Identifying Bassian and Russet-tailed Thrushes using Photographs – Simon Pelling

Australia has two native *Zoothera* ground thrushes, with overlapping distribution. These are the Bassian Thrush (*Zoothera lunulata*) and the Russet-tailed Thrush (*Zoothera heinei*).

These birds are well known for being very difficult to distinguish in the field. Both birds are extremely similar in appearance and behaviour, and their ranges overlap in NSW and Queensland. At some sites, such as O'Reilly's in the Lamington National Park (NSW/Qld border) both species are regularly seen.

The use of photographs can be helpful in identifying 'difficult' birds in the field. However, the plumage and other differences distinguishing the two Thrushes are subtle and may not be clearly visible in photographs. Colour and shape differences are often masked by difficult lighting conditions, and white balance settings in the camera or the post-processing software. The most reliable differentiator between the two species is call, but the birds don't call on demand, and of course calls are not captured by still photos.

What I have attempted to do in this document is to look at BirdLife Photography's database of images to see how photographs can be used to separate the species, as well as the limitations of doing so.

Range Overlap

The ranges of the two species overlap between (roughly) Sydney in the south and Noosa in the north. The range of the Bassian extends through SE Australia including the ACT, parts of Victoria, southeastern South Australia and Tasmania. Birds in these southern regions can be expected to be Bassian.

There is also what the Australian Bird Guide calls 'a degree of altitudinal sorting' as the birds have preferences for different altitudes, with the Bassian preferring higher altitudes. However, this is not a particularly reliable difference due to overlaps in altitudinal range, particularly in the non-breeding period.

Calls

If heard, calls are diagnostic. The Bassian Thrush has a more complex, melodious Blackbird-like call, whereas the Russet-tailed has a simple, two-note whistle described by the Australian Bird Guide as '*whee-dooo*', with the second note often pitched lower than the first.[1]

Other Distinguishing Features

The Australian Bird Guide notes that "ID based on plumage requires good views of wing-coverts and consideration of age class". Based on Field Guides, online resources, and consulting with BirdLife Australia expert John Barkla, the main features that one should look for to distinguish between the Bassian and the slightly smaller, slighter Russet-tailed include:

The wing coverts: The adult Russet-tailed has broad crescent-shaped tips to the median and greater-secondary coverts, resulting in two reasonably distinct buff wing bars in the folded wings. In the adult

[1] Recordings of these calls can be found at various sites online, e.g. Birds in Backyards has a recording of the Bassian, and Graeme Chapman has a recording of the Russet-tailed (graemechapman.com.au).

Bassian, these are reduced and often scarcely visible. In poor light and with fleeting views this difference may be difficult to discern.

In addition, it is important to distinguish between young birds and adults. The juveniles of both species are almost indistinguishable from each other in the field. Both show broader tips than the adult, which often have an 'anchor' shape due to pale feather shafts being visible. Juveniles are generally distinguished by pale spots on the upperparts, particularly the crown. Immatures retain some juvenile features, including often retaining some juvenile wing coverts.

In short, identification by this feature will depend on reliably ageing the bird, as well as clear views of the coverts.

The amount of white in the tail: The Russet-tailed has a rather longer tip of white on the inner vane of the tail feathers, compared to the Bassian[2]. This is primarily visible in flight or preening, when the tail spreads. It is often not visible in photographs (and of course photographs which focus on the head of the bird will often have the tail out of focus).

Shape and length of bill: While not referred to in the Australian Bird Guide, John Barkla, and the description in the eBird website, note that the Russet-tailed generally has a narrower and longer bill, appearing slightly larger relative to the head. Close viewing is needed to see this.

General colouration on first impression: many sources indicate that the Bassian appears more olive coloured and Russet-tailed more honey coloured particularly when seen in good light. Superficially this can make the Bassian appear to be darker. However, this is a subtle distinction and again one needs to be wary of juveniles which can have a lighter more buffy colour. In photographs this will be affected by white balance and other settings. The ABG also notes that the black scaling on the rump of the Russet-tailed is finer and less distinct.

Analysis of Photographs

The BirdLife Photography database has 47 images identified as Bassian Thrush, but only 6 identified as Russet-tailed, which limits the extent to which comparisons can be made. These photos cover a range of locations, and there is a fair amount of variation in photographic quality. Also, use of flash photography can confuse observations about colour, particularly if the images are leaning towards being overexposed.

To minimise the risk of incorrect identification of Bassians I have only selected images from the southern part of the range of the species, including the ACT, Victoria, Tasmania and South Australia.

Where birds are identified as juvenile or immature, this is primarily on the degree of spottiness on the back and crown of the head. I am less confident about the 'immature' designation.

[2] The Bassian ssp *cuneata* has longer white tail feathers, similar to the Russet-tailed. However, this subspecies only occurs in far N Qld.

