

NEOTROPICAL BIRDING 5

OCTOBER 2009

# Separating Social and Rusty-margined Flycatchers

Robin Restall

Newcomers to the Neotropics are often baffled by an array of tyrant-flycatchers with bright yellow underparts and a black-and-white head. Little wonder, for these birds encompass five genera and cover a considerable size spectrum. But even experts can be flummoxed by members of the genus *Myiozetetes*. This Identification Workshop is intended as a contribution to the debate on a particularly tricky species pair, and is unlikely to be the last word on the subject!

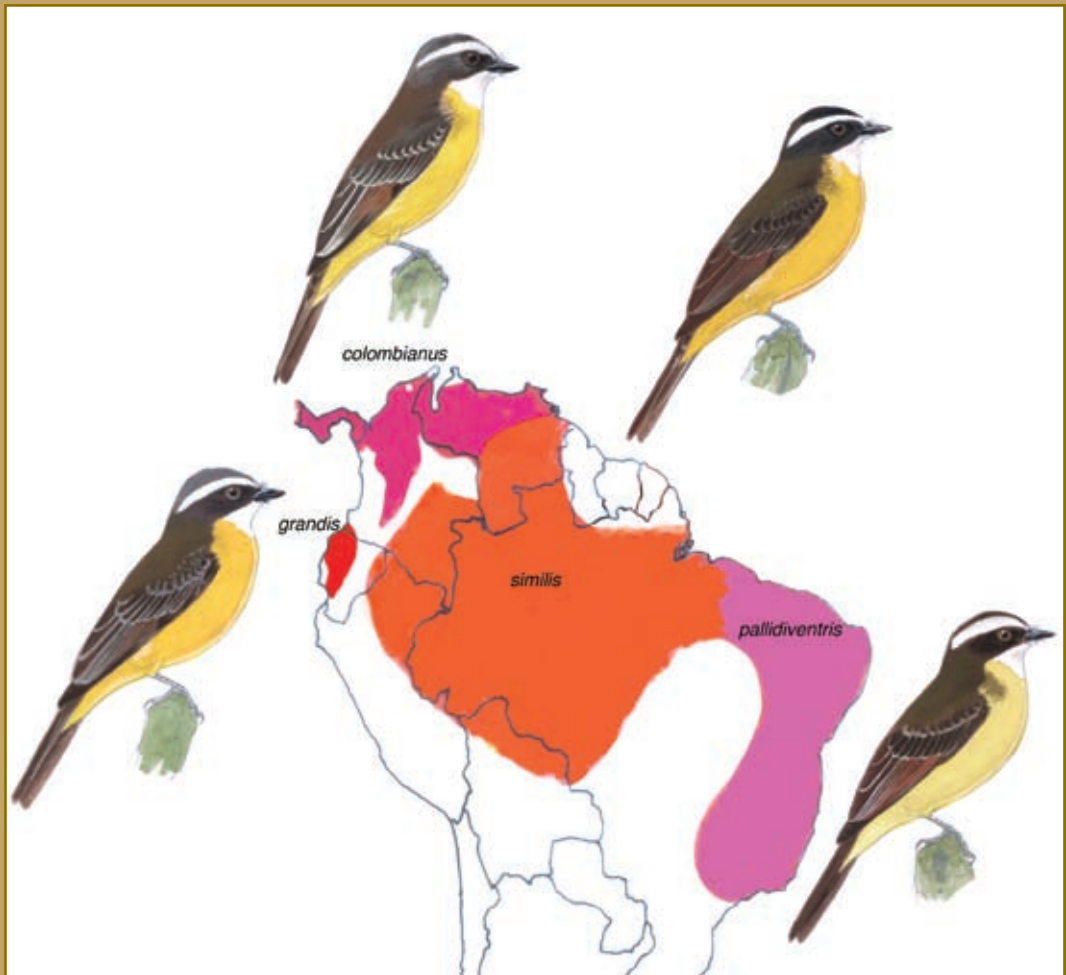


Figure 1. Subspecies of Social Flycatcher *Myiozetetes similis* and their ranges (Robin Restall)

Even at the outset, there was confusion. When Johann Baptist von Spix described Social Flycatcher *Myiozetetes similis* in 1825, he was actually looking at a Rusty-margined Flycatcher *M. cayanensis* from Brazil, but then wrote diagnostic notes from a specimen of Social Flycatcher! Cory & Hellmayr<sup>1</sup> subsequently assigned Spix's second specimen as the type. Nearly two centuries on, these two fairly common and widespread tyrant-flycatchers continue to cause confusion and misidentification across much of the Neotropics. Indeed, having researched this article, I sense that the problem may be more complex than almost anybody realises.

