Aleutian Terns *Onychoprion aleuticus* at Farquhar Inlet, New South Wales, 4th December 2016 and 11th December 2017 – April 2018.

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Aleutian Terns at Farquhar Inlet, 28/2/18 (Photo: Liam Murphy)

Introduction

On the evening of October 20th 2017 I was sorting through some old photographs I had taken at Farquhar Inlet, near the town of Old Bar, NSW, on December 4th 2016. I came across a single photograph of some terns which I realised I had not yet conclusively identified (Fig 1). Despite my best efforts at identifying the birds myself with the resources available to me, I drew a blank. I just could not manage to reconcile the birds' features with any of the species that I would reasonably expect to find at that site, or with any other species in my current Australian field guides. So, I posted the image to the Facebook forum 'Australian Bird Identification' for some assistance.

Figure 1. Original photograph taken at Farquhar Inlet on 4/12/16 (Photo: Liam Murphy).

I requested an opinion on the birds from David Eades, who I was aware to be an authoritative figure in tern identification. David's initial response was as follows:

"These Terns look decidedly odd to me, definitely wrong for Common Tern, perhaps White-winged Black Terns but a number of things bother me - the contrasting white tips/fringes to mantle/back/scapulars and secondary-coverts, the dark-centred and contrastingly white-fringed tertials and, on R bird, the seemingly rather longish bill, proportionately a tad too long for WWBT? If I'm not being fooled by some weird photographic artefact, the L bird seems to show a deeply forked tail i.e. with outermost feathers forming tail-streamers - just plain wrong for a WWBT. The combination of all these characters remind me, believe it or not, of photos I've seen in the past of Aleutian Terns in non-breeding plumage!! Single photos can often convey odd impressions so I am very wary

of putting a certain ID on these birds. Probably just 1st Immature WWBTs but if you have any more shots, I'd urge you to post as many as possible so that we can nut this one out properly."

I explained to David that unfortunately I only had the one photo. However, other experts had subsequently joined the discussion and were in agreement that the birds were likely candidates for Aleutian Tern, and I was encouraged to make a submission to BARC. Before I had the chance to finish that submission I had rediscovered the birds at the same site so I have decided to submit just this single submission to BARC for both the 2016 and the 2017-2018 sightings.

December 2017

At 10:00am On December 11th 2017, one year and one week after the original photo was taken, I went back to Farquhar Inlet and was astonished to quickly find four Aleutian Terns loafing on a sandbar in exactly the same spot I had taken the photo the year before. I frantically got to work taking as many photos as possible from different angles and in flight. More birds were appearing from out at sea and soon there were nine birds in a single flock on the sandbar. I then made a few phone calls and posted on the 'Australian Twitchers' Facebook page to get the word out. By 3pm other birders had begun to arrive and there were now 13 Aleutian Terns lined up along the edge of the sandbar. In the months to follow there were regular reports of up to 16 birds at the site and on 3rd February 2018 four separate observers recorded a single flock of 18 birds. The last confirmed sighting that I'm aware of was on 8th April 2018 when I observed four birds at the site, one almost in full breeding plumage.

Location and habitat

Farquhar Inlet is at the mouth of the Manning River South Channel, located in Manning Entrance State Park, approximately 1.5km north of Old Bar, NSW. It is one of the largest expanses of tidal sand flats on the NSW mid-north coast and is a significant area of habitat for local and migratory waders. The adjacent dunes are an important breeding area for Little Terns and, incidentally, Farquhar Inlet was also the site of the Kentish Plover in 2002 (BARC Case #343). Approximate GPS coordinates of the Aleutian Tern site are -31.949801, 152.604852 (Fig 2).

