

Variation in *Anthracothorax* hummingbirds

Robin Restall

Zippering past at speed, many hummingbirds are difficult enough to identify without the added complication of individual variation. This article sheds light on the differences within and between a congeneric trio of hummingbirds from northern South America.

The eight species of hummingbirds comprising the genus *Anthracothorax* are a rather homogenous lot, exhibiting strong similarities between the species. Known as mangos, the genus ranges over Middle America, parts of the Caribbean and northern South America. The ranges of Middle American mangos overlap only in Panama. The situation is similar in the Caribbean, where only on Puerto Rico does more than a single species of *Anthracothorax*

occur. Identifying mangos in Central America and the Caribbean is thus a fairly straightforward matter, and few birders will be confounded. However, the situation in northern South America is different, and confusion is quite possible. This article seeks to shed light on individual variation within three partially sympatric *Anthracothorax*, a problem that presents an additional layer of complexity to this identification issue.



Figure 1. Black-throated Mango *Anthracothorax nigricollis* (Robin Restall). Males above, females below

In continental South America, there are three species of *Anthracothorax*. Green-breasted Mango *A. prevostii* has a fragmented range from eastern Ecuador to north-east Colombia and, very patchily and somewhat locally, across Venezuela north of the Orinoco. Green-throated Mango *A. viridigula* is primarily coastal, occurring from north-east Venezuela east through the Guianas to northern Brazil. Black-throated Mango *A. nigricollis* occurs over much of eastern Ecuador, lowland Colombia, most of Venezuela, the Guianas and Brazil, and south to north-east Argentina.

Whilst this trio may appear to be separated by range to some extent, their seasonal movements¹ are poorly known, and the extent to which the species overlap is certainly not dealt with comprehensively in the literature. As a dramatic illustration of this, I have personally recorded all three at my extensive feeding station in Caracas, Venezuela, which should be impossible based on the distribution maps for the three in northern South America¹.

A limitation of all field guides is that, for various reasons, the entire range of plumages displayed by most species are not illustrated (a lament echoed elsewhere in this issue by Tom Schulenberg *et al.* on pp. 31–36). This article is based on birds from Venezuela, but the variations and differences I describe may occur in birds elsewhere in their ranges, so I hope will enable a better understanding of the three species and assist in reducing confusion between them. The birds illustrated are taken from specimens. They show the extent of variation from juvenile to adult, but are by no means definitive. Every image was painted from exactly the same position and with the same lighting. The variations in shades and tones of green thus reflect real colour differences between individuals. I have drawn the birds in identical poses so that plumage and colour differences are obvious and cannot be construed to be a result of a different angle or light. 'Perfect' or 'classic' birds may be found on plate 95 of *Birds of northern South America*¹, where, by some awful error, the images for Green-breasted and Green-throated Mangos have been transposed!

Black-throated Mango *Anthracothorax nigricollis* (Fig. 1)

This locally common species occurs in a variety of habitats, from humid, lightly wooded country to dry scrub, as well as on farms and in gardens. It quickly becomes a regular and loyal visitor to feeding stations. The plate (Fig. 1) depicts six

males (upper row) and six females (lower row). The species is monotypic, but is by far the most variable of the three species, and extreme variants can be very confusing indeed.

- (a) A fully adult male with a very rich welt of royal blue on the breast-sides, which is very noticeable in certain lights, but the bird may appear totally dull black in others.
- (b) Another old male, but nowhere near as strongly coloured. Note the different rump colour to old male (a).
- (c) The first of three immatures. The white moustachial stripe on this bird and bird (d) could be quite confusing. But note the tail: the two central rectrices are missing, revealing the brightly coloured inner webs to the remaining feathers. The tail is now bifurcate.
- (d) The white throat crescent could prove very confusing as no hummingbird normally displays such a feature, and it might even prompt thoughts of a *Heliangelus* sunangel. This individual retains traces of juvenile plumage on the belly, suggesting that it is an immature, probably in moult. In this species, the small white spot behind the eye is also a clue suggesting immaturity, as is the more orange tone on the inner half of the outer web of the rectrices.
- (e) This bird is moulting, but appears typical in that it lacks any of the dramatic irregularities of the previous two birds. The white behind the eye is more noticeable, but there is no orange visible in the closed tail.
- (f) A true juvenile, seldom seen except at garden feeders. It is in clear female-type pattern, but is distinguished by the paler and weaker iridescent green upperparts and by the barring on the head. Note the large white post-ocular spot. Many juveniles, as here, show small, scattered white feathers on the head and body. Some have more white feathers in regular patterns, creating very striking, and confusing, effects¹. Note that juvenile males (such as this bird) lack white tips to the tail.
- (g) An adult female (she had enlarged ovaries), but, oddly, retaining juvenile orange on the face and an unusually large white post-ocular patch. The six females illustrated display substantial variation in the extent of white on the tail tip; in this bird, it is absent entirely.
- (h) A perfectly normal adult female. In life, the green reflections can vary, but females are

generally a paler shade of green than the deeper green adult males (compare birds [a] and [b]).