An apposite illustration comes from French Guiana. Just before submitting this article, Olivier Claessens told me that Social Flycatcher had been

removed from the country's list. Claims<sup>14</sup> were found to relate to misidentified Rusty-margined Flycatchers of the subspecies *cayanensis* which, in French Guiana, has little rufous in the wings (Fig. 4, bird 2c), in contrast to the plate in the only field guide widely available at the time of the records<sup>6</sup>.

Although the continent's top birders may not have problems, most of us are mere mortals and another illustration suggests that confusion may be systemic. To inform my research, I circulated a request for photographs of both species from throughout their range. Many kind people obliged, sending me nearly 500 images: a testament to the strength of our Neotropical ornithological community. However, the photograph labels suggested that there was indeed a problem afoot. With the exception of birds photographed

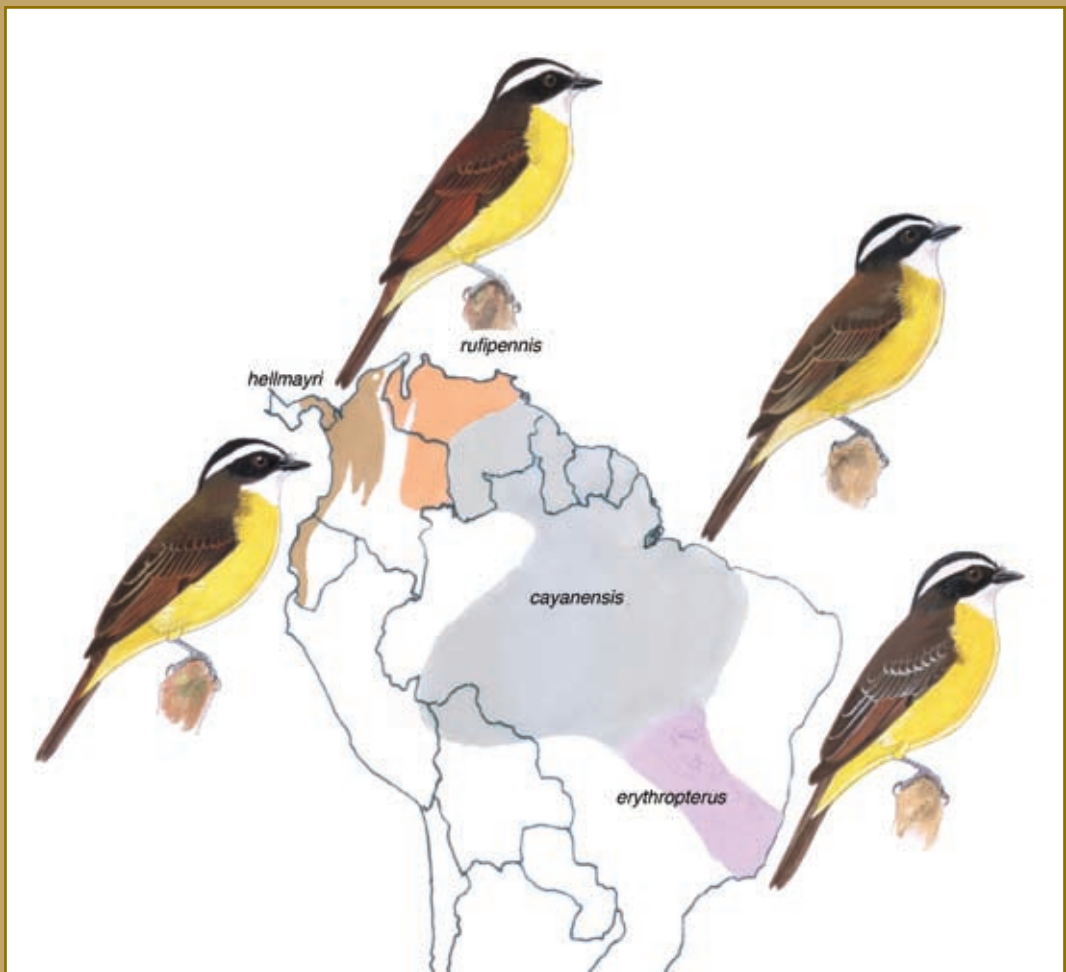


Figure 2. Subspecies of Rusty-margined Flycatcher *Myiozetetes cayanensis* and their ranges (Robin Restall)

