

# Identification of immature Salvin's, Chatham and Buller's Albatrosses

Steve N. G. Howell

"I now belong to a higher cult of mortals", wrote Robert Cushman Murphy, the American ornithologist and conservationist, "for I have seen the albatross." But which albatross? In this article, bird identification guru Steve Howell tackles the complexities of immature 'mollymawks' in the Humboldt Current of western South America. A better understanding of how to identify young albatrosses is essential if we are to inform efforts to conserve these rapidly declining masters of the ocean.

**A**lbatrosses of the genus *Thalassarche*, also known as 'mollymawks', comprise 11 taxa of relatively small to medium-sized albatrosses of the Southern Hemisphere. Different authors recognise between five and 11 species, and English names are also debated. Here I use the well-reasoned names given by Tickell<sup>7</sup>. [Editorial note: Neotropical Birding policy is to follow the taxonomy and nomenclature of the South American Classification Committee (for which see Neotropical Birding 2: 21–23) but we have made an exception in this instance.]

Although most birders associate the Neotropics with landbirds, the rich Humboldt Current waters off Chile and Peru are important feeding areas for many seabirds (as Alvaro Jaramillo shows for Chile on pp. 27–39 of this issue), including five mollymawk taxa: Black-browed Albatross *T. melanophris* (Endangered), Salvin's Albatross *T. salvini* (Vulnerable), Chatham

Albatross *T. eremita* (Critically Endangered), 'Southern' Buller's Albatross *T. bulleri* (Near Threatened) and 'Northern' Buller's Albatross (still formally undescribed!). Indeed, the Humboldt Current supports most of the non-breeding populations of Salvin's, Chatham and (both taxa of) Buller's<sup>6</sup>, which all breed in New Zealand.

## The identification conundrum

With one or two notable exceptions, the field identification of adult mollymawks is adequately covered in field guides<sup>2</sup>. Immatures (age 1–3 years) are less well known, however, largely because they remain at sea for their first few years. Illustrations of immature Salvin's, Chatham, and Buller's Albatrosses in the literature<sup>4,5</sup> are frequently misleading, at least with respect to the two best features for identification, namely underwing pattern and bill coloration. Recent internet discussions about the identification of some immature albatrosses off western South America have also generated more heat than light, and amply reflect how poorly known these birds are.

Immatures of all three species are generally similar, sharing a grey head and neck, mostly white underwings with fairly narrow black borders, and a dark-tipped bill. Thus, good views are usually needed to identify birds to species.

With the exception of Fig. 1, all photographs of Salvin's Albatross *Thalassarche salvini*, Chatham Albatross *T. eremita* and Buller's Albatross *T. bulleri* were taken by Steve N. G. Howell on pelagics off Quintero, Chile between 29 October and 5 November of various years. Fig. 1 is by James C. Lowen ([www.pbase.com/james\\_lowen](http://www.pbase.com/james_lowen)), taken off Quintero on 23 November 2006.

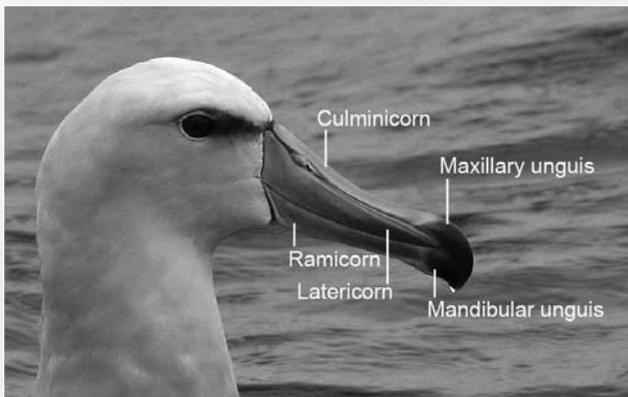


Figure 1. Close-up of Salvin's Albatross, showing bill plates mentioned in the article



Figure 2. Second-cycle Salvin's Albatross (left) and first-cycle Buller's Albatross (right). Note the bulkier build and appreciably stouter bill of Salvin's. On the Salvin's, fresh head, neck, and back feathers contrast with some bleached juvenile upperwing coverts and the outer primary tips. The Buller's is in uniformly fresh plumage, still with some unworn pale tips to the scapulars and upperwing coverts



Figure 3. First-cycle Salvin's Albatross. Note the greyish bill with a solid black tip and the fairly fresh and uniform upperwings (cf. Fig. 7). Some post-juvenile moult of new grey back feathers is apparent