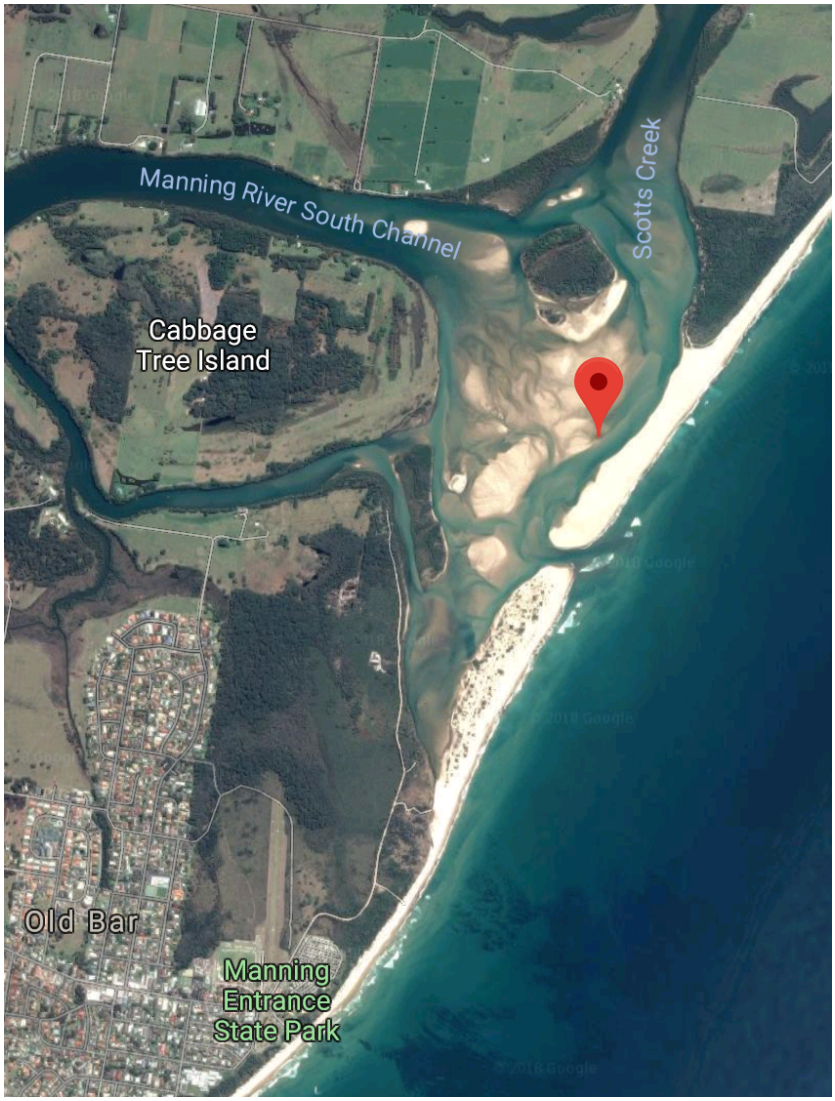

Figure 2. Location of the site at Farquhar Inlet, just north of Old Bar, NSW.

Physical description/Identification

Structure

The birds appear relatively short-legged and small-headed but quite long in the body. Importantly, the bill shape is rather fine but there is a noticeable gonydeal angle due to the fairly straight profile of the upper mandible. This results in the lower mandible having a *unique, finely chiseled appearance*. The foreheads are steep, making the overall profile of the head appear deep and well-rounded. The tails are long and deeply forked. They are medium-sized terns, similar in size to Common Terns.

Plumage

The white of the forehead is extensive, reaching above and anterior to the eye and *completely surrounding the rear of the eye*. There is a small black mark at the front of the eye. The crown and nape are smutty black, with the black reaching down to just below the eye. The feathers of the dorsal surface are grey and the scapulars, coverts and tertials have *obvious and extensive white fringes and tips, giving an overall scaly appearance* (Figs 3-7). The primaries are worn and dark. The collar and the entire ventral surface from throat to undertail are clean white. The secondaries have a *distinct and diagnostic dark trailing edge*, visible in flight (Figs 8 & 9). Apart from the dark worn primaries and the dark trailing edge to the secondaries, the underwing is white. The tail feathers are grey with *white outer edges to the elongated outermost retrices* (Figs 6 & 7). A dark carpal bar is present. The legs and bill are black.

Most birds are believed to have been non-breeding adults, however individual plumages are still being assessed and precise ageing and detailed moult analysis is beyond the scope of this report. A more detailed review will be attempted at a later stage. For the purposes of this submission it is sufficient to say that the birds were in basic plumages for the majority of their time at Farquhar Inlet, apart from the last few sightings where one bird was seen and photographed in fresh breeding plumage. This bird showed a uniform dark grey upperwing and dorsal surface, greyish breast and belly and an almost solid black cap with white forehead extending in to a short pointed supercilium stopping at the rear of the eye (Figs 10 & 11).