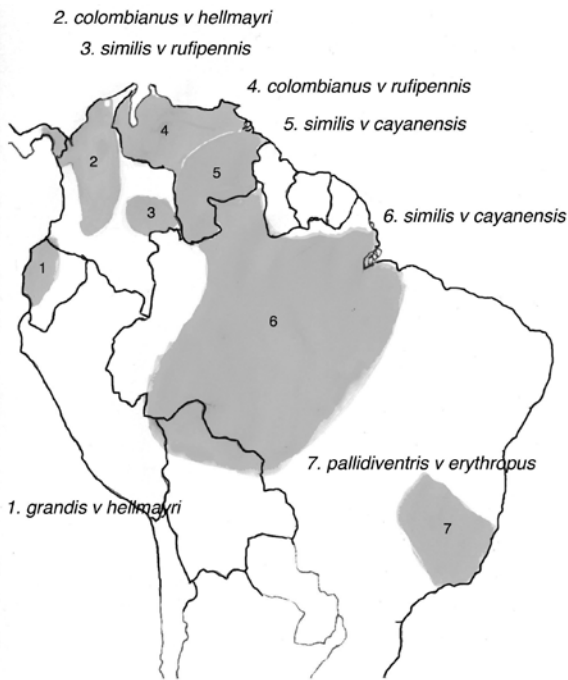


Figure 3. The areas of overlap between various subspecies of Social Flycatcher *Myiozetetes similis* and Rusty-margined Flycatcher *M. cayanensis* (Robin Restall)

around Caracas in Venezuela, 95% of images received were identified as Social Flycatcher! This didn't make sense, as Social Flycatcher simply cannot be 19 times more common than Rusty-margined. I am certain that many of the birds photographed were actually Rusty-margined.

Given this context, I feel that this article can only really serve as an introduction to the problem—an alarm bell to fieldworkers that there is a serious need to pay more attention to this pair of *Myiozetetes* than almost anybody is apparently doing. The reward may be the discovery of one or more cryptic taxa...

## Distribution

Figs. 1 and 2 show the range of each taxa. Social Flycatcher is the more widely distributed, occurring from Mexico to northern Argentina (Fig. 1). Rusty-margined is primarily a species of northern South America (Fig. 2). Nevertheless, as Fig. 3 illustrates, there is much sympatry. Moreover, in areas of overlap, the species often occupy similar habitats and have similar habits. For example, Vitor Piacentini found both species breeding in the same locality in Brazil, and was able to photograph one of each sitting side by side (Fig. 5)! In many

areas both species are common garden birds, and are very tolerant of human presence.

A word of caution about the maps. No two field guides agree on the ranges of the species, let alone the subspecies (which are invariably dealt with in very superficial terms). The maps presented here are my own construction based on museum specimens and literature covering the entire range of both species<sup>2-5,8-13</sup>. Note that the maps for the two species in one major field guide<sup>9</sup> are inadvertently transposed.

To be honest, it seems to me that there is a case for starting from scratch with the distribution of both species. Whoever did this would need to: ensure that the identifications are correct; map museum specimens very carefully; and map locations of every photograph. Including vocalisations in the study could well show up more than one might expect; several people have commented that they suspect Social Flycatcher to consist of more than one species. Dexterous birders able to simultaneously photograph and record a calling bird could gather some very useful material. At the very least, they may discover vocalisations particular to Social Flycatcher that are as helpful in identification as one particular call of Rusty-margined.