Figure 4. First-cycle Salvin's Albatross. Note the bill pattern, fairly fresh upperwings and the wide but messy black leading edge to the underwing, with no trace of a preaxillary notch

Here I offer provisional identification criteria for immature Salvin's, Chatham, and Buller's Albatrosses based upon moult, plumage, and bill coloration; for a quick guide to bill morphology in albatrosses, see Fig. 1. I treat the two Buller's taxa in a single account as I am not aware of any evidence that they look appreciably different in their first 1–2 years of life. Immature Black-browed Albatross, being white-headed, is relatively distinctive (see the photograph on p. 28 of this issue) and thus not treated here. Features to distinguish Salvin's and Chatham from immature Tasmanian Shy *T. cauta* and Auckland Shy *T. steadi* Albatrosses, neither of which occur in the Humboldt Current, have been discussed elsewhere<sup>3</sup>.

This paper is based largely on 21 days of at-sea observations off Chile from 1992–2007, mainly in October–November, but also in January, April, August–September and December. Although my sample sizes for immatures are small (425 Salvin's, seven Chatham, 25 Buller's), they provide a starting point for future work. I have also seen hundreds or thousands of each taxon (mainly adults) around the breeding islands off New Zealand. As a rule, most mollymawks attain adult-like plumage in 2–3 years, with the full adult bill pattern taking a further 2–3 years to develop. By age 2–3 years, most individuals resemble adults sufficiently that identification is not a problem.



Figure 5 (top). First-cycle Salvin's Albatross. Note the greyish bill with a solid black tip, and the messy black leading edge to the underwing

Figure 6 (bottom). Second-cycle Salvin's Albatross. Relative to first-cycle birds, note the pale bill tip and the scattering of contrastingly old and bleached juvenile upperwing coverts

## A quick overview

In brief, Salvin's is the largest and biggest-billed taxon, Buller's the smallest and most lightly built. Chatham is much like Salvin's in size and structure but averages smaller and shorter billed. Such differences can be difficult to discern on lone birds, but the bill of Buller's often appears relatively slender compared to the thicker bills of Salvin's and Chatham (Fig. 2). All ages of these taxa share a grey head and neck, potentially leading inexperienced observers to misidentify them as Grey-headed Albatross *T. chrysostoma*, a species of cold subantarctic waters; I know of no documented record of Grey-headed as far north as central Chile.

## Moult and ageing

A knowledge of moult schedules is useful for determining the age, and sometimes species, of a mollymawk. When approaching the puzzle of moult and age determination in any bird it is



Figure 7. Second-cycle Salvin's Albatross. Relative to first-cycle birds, note the pale bill tip, contrast between the fresh back feathers and worn juvenile upperwings and the heavily worn outer primaries (cf. Fig. 3)

Figure 8. Second-cycle Salvin's Albatross. Relative to first-cycle birds, note the pale bill tip and narrower, neater black leading edge to the underwing, with a poorly defined preaxillary notch

Figure 9. Second-cycle Salvin's Albatross. Relative to first-cycle birds, note the fresh, adult-like head and neck feathering, neater black leading edge to the underwing and frayed outer primary tips. Second-cycle birds in particular can show a relatively dark bill that may appear almost blackish in certain lights

helpful to know its breeding cycle. Broadly, Salvin's and Chatham Albatrosses lay eggs during September–October and fledge mainly in April; 'Northern' Buller's lays in November and fledges in June–July, whereas 'Southern' Buller's lays in January and fledges in September–October<sup>1</sup>. As a rule, albatrosses undergo wing moult and most of their head and body moult during the non-breeding season, and immatures and non-breeding adults usually have a more protracted moulting period than do breeding adults. Among most albatrosses, the first moult of primary feathers does not occur until birds are almost two years old; typically only the outer three primaries, and sometimes a few inner primaries, are replaced. However, at 6–18 months old, birds moult their head and body feathers. Thus, in October–November the outer primaries of first-cycle Salvin's, Chatham and Buller's Albatrosses are fresh or only slightly worn, but are often heavily worn (and soon to be replaced) on second-cycle birds.