Figure 3. Aleutian Tern at Farquhar Inlet showing white tips and fringes to dorsal feathers, 11/12/17 (Photo: Liam Murphy).

Figure 4. Aleutian Tern in flight, Farquhar Inlet, 11/12/17 (Photo: Liam Murphy).

Figure 5. Aleutian Tern in flight, Farquhar Inlet, 29/12/17 (Photo: Paul Walbridge).

Figure 6. Aleutian Tern in flight, Farquhar Inlet, 29/12/17 (Photo: Paul Walbridge).

Figure 7. Aleutian Tern in flight, Farquhar Inlet, 29/12/17 (Photo: Paul Walbridge).

Figure 8. Aleutian Tern with wings raised, Farquhar Inlet, 29/12/17 (Photo: Paul Walbridge).

Figure 9. Aleutian Tern in flight, Farquhar Inlet, 29/12/17 (Photo: Paul Walbridge).

Figure 10. Aleutian Tern in breeding plumage in flight, Farquhar Inlet, 08/04/18 (Photo: Liam Murphy).

Figure 10. Aleutian Tern in breeding plumage in flight, Farquhar Inlet, 08/04/18 (Photo: Liam Murphy).

Similar Species

Aleutian Terns in breeding/alternate plumage could conceivably be confused with any of the other terns in the genus *Onychoprion* - Sooty, Bridled or Grey-backed. However, in nonbreeding/basic plumages, as they have been for most of their time at Farquhar Inlet, they are more likely to be confused with Common Tern or perhaps White-winged Black Tern.

Common Terns have a flatter crown profile, more robust and down-curved bill, slightly longer-legged stance and more extensive black on the crown, adjoining the rear of the eye (Fig 10). Common Terns also never show the extensive white tips and fringes to the dorsal feathers cf. Aleutian Terns in figures 3-7 (J. Davies, pers. comm.).

Figure 10. Comparison of basic Aleutian Tern (top) and Common Tern. Both photos taken at Farquhar Inlet, 28/2/18. Not exactly to scale. (Photos: Liam Murphy).

White-winged Black Terns have a slightly shorter bill, a shorter-bodied and longer-legged structure, and in flight would show a shorter tail with a square tip. White-winged Black Tern also have a different head pattern, with the black ‘earmuffs’ extending well below the eye cf. Aleutian Tern about level with the bottom of the eye (Fig 11).

Figure 11. Comparison of structure and head pattern of Aleutian Tern (top) and White-winged Black Tern. Not to scale. (Photos: AT-Liam Murphy, WWBT-Duade Paton).

Discussion

Aleutian Terns breed in west and southern Alaska, on the Aleutian Islands and in parts of far eastern Siberia (including the Kamchatka Peninsula). They're widely considered to be the most poorly understood of North American terns and this lack of knowledge probably applies more to the whereabouts of birds during their winter range than anything else. Little is published on the wintering quarters of Aleutian Terns and all published observations are of few birds. This is probably due to a combination of factors, but foremost because the birds are spending the Austral summer in places where observers simply are not.

But even in areas where observers are plentiful (such as Singapore and Hong Kong) the vast majority of records appear to be from the Austral spring and autumn. Using a global online reporting tool such as eBird, it becomes clear that there are enormous gaps in where Aleutian Terns have been recorded in the Austral summer months. In fact, looking at eBird alone reveals that Farquhar Inlet is the ONLY place that eBird users have ever logged Aleutian Tern between December and February! All other non-breeding range records in eBird are within September to November or March to May.

eBird is just one data source of course, heavily reliant on observer presence, bird detection and reporting. There are reports in the literature of birds being located in coastal waters around Java, Bali and Sulawesi during December (Hill and Bishop, 1999) and unpublished work with geolocators has also revealed that birds are spending the non-breeding season around the Philippines, Greater Sundas, east of Papua New Guinea and potentially even along the Capricorn Coast of Queensland (M. Goldstein, US Forest Service, pers. comm.). But these data are from just a handful of individual birds and overall the location of the vast majority of the Aleutian Tern population in summer is simply unknown. New studies are now underway using GPS satellite radios to better determine location information and one day soon the entirety of their non-breeding range may be able to be described.

Acknowledgements

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