## Do vocalisations help?

Particularly for species that are difficult to identify visually, a knowledge of vocalisations is valuable. Fortunately, Rusty-margined Flycatcher has a unique call, a melancholy *cheeeeuui* that descends slightly in pitch. Given that this vocalisation is transcribed differently in every field guide, it may be simplest to listen to a recording. On the freely available [www.xeno-canto.org](http://www.xeno-canto.org), I suggest familiarising yourself with recordings XC11283 (from Ecuador), XC2820 (Panama) and XC9196 (Imataca, Venezuela).

Armed with knowledge of this vocalisation, you should have no problems in pinning down a certain Rusty-margined. However, there are potentially confusing variations. The melancholy whistles on recording XC12843 (Cundinamarca, Colombia) and XC26132 (Rio de Janeiro, Brazil) *ascend* at the end, the latter also continuing with a sharp *chp-chp-chp-chp!* Moreover, the Rusty-margined repertoire is much more diverse than this single sad call, and some vocalisations recall Social Flycatcher! Recording XC1175 (Suriname) is a case in point. Fortunately, the common call of Social Flycatcher is fairly distinctive. Variations on the *chiew, chiew* of XC10094 (Panama) may be heard throughout

the range of the species. The call is an explosive *tcheio* on XC11811 (Rio de Janeiro, Brazil) but reduced to *ch-ch-ch-ch* on XC9361 (Ecuador).

Rusty-margined appears to be much more vocal than Social. When Olaf Jahn analysed thousands of recordings from western Colombia and Ecuador, he found that Rusty-margined apparently 'out-vocalised' Social by 20:1!

## Rusty margins, or not

Only one race of Rusty-margined (*rufipennis*, in northern Venezuela) shows a consistently striking amount of rufous in the wings. But the problem is that all subspecies of *both* species (bar one exception, fresh adult Socials of the race *similis* in northern Venezuela) show some degree of rufous in the wings in one or more plumages. In particular, juveniles of both species resemble adults but have *more* rufous in the wings!

## Typical adults

The main plate (Fig. 4) shows 'ideal' adults. As composite sources for these images, I have used perfect adult specimens in museum collections as well as photographs from across their ranges. Examining the photographs, I was struck by several points: subtle (or sometimes dramatic) local variations; the *apparent* absolute consistency of the yellow underparts for both species wherever they had been photographed (which does not necessarily follow museum specimens); and the variation in bill sizes.

Whether a plumage is fresh or worn, and whether the bird is young or old (or in-between in both cases) probably accounts for much of the local variation. The underpart issue is obvious in the field when looking at a bird perched above you; from this angle, the species are indistinguishable (Fig. 7b). As for bill size, no sooner had I found a couple of good shots that apparently showed one species to have a smaller bill, then another set of images would suggest the opposite.

Most field guides (and birders) generalise as to differences between Social and Rusty-margined Flycatchers, but those generalisations have merit and are worth a recap. Social tends to have a comparatively greyish head and greenish mantle, while Rusty-margined has a blacker head and a browner mantle. The colour of the concealed coronal patch usually differs (orange or vermillion in Social, yellow in Rusty-margined), but these are hard to see at the best of times, even when a bird is excited. Moreover, the colour tends to vary according to age, sex and possibly subspecies.

## Discerning the duo where they overlap

Rather than describe each subspecies, I attempt a more user-friendly steer as to how to visually differentiate the subspecies pair in each area of sympatry. The numbered paragraphs below relate to the areas of overlap depicted in Fig. 3. For one subspecies pair (*similis* Social and *cayanensis* Rusty-margined), I have found differences between the birds in Venezuela and Brazil, and thus treat them separately (as areas 5 and 6, respectively). The situation in Brazil is possibly even more complex, and the birds there undoubtedly merit their own comprehensive taxonomic analysis.

As the numbered paragraphs below make clear, every area is different; some subspecies pairs are easy to differentiate but others are fiendish. The most straightforward area is Venezuela north of the río Orinoco (area 4), where the two opposing extremes of plumage occur (*colombianus* Social and *rufipennis* Rusty-margined). Three photographers sent magnificent images of both species taken in their gardens in the city of Caracas (e.g. Figs. 7a and 7c). At the other extreme, I am indebted to Olaf Jahn for sharing experience of the subspecies pair (*grandis* Social and *hellmayri* Rusty-margined) that inhabits the Pacific coast of Ecuador (area 1, as discussed below). Olaf believes that this pair can be extremely tricky to distinguish unless they are calling.

Birders traveling around a country should also remember that the subspecies pair may change with location. In Colombia, for example, races of Social Flycatcher include the largest (*grandis*) and the smallest (*colombianus*). In the same country, birders may also bump into two races of Rusty-margined (*hellmayri* and *rufipennis*) which are so different that one could easily identify *hellmayri* as Social Flycatcher! The key in each instance is to concentrate on the wings: check the colour tone and look for any pale fringes or tips to the feathers. Add to this the colour of the cheeks and head, usually greyer in Social, and the mantle colour, which is usually greener in Social.

**1) West Ecuador and extreme south-west Colombia.** Social of the race *grandis* is sympatric with *hellmayri* Rusty-margined. Due to deforestation Social Flycatcher has expanded its range northward in coastal Ecuador and Olaf Jahn (*in litt.*) has recorded it very close to the Colombian border in recent years (confirmed by tape recordings). It is almost certain that it now also occurs regularly in the Pacific lowlands of Colombia, at least in Nariño and possibly



Figure 4. Subspecies of Social Flycatcher *Myiozetetes similis* and Rusty-margined Flycatcher *M. cayanensis* (Robin Restall).  
 1. Social Flycatcher: a) *grandis*; b) *colombianus*; c) *similis*; and d) *pallidiventris*. 2. Rusty-margined Flycatcher: a) *hellmayri*; b) *rufipennis*; c) *cayanensis*; and d) *erythropterus*

Facing page, top two rows:

Figure 5. The two species together, Manaus, Brazil: (left) Rusty-margined *Myiozetetes cayanensis* and (right) Social *M. similis* (Vitor Piacentini)

Figure 6a and 6b. Different Social Flycatchers *Myiozetetes similis* from Panama (6a: Ben Lascelles; 6b: Allen Chartier). Note the differences in wing patterns. Or could 6a be a Rusty-margined *M. cayanensis*?

Figure 6c. An undoubted Social Flycatcher *Myiozetetes similis*, northern Venezuela (David Southall)



Figure 7a. A perfect Social Flycatcher *Myiozetetes similis*, Caracas, Venezuela (Mikko Pyhälä)

Figure 7b. *Myiozetetes* sp, northern Venezuela. Front-on, birds cannot be identified with certainty (David Southall)

Figure 7c. Rusty-margined Flycatcher *Myiozetetes cayanensis*, Caracas, Venezuela; the contrast with the Social *M. similis* in Fig. 7a is clear (Phil Gunson)

Figure 8. Rusty-margined Flycatcher *Myiozetetes cayanensis*, central Brazil (João Quental)

further north. Social Flycatcher is represented here by its largest race; it is deep waxy-yellow below and has a grey cap. The wing-coverts are edged pale greyish with conspicuous tips to the greater coverts. A greenish tone to the outer edge of the inner secondaries becomes rufescent on the basal half of the outer secondaries and inner primaries. In contrast, Rusty-margined Flycatcher has a more blackish cap and is fairly olivaceous above. The wing feathers are fringed buff, becoming cinnamon on the distal half of the greater coverts and rufescent on the secondaries and basal half of the primaries.

**2) East Panama, north-west and central Colombia.** Social of the race *colombianus* is sympatric with *hellmayri* Rusty-margined. This race of Social Flycatcher is the smallest and most distinctive. It has two cleanly defined wing-bars, although that on the median coverts is reduced to a row of spots in worn plumage. The tertials are edged white or buffy-white, the secondaries edged yellowish, often tinged basally with rufous, but distally becoming whitish. In contrast, Rusty-margined Flycatcher is more olivaceous above than usual and lacks white edging to the wing-coverts; the tertials are pale and have buffy edges. There are different opinions on the primaries: Cory & Hellmayr<sup>1</sup> say that the rufous edges to the primaries are more pronounced than on *cayanensis*, but Olaf Jahn considers that *hellmayri* is not a rusty-margined bird!