## Salvin's Albatross

### *Thalassarche salvini*

As the taxon most frequently encountered, Salvin's Albatross is a good species to learn well. *First-cycle* birds fledge in April and by October–November are common off Chile (Figs. 3–5). *Bill*: fairly dark dusky grey or lead-grey, often tinged flesh, with a large black tip which is sometimes accentuated slightly by a narrow, slightly paler subterminal band; the culminicorn is often slightly paler pinkish, and the gape line often shows orangish on the lower corner of the mandible. I believe that the dull yellowish- or horn-coloured bills shown for juvenile Salvin's in some books<sup>4,5</sup> are actually typical of Chatham Albatross. *Head and upperparts*: the head is usually paler grey than the dusky neck sides and the 'black brow' is usually reduced to a dark smudge in front of the eye. The back and upperwings are uniform in wear and variably bleached; by October–November, some fresh grey feathers often appear on the hindneck and back (Fig. 3). *Underwing*: the blackish leading edge is messier and appreciably wider than on subsequent ages and could suggest Buller's, which has a more cleanly defined black leading edge; the preaxillary notch (the dark mark or 'thumbprint' on the leading edge of the underwing, where the wing meets the body) is often indistinct or absent (*contra* illustrations in the literature<sup>4,5</sup>) and the blackish typically fans out on the primary coverts (Figs. 4–5).

At distance, *second-cycle* birds (Figs. 6–9) look similar to first-cycle birds but have undergone a moult of head and body feathers, scapulars, some wing-coverts and apparently rectrices. *Bill*: on some individuals the bill resembles that of first-cycle birds, but with a variable pale tip. Other birds exhibit a 'ghosting' of the adult pattern, with a duskier latericorn, paler and slightly yellowish culminicorn and ramicorn, and reduced black on both ungues that can be restricted to a mandible spot on some birds. On some individuals the bill can appear very dark or even blackish (Figs. 2, 9), an effect that may be accentuated by photos and by the gloomy light that typifies overcast days in the Humboldt Current. *Head and upperparts*: relative to first cycle, black brow slightly bolder and whitish forecrown more contrasting, with the fresh greyish hindneck and back contrasting with worn and browner upperwings. The primaries are of equal age, but the tips to the outer primaries are often distinctly frayed (Fig. 7). *Underwing*: black leading edge averages narrower and cleaner than on first-cycle birds, often with a preaxillary notch (Figs. 8–9).

Subsequent ages are ostensibly adult-like but the bill is duller overall, and subadults may be distinguished by a subterminal blackish mark on the culminicorn. Third-cycle birds should be distinguishable by their subadult bill pattern and contrast between the old juvenile middle primaries and new outer primaries (p8–p10).

## Chatham Albatross

### *Thalassarche eremita*

Moult and ageing criteria parallel those of Salvin's Albatross. *First-cycle* birds (Figs. 10–12) differ from Salvin's mainly in bill colour. *Bill*: the bill of the few presumed Chatham Albatrosses I have seen off Chile has been dingy pale yellowish to yellowish-horn with a large black tip, the latericorn being slightly duskier than the culminicorn and ramicorn; this is obviously different from the dull greyish bill characteristic of Salvin's. *Head*: the forecrown can bleach to whitish, unlike the solidly grey head and neck shown by adult Chatham.

*Second-cycle* birds (Figs. 13–14) differ in several ways. *Bill*: brighter and yellowish overall, especially on the culminicorn, with a large black subterminal area of variable size and a pale tip. *Head and upperparts*: the forecrown can bleach to whitish. As on second-cycle Salvin's, the fresh greyish hindneck and back contrast with the worn, browner upperwings, and the tips to the outer

primaries are often distinctly frayed. *Underwing*: the black leading edge averages narrower than on first-cycle birds, often with a preaxillary notch.

Subsequent ages are ostensibly adult-like but can have a whitish forecrown, and the bill is duller overall. Subadults may be distinguished from adults by a subterminal blackish mark on the culmicorn; third-cycle birds should be distinguishable by their subadult bill pattern and contrast between the old juvenile middle primaries and new outer primaries (p8–p10).

## Buller's Albatross

### *Thalassarche bulleri*

As adults, both 'Northern' and 'Southern' Buller's occur off Chile, and presumably immatures of both taxa also occur in the Humboldt Current. *First-cycle* birds of both forms fledge later than Chatham or Salvin's (see *Moult and ageing* above) and are thus in fresher plumage off Chile in October–November (Figs. 2, 15–17). *Bill*: dusky flesh with a contrasting black naricorn line, blackish distal patch and pale tip; the latericorn is often slightly greyer, whereas the culmicorn and ramicorn are usually slightly paler yellowish to pinkish. *Head and upperparts*: head paler than dusky neck-sides, and some can bleach to almost whitish (suggestive of a first-cycle Black-browed Albatross); 'black brow' usually reduced to a dark smudge in front of the eye. Back and upperwing uniform in wear and variably bleached.

*Underwing*: blackish leading edge often slightly messier and more extensive than on older birds, but still blacker and more sharply demarcated than on first-cycle Salvin's.