- **Covert banding**

a) Bassian Thrush

Images 1-16 are all of the Bassian Thrush. The distinction between adult and juvenile can be seen in the pale bands of the wings. The areas to look at are:

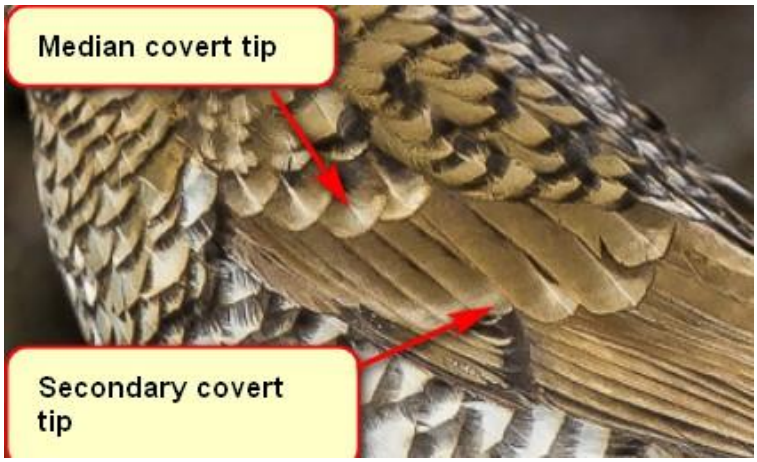


Image 1: Adult, lit by flash

Image 2: Adult, lit by flash

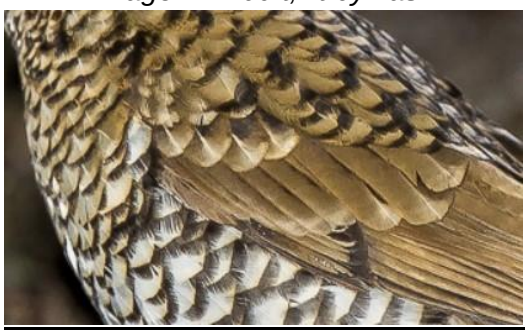


Image 3: Adult

Image 4: Juvenile

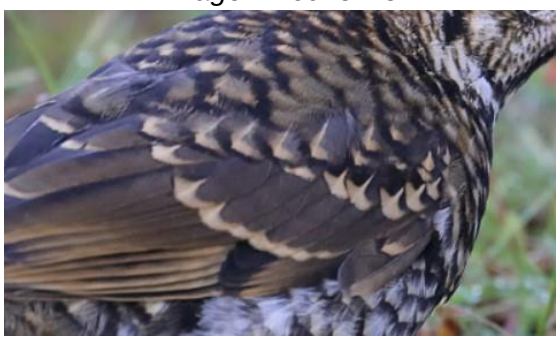


Image 5: Adult, lit by flash

Image 6: Adult

Image 7: Adult

Image 8: Juvenile

Image 9: Juvenile or immature

Image 10: Juvenile

Image 11: Age not entirely clear, adult or immature

Image 12: Adult

Image 13: Adult

Image 14: Adult

Image 15: Adult

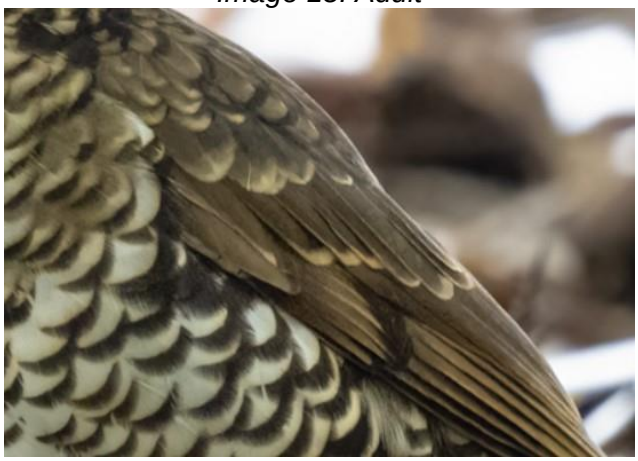


Image 16: Juvenile

Comment

The distinction between juveniles and adults is generally clear. Some adults have small pale crescents, others show no crescents at all. Due to variations in lighting and colour processing I can draw no conclusions about overall colour.

b) Russet-tailed Thrush

Unfortunately, we have only a small number of images in our database identified as the Russet-tailed Thrush.

