

BirdLife Australia Rarities Committee Unusual Record Report Form

This form is intended to aid observers in the preparation of a submission for a major rarity in Australia. (It is not a mandatory requirement) Please complete all sections ensuring that you attach all relevant information including any digital images (email to birdlife@barc.gov.au). Submissions to BARC should be submitted electronically wherever possible.

Full Name: Vincent Mourik (author of report, VM in what follows) Andrew Cruikshank (original observer, AC in what follows) Daniel Burndred (online reporter, DB in what follows)	Office Use
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	Phone No:
	Email:

Species Name: Short-eared Owl	Scientific Name: <i>Asio flammeus</i>
Date(s) and time(s) of observation:	08 December 2019, 08:47 am
How long did you watch the bird(s)?	N.A.
First and last date of occurrence:	08 December 2019
Distance to bird:	N.A.

Site Location Warf, container terminal Port Botany NSW. GPS: -33°58'12.20" 151°13'8.21"
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Habitat (describe habitat in which the bird was seen): Driveway bordering the water of a wharf at the container terminal of Port Botany NSW, a major shipping port in Australia.
Sighting conditions (weather, visibility, light conditions etc.): N.A.

To your knowledge, is the species seen frequently at this site? To the best of VM's knowledge, this species has never been observed anywhere within Australian territory.
Were other observers present Do any of the other observers disagree with your identification, if so, who? (please give names, addresses and phone numbers)? AC was the only confirmed observer, DB and VM subsequently assessed the pictures with input from the online facebook community and bird identification experts. Nobody disagrees with the identity of this bird.

How confident are you of your identification?, e.g. 70%, 100%. If not 100%, why not?

100%

Please confirm that you are willing for BARC to display your images (fully credited with your name) electronically
YES, picture credits should go to AC.

Other details: e.g. Do you have historical and or anecdotal information/comments relating to the prior occurrence/status of the species within or near this location?

None, as this pertains a first record for Australia. See next section for a full account of events.

Physical Description of Bird - Please describe only what you saw: (1) No. of individuals present (living or dead); (2) age (adult, juvenile, immature) and sex; (3) size and shape; (4) plumage colour and pattern (including any details of moult); (5) colour of bill, eyes and legs/feet; (6) calls; (7) behaviour, movements, flight pattern, and anything else that might help to identify the bird e.g. feeding, interactions with other birds, describe where the bird was – on ground, in canopy, flying etc. Were comparisons made with other species?

This report pertains the observation of a death Short-eared Owl *Asio flammeus* at Port Botany, NSW on Sunday morning 8 December 2019.

Account of events

AC works as a stevedore at Port Botany. In this capacity, while finishing his night shift on Sunday 8 December 2019, at 08:47 am he observed a death bird on the side of a driveway at the container terminal at GPS -33°58'12.20" , 151°13'8.21" (exact GPS known through metadata of photograph, see below). AC noticed this was an unusual bird, took two pictures (image 1 and image 2 in what follows), and sent these straightaway to his friend DB for help with the identification.

DB realized it was an owl, but wasn't quite sure what species this was, and therefore decided to post the pictures on the Australian Bird Identification Facebook group at 0852 am (Fig. 1A), with a request for help with the identification. VM subsequently engaged through responses to the original post at 0902 am (Fig 1B), realising this was a rare bird and being suspicious it could be a Short-eared Owl. Via email, VM asked for confirmation of his suspicion from Dr Steve Debus and Jeff Davies (both agreed later that day or the day after with this suggestion), but in the meantime, other members of the facebook group already concluded the bird must be a Short-eared Owl. In a subsequent comment at 0912 am, VM asked DB if he could ask AC to secure the specimen, as VM lives nearby and would have been able to collect the specimen from AC. Unfortunately, DB checked with AC shortly after, but the specimen could no longer be located by AC, and the two pictures shared online already is all evidence available for this record.

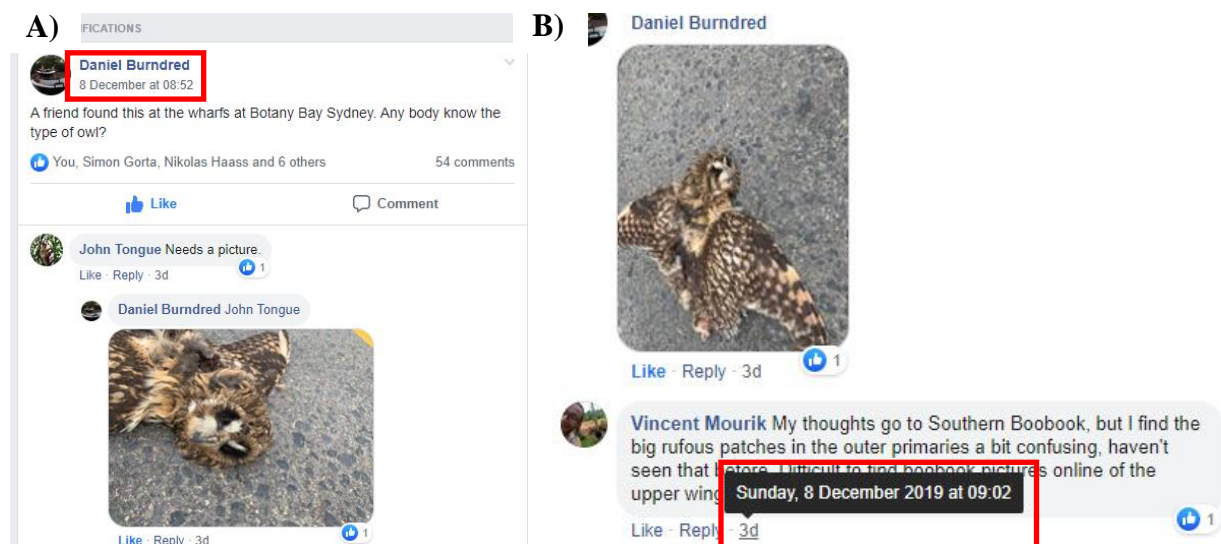


Figure 1 Some screenshots supporting the timeline of the online reporting of this record on the Australian Bird Identification facebook group, Sunday morning 8 December 2019. A) shows the start of the thread by DB at 0852 am including the original message and first photograph. B) shows VM engaging at 0902 am and the second photograph. About 10 mins later (not shown here) VM asked to secure the specimen. VM in the meantime emailed Dr Steve Debus and Jeff Davies asking could this be a Short-eared Owl. At 1010 am and onward the first suggestions (not shown) were made in this thread by others (Nigel Jackett, David Thomas, Simon Gorta) that this is a Short-eared Owl. At 1140 am DB confirms