*Second cycle* birds (Figs. 18–19). *Bill*: relatively adult-like in pattern by October–November, with a dark grey latericorn, and yellow culmicorn and ramicorn with a variable blackish subterminal band on the unguis. *Head and upperparts*: head-sides greyer than first-cycle, with a slightly bolder 'black brow' and more contrasting whitish forehead. The fresh greyish hindneck and back contrast with worn and browner upperwings. Primaries of a single generation with tips to the outer primaries often distinctly frayed. *Underwing*: the black leading edge averages neater and more solidly black than on first-cycle birds.

Subsequent ages are ostensibly adult-like (and thus perhaps distinguishable as 'Northern' or 'Southern' Buller's; Figs. 20–21). At close range, however, subadults may be distinguished by bill pattern, with the subterminal blackish area bleeding onto the culmicorn; third-cycle birds

should be distinguishable by their subadult bill pattern and contrastingly new outer primaries (p8–p10) relative to the old juvenile middle primaries.

## Summary

Confronted with a 'grey-headed' albatross off western South America, it is best to concentrate on bill pattern and coloration. It is also useful to determine the bird's age, although it may not be possible to be more precise than 'immature' (1–2 years old) for many Salvin's seen at moderate distance. Underwing pattern can be helpful but is sometimes difficult to see (or impossible, as with birds sitting on the water), but note that the 'diagnostic' black preaxillary notch of Salvin's and Chatham that is often touted in the literature<sup>4,5</sup> is often lacking on first-cycle (and some second-cycle) birds. With experience, the larger and bulkier build of Salvin's can be helpful, as can the slighter build and more slender bill of Buller's.

### ACKNOWLEDGMENTS

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Above, top to bottom:

Figure 10. First-cycle Chatham Albatross. Note the dusky pale yellowish bill with a solid black tip (see Fig. 12 of the same individual)

Figure 11. First-cycle Chatham Albatross. Note the dirty pale horn bill with a solid black tip and the relatively fresh upperwings with all feathers of the same generation

Figure 12. First-cycle Chatham Albatross. Note the dirty pale yellowish bill with a solid black tip, and the relatively fresh, same-age upperwings; some post-juvenile moult is apparent, with new grey back feathers visible (see Fig. 10, showing the same individual)



Figure 13. Second-cycle Chatham Albatross. Note the yellowish bill with very fine pale tip and heavily worn outer primary tips and humerals; even at this age, the preaxillary notch may be absent. The tail appears relatively fresh, suggesting that it was replaced in the post-juvenile moult

Figure 14. Second-cycle Chatham Albatross. Note the same features as the bird in Fig. 12, although a preaxillary notch is also apparent at this angle. The post-juvenile head and neck feathers may average darker than on Salvin's but second-cycle (and older) Chathams can still have a whitish forecrown



Opposite page, left column top to bottom:

Figure 15. First-cycle Buller's Albatross. Note the overall fresh plumage plus bill pattern: the greyish latericorn contrasts subtly with the pale yellowish culminicorn and ramicorn, and Buller's does not show the solid black bill tip of first-cycle Salvin's and Chatham

Figure 16. First-cycle Buller's Albatross. Note the overall fresh plumage, bill pattern and the broad but relatively diffuse blackish leading edge to the underwing

Figure 17. First-cycle Buller's Albatross. Note the same features as Fig. 16. The relatively pale bill of Buller's typically shows a well-defined black naricorn line along the sides of the upper mandible as well as an obvious pale tip (see also Figs. 2, 15-16)

Figure 18. Second-cycle Buller's Albatross. Note the relatively adult-like bill pattern and the uniformly worn juvenile upperwings contrasting with the fresh post-juvenile back



Above, top to bottom:

Figure 19. Second-cycle Buller's Albatross. Note the bill pattern and upperwing feathers of the same age. The relatively pale grey post-juvenile head feathering (cf. Fig. 20), plus the relatively unworn outer primaries, may point to this being a 'Southern' Buller's, which fledges later and thus would have up to three months fresher plumage than a 'Northern Buller's' (cf. Fig. 18, which has more heavily worn outer primaries)

Figure 20. Adult 'Southern' Buller's Albatross. Note the relatively pale grey head and neck with a 'gentle' facial expression and relatively poorly contrasting white forecrown, plus the ongoing primary moult. Adult Northern Buller's have typically finished their primary moult by October–November (cf. Fig. 21, photographed on the same day)

Figure 21. Adult 'Northern' Buller's Albatross. Note the relatively dark grey head and neck with a 'stern' facial expression and a contrasting white forecrown, plus the lack of primary moult