Image 17: Adult

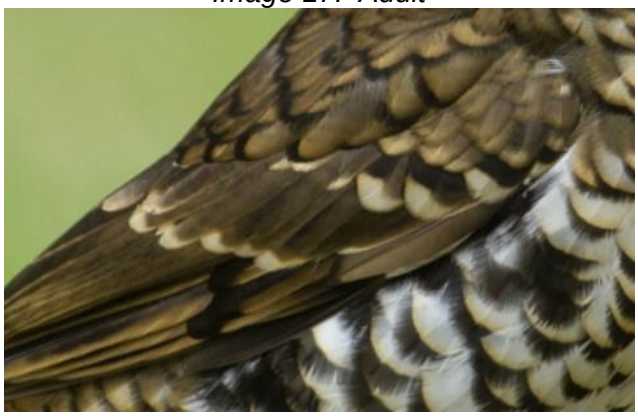


Image 18: Not clear if immature or adult

Image 19: Immature

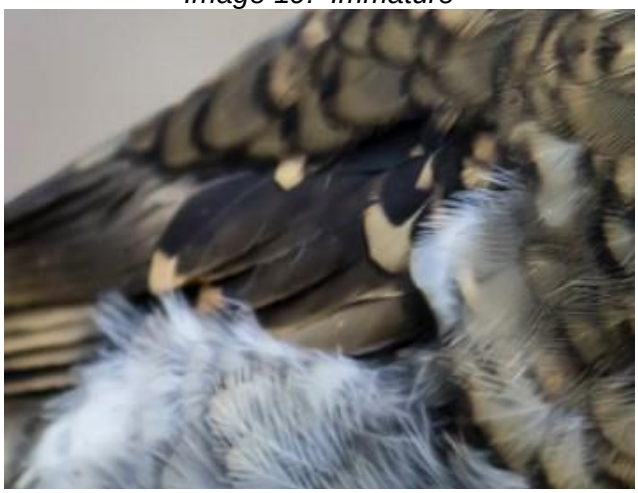
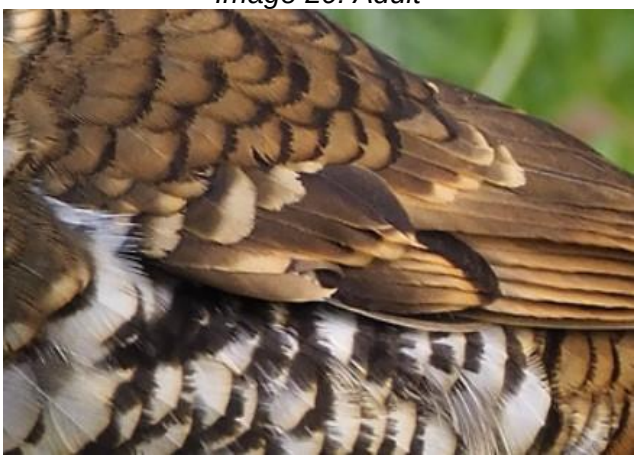


Image 20: Adult



Comment

All images show broad tips to the coverts. Note the similarity between these images and the juvenile Bassian. Immature Russet-tailed show ‘anchor’ shaped tips, similar to juvenile Bassians.

Bill shape

I have also attempted to see whether bill shape is a reliable indicator to use of species in photographs. Images 21-26 compare the profiles of 3 Bassian and 3 Russet-tailed Thrushes.

Image 21: Russet-Tailed

Image 22: Russet-tailed (imm)

Image 23: Russet-tailed

Image 24: Bassian (imm)

Image 25: Bassian

Image 26: Bassian

Comment

I am hard pressed to clearly see a significant difference between the two species in this small sample of photos (which is limited by the number of Russet-tailed Thrush photos we have in the database with a suitable side-on view). For example, one could say that the bill in photo 21 is slightly narrower than that in photo 25 but this could be down to variations within species. Note the paler speckles on the heads of the immature birds in these images (also applies to juveniles).

Conclusion

While this analysis is to some extent limited by the lack of Russet-tailed images, it suggests:

- Wing covert bars can be helpful in distinguishing between the two species in photographs, provided that care is taken to identify juvenile birds.
- Due to the lack of Russet-tailed photos I cannot compare juveniles of both species with confidence. However, they are likely to be virtually impossible to distinguish from photos alone.
- There is some variation in the covert tips in adult Bassians, with some showing small wing bars and others virtually no wing bars.
- Colour tones in the available photographs are of little use in separating species due to the vagaries of lighting in the field and post-processing variations.
- No significant differences could be seen in bill shapes or sizes in the sample of photos used; perhaps a greater sample would show a greater and more obvious variation.

A selection of useful Resources:

All photos are taken from the publicly-viewable BirdLife Photography database (www.birdlifephotography.org.au), and have been contributed by various BirdLife Photography members.

The Australian Bird Guide (Menkhorst *et al*)

https://absa.asn.au/wp-content/uploads/2015/08/Bassian-Thrush-1.pdf

https://absa.asn.au/wp-content/uploads/2015/08/Russet-tailed-Thrush-1.pdf

https://sunshinecoastbirds.blogspot.com/2017/08/russet-tailed-thrush-bassian-thrush-in_30.html

https://www.jennygrogan.com/single-post/2015/08/31/Eungella-NP-A-thrush-is-a-thrush-but-is-it-Bassian-or-Russettailed

Descriptions in eBird (www.ebird.org)

https://www.hboc.org.au/wp-content/uploads/Hunter-Region-thrushes-The-Whistler-Vol-7.pdf