the campsite near Loma Larga, 1850m, to Dionisios, 1050m, in 1992 and 1993.
- ◆ Calls and songs were taped.

195. *Basileuterus signatus* Pale-legged Warbler.

A singing bird was taped inside the forest at San Lorenzo, 2350m, February 4, 1993.

- ◆ Taped.

196. *Psarocolius decumanus* Crested Oropendola.

Common at La Yunga, 1400-1500m, in December 1991/January 1992, but only 1 singing male was observed in the same location in February 1993. Several were seen each day at Dionisios, 1050m, March 13-15, 1993. Quite a few nests, but no nesting activity, were seen from La Yunga down to Dionisios.

197. *Cacicus chrysopterus* Golden-winged Cacique.

Several were seen at San Lorenzo, 2350-2500m, in January 1992 and February 1993.

- ◆ Songs and calls were taped.

198. *Molothrus badius* Bay-winged Cowbird.

Very common, and singing often, in the valley of Vallegrande, 2050m.

199. *Molothrus bonariensis* Shiny Cowbird.

About 5 were seen on the floor of the valley of Vallegrande, 2050m, February 1993.

200. *Carduelis magellanica* Hooded Siskin.

- Two together were seen just outside Vallegrande, 2050m, on March 10, 1993.
- Several were seen at San Lorenzo, 2350m, in 1992.

## Mammals

*Cebus apella* Brown Capuchin Monkeys were calling at "La Yunga", 1450m, in secondary humid forest, in February/March 1993. Sound recorded. Monkeys of presumably this species were also seen lower down, along the road to Dionisios, at about 1300m.

Agoutis were seen along the road at "La Yunga", 1450m, and at Dionisios, 1050m.

And some squirrels.

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