- (i) Immature female with orange-brown on the sides of the throat and belly, which usually extends fully from the base of the bill to the flanks. The black on the central underparts is well defined. There is more orange than purple in the tail.
- (j) A similar immature female, but one with significantly more white in the tail, which would be noticeable in flight.
- (k) A juvenile with unusual patterning, lacking barring on the head, but with some irregular barring on the belly and large white terminal spots on the rectrices. The green upperparts are also paler; such a bird could possibly be misidentified in the field—as a *Polytmus* goldenthrout, perhaps?
- (l) Finally, a typical juvenile, complete with barring on the head and scattered small white feathers. Note the buffy fringes to the wing-coverts. Compare the typical juvenile male (f).

Green-throated Mango

Anthracothorax viridigula (Fig. 2)

Usually found in coastal regions, in mangrove swamps, etc., with scattered trees. Like the other *Anthracothorax*, Green-throated Mango occurs in parks and gardens and will visit hummingbird feeders. It is usually solitary, but groups may gather at large flowering trees, squabbling and chasing each other. Lone females and juveniles are easily confused with other mangos, so compare the plates carefully for the predictable differences. I have not encountered any problems identifying males of this species and same-sex Black-throated Mango, particularly because the green throat is usually very visible. I have only found rufous on the sides of the throat and breast of immature males, in contrast with the weaker orange of Black-throated Mango immatures, where I have found it only on females! As in Fig. 1, all of the birds on the upper row of the plate (Fig. 2) are males, and the lower birds are females.

- (a) Fully adult male; note the throat, which is deep but iridescent green, often with a bluish glint. Immediately below, there is a black patch shaped rather like a golf tee. The species has a strong tendency to show a bronze sheen to the uppertail-coverts.
- (b) Another adult male, but with a larger throat gorget and noticeably bluer iridescence. Males

of this species are more similar than are males of Black-throated Mango, with little variation. The green of the upperparts is usually quite constant.

- (c) Immature (this plumage is usually, but incorrectly, referred to in field guides as juvenile) male with the deep chestnut sides of the throat and upper breast typical of the species. The rufous is paler on Black-throated Mango and usually only found on females. On Green-breasted Mango the rufous is brighter and typically on the throat-sides of young males. The gloss on the central breast line is turquoise-blue, rather than the deep green of the adult, and there is a weak rufous bar across the lower breast. The tail lacks any blue but may well possess a turquoise-green glint.
- (d) Another immature male with less chestnut and turquoise-blue, but a more complete black frontal stripe. Note that both immatures (c) and (d) have small white tips to all but the central pair of rectrices.
- (e) A true juvenile male, with a much smaller black patch on the throat and white behind the eyes. The green bar across the breast is complete and separates the black throat and belly patches.
- (f) Adult female, superficially resembling a juvenile male, but exhibiting much stronger and cleaner bright green (with a turquoise iridescence), cleanly separated divisions between the sides of the throat, neck and breast and the black line down the throat, which lacks any iridescence. Note also the blue tail and solid white tips to the rectrices.
- (g) A young female (with well-developed ovaries but still apparently immature). Note the olive-green is that of a young bird, rather than the richer green of adults. The white feather on the lower back is typical of juveniles. The black line on the central underparts does not continue onto the belly.
- (h) An adult female with the largest ovaries of the four shown here, with a richer green plumage and broader white tips to the rectrices. Note the complete break in the black line, which continues to the ventral region. The white crescent behind the eyes is atypical, that of individual (f) being usual. This bird has missing central rectrices, making the tail look bifurcated in flight, and glistening bright purple instead of blue.



Figure 2. Green-throated Mango *Anthracothorax viridigula* (Robin Restall). Males above, females below

(i) Another young bird but, again, with well-developed ovaries. Note the weaker green tone and smaller amount of white at the tip of the tail and behind the eyes.

Green-breasted Mango
Anthracothorax prevosti viridicaudatus
 (Fig. 3)

This species prefers fairly open areas with scattered trees, especially near water, but may occur in parkland and gardens, where it will visit feeding stations. I was only able to find a single specimen of a female, the adult depicted here as individual (f), but the five males (a) to (e) are representative of the dozen that I examined. The extent of variation within the species (or, at least, subspecies *viridicaudatus*) appears to be significantly less than that of the others. As with the other two species, the green is variable, ranging from deep emerald or jade to leaf green with golden glints. The adult male has no white behind the eyes, but juveniles may do so; however, in all the specimens I examined, the white

comprised no more than tiny feathers, sometimes only one, and was occasionally absent. The adult female has a small white post-ocular spot. The white at the tip of the tail in young birds was worn in every single case, and thus vestigial. Only the adult female had complete and noticeable white tips to the tail.

- (a) A full adult male that lacked the typical bronze reflections on the tail. Black-throated Mango differs by the royal blue on the neck-sides, but note that this species also has blue, albeit weaker and tending to turquoise.
- (b) A very similar adult male, but the entire coloration is weaker, or paler, and the central rectrices are green rather than turquoise-blue.
- (c) An immature male with very rich orange on the throat-sides but not breast-sides. Note the full white chin and the royal blue reflections on the black bib.
- (d) Another immature male with clear orange streaks on the sides of the throat. In both (c) and (d), the black line down the centre of the

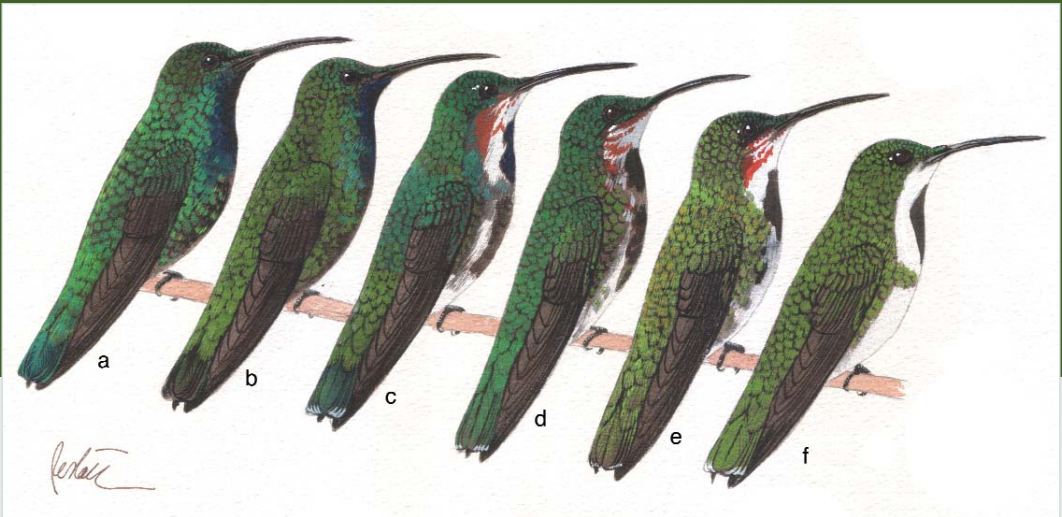


Figure 3. Green-breasted Mango *Anthracothonax prevosti viridicaudatus* (Robin Restall). A female (right) and five males

breast and belly is broken by an irregular band. Compare the immature males of Green-throated Mango (Fig. 2, birds [c] and [d]).

- (e) A juvenile male. Paler green. The black on the underparts is limited to a bib, with no extension to the breast or belly.
- (f) Adult female. Note the single long black diamond, lacking any iridescence, on pure white underparts, and the breast-band. This is distinctive, but beware of juveniles of both other mangos (Fig. 1l; Fig. 2g and h).

REFERENCES

1. Restall, R., Rodner, C. & Lentino, M. (2006) *Birds of northern South America*. London, UK: Christopher Helm.

ROBIN RESTALL

Phelps Institute of Ornithological Studies, Caracas, Venezuela. E-mail: robinrestall@gmail.com

Editor's note: auction of artwork. The artwork that illustrates Robin Restall's article is painted on three separate plates measuring 34 cm by 24.5 cm, and are in gouache on heavy cartridge paper. Robin has kindly donated the originals to the Neotropical Bird Club for blind auction as a set. In addition, Robin has also donated a number of the original plates from *Birds of northern South America*¹, also for blind auction. Full details of the book plates available will be posted on the Club website www.neotropicalbirdclub.org on 1 September 2008.

The proceeds from both sets of plates will be used to offset the increased production costs of *Neotropical Birding* that result from the Club's move to two issues per year.

Please send your offers by e-mail to secretary@neotropicalbirdclub.org. The person making the best offer received by the end of 2008 will acquire the pictures. There is a reserve of £250/US\$500 for the set of three *Anthracothonax* plates; the reserve for the *Birds of northern South America* plates will be specified on the website.

Your chance to suggest future Identification

Workshops. Robin Restall's Identification Workshops are established as a regular feature of *Neotropical Birding*. We are keen to deploy Robin's talents to meet your birding needs. Which species or species groups do you find particularly confusing to identify? What individual variation have you noticed within species or genera that has not been captured in field guides to date—and which Robin might usefully investigate? Robin's area of expertise is focused on northern South America so, for the time being, we ask for suggestions related to this area only. Please e-mail your ideas to the editors at neotropical.birding@neotropicalbirdclub.org