**3) Central-east Colombia, Vichada and Guainia.** Social of the race *similis* is sympatric with *rufipennis* Rusty-margined. The nominate race of Social Flycatcher is the most widespread, but, as luck would have it, the least distinctive. It lacks any kind of barring or fringing on the wings in anything other than very fresh plumage. Moreover, the vague rufescent tone to the tertials and flight feathers could lead one to think of a poorly marked Rusty-margined. Fortunately, however, *rufipennis* Rusty-margined is the most distinctive subspecies, and the prospects of confusion are slight. It is rich rufous on the entire outer edges of the secondaries and most of the primaries. Moreover, the rufous or cinnamon tone extends to the median and greater coverts.

**4) Venezuela, north of the río Orinoco.** Social *colombianus* is sympatric with Rusty-margined *rufipennis*. There is little risk of confusion here, for both species are at their most distinctive (assuming that one gets sight of the wings). As described for area 2, Social Flycatcher has two thin whitish or yellowish-white wing-bars. In comparison, Rusty-margined Flycatcher is intensely rufous on the wings with no white edging.

**5) Venezuela, south of the río Orinoco.** Social of the race *similis* is sympatric with *cayanensis* Rusty-margined. Cross the río Orinoco and we move from the zone with least risk of confusion to that of the greatest. As noted for area 3, this is the least distinctive race of Social Flycatcher, with virtually unmarked wings, although there is some rufous edging to the basal half of the primaries. The race of Rusty-margined Flycatcher has the least rufous on the wings of any subspecies. More infuriatingly, the rufous is also on the basal half of the inner primaries, i.e. the same place as *similis* Social. Fortunately, the wings do differ slightly: those of Rusty-margined are edged more with buffy, tinged with a little cinnamon. In terms of other plumage features, Social has a darker head than normal, but is olivaceous or mossy-green on the mantle and lesser coverts, while Rusty-margined is definitely warmer browner on the mantle.

**6) North-east to west Brazil and northern Bolivia.** As in southern Venezuela (area 5), Social of the race *similis* is sympatric with *cayanensis* Rusty-margined. But the Rusty-margined here look different to those in southern Venezuela: they are larger and possibly have less rufous in the wings. This is where I found greatest difficulty in identifying species in photographs sent to me, and encountered the most subtle variations in plumage. Similarly, Luís Fábio Silveira tells me that the two species are frequently impossible to separate visually in Brazil. There may be more going on here than meets the eye.

**7) South-east Brazil.** Social of the race *pallidiventris* is sympatric with *erythropterus* Rusty-margined. These two races are very similar, so you need to look very carefully to identify a silent bird. (As an aside, Luís Fábio Silveira suggests that the calls of this Social Flycatcher differ from those of the species in northern South America, which is intriguing in a region renowned for high levels of avian endemism.) It seems to me that Social Flycatcher here is generally a rather mossy olive-green from the back of the head through the nape, mantle and lesser wing-coverts. In contrast, Rusty-margined Flycatcher appears to me to be greyish on the nape and browner on the mantle and lesser wing-coverts. From several photographs, the white superciliary of Social Flycatcher seems to broaden behind the eye, rather than taper off as on other subspecies and on Rusty-margined Flycatcher. I have painted this distinction (Fig. 4, bird 1d), but am unclear whether or not it is a genuine field mark, is variable, or appears variable; perhaps observers from south-east Brazil might let me know?



## Conclusion: Spix's legacy

Having had the benefits of 21st-century technology (photographs, internet, digital recordings) and knowledge (museum specimens) to research this article, I feel sanguine about pardoning Johann Baptist von Spix for his 19th-century mistake with a new species for science. It is clear that these two can be very confusing species that merit very careful attention, and that birders should be rigorous when labeling specimens, photographs or recordings. The exaggerated bias towards Social Flycatcher in photographs, and the opposite tendency in favour of Rusty-margined Flycatcher in vocalisations suggest that the problem is very real. Could it be that we have predetermined ideas about how to differentiate the two species? And that we see or hear those in our minds and therefore plump for a firm identification without objectively analysing what we really see or hear? I hope that this article encourages ornithologists and birders to investigate this fascinating duo further. Both species are common and widespread, a quality that tends to weaken interest on the part of birders and students alike, but surely it is apparent that further information is desirable, and the researcher has a great advantage in being able to find the birds comparatively easily.

### ACKNOWLEDGMENTS

Particular thanks to the following who read and commented constructively on various drafts of the article: David Ascanio, Olivier Claessens, Dilia Elaena Garcia, Luís Fábio Silveira, Phil Gunson, Steve Hilty, Olaf Jahn, Johan Ingels, Guy Kirwan and Andy Whittaker. Steve Cardiff (Museum of Zoology, Louisiana State University) and Chris Milensky (US Museum of Natural History, Smithsonian Institution) provided great photographs of useful specimens from the Pacific coast of Ecuador and Colombia.

The following photographers kindly contributed hundreds of excellent photographs of *Myiozetetes* for the preparation of the article: Carol Anderson, David Ascanio, Lorenzo Calcaño, Bertrando Campos, Allen Chartier, Rob Clay, Kristina Cockle, Andres M. Cuervo, Maxime Dechelle, Alberto Espinoza, Dilia Elena Garcia, Arthur Grosset, Roberto Güller, Phil Gunson, Francisco Hernandez-Baquero, Deborah Hosking, Olaf Jahn, Maria Teresa Jaramillo, Jorgen Peter Kjeldsen, Ben Lascelles, José Leiberman, Ricardo Leite, Arne Lesterhuis, Mark Lockwood, Felipe López, James Lowen, Michael Lustbader, Chris Milensky, Matthew Miller, Rodrigo Gaviriao Obregon, Fabiano Ficagna Oliveira, Vitor de Q. Piacentini, Mikko Pyhälä, João Quental, Juan Mario Raggio, Juan David Ramirez, Paul Smith, David Southall, Jorge Martin Spinuzza, Fernando Straube, Philip Tanimoto and Rodolfo Eller Viana. The quantity and quality of photographic material received was incredible.

The pictures used are not necessarily the best as my selection stems from suitability to support particular points related to the notes and comparisons. Had I relied simply on quality of picture I'd still be trying to decide!

Additional thanks are due to staff at the Phelps Ornithological Institute, Caracas, to Diana Esclasans for help with distribution maps, and to Margarita Martinez for help with specimens from the Phelps Collection.

### REFERENCES

1. Cory, C. B. & Hellmayr, C. E. (1927) Catalogue of the birds of the Americas and the adjacent islands. *Field Mus. Nat. Hist. Zool. Ser.* 13: 1–517.
2. Dickinson, E. C. (ed.) (2003) *The Howard and Moore complete checklist of the birds of the world*. Third edn. London, UK: Christopher Helm.
3. Garrigues, R. & Dean, R. (2007) *Birds of Costa Rica*. London, UK: Christopher Helm.
4. Hilty, S. L. & Brown, W. L. (1986) *A guide to the birds of Colombia*. Princeton, NJ: Princeton University Press.
5. Hilty, S. L. (2003) *Birds of Venezuela*. Second edn. Princeton, NJ: Princeton University Press.
6. Meyer de Schauensee, R. & Phelps, W. H. (1978) *A guide to the birds of Venezuela*. Princeton, NJ: Princeton University Press.
7. Mobley, J. A. & Fitzpatrick, J. W. (2004). Genus *Myiozetetes*. In: del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) *Handbook of the birds of the world*, 9. Barcelona: Lynx Edicions.
8. Restall, R., Rodner, C. & Lentino, M. (2006) *Birds of northern South America*. London, UK: Christopher Helm.
9. Ridgely, R. S. & Greenfield, P. J. (2001) *The birds of Ecuador*, 1. Ithaca, NY: Cornell University Press.
10. Ridgely, R. S. & Gwynne, J. D. (1989). *A guide to the birds of Panama*. Princeton, NJ: Princeton University Press.
11. Ridgely, R. S. & Tudor, G. (1993) *The birds of South America*, 2. Oxford, UK: Oxford University Press.
12. Schulenberg, T. S., Stotz, D. F., Lane, D. F., O'Neill, J. P. & Parker, T. A. (2007) *Birds of Peru*. Princeton, NJ: Princeton University Press.
13. Sick, H. (1993) *Birds in Brazil*. Princeton, NJ: Princeton University Press.
14. Tostain O., Dujardin, J. L., Énard, C. & Thiollay, J. M. (1992) *Oiseaux du Guyane*. Cayenne: Societe d'Etudes Ornitologiques.

### ROBIN RESTALL

Caracas, Venezuela. E-mail: robinrestall@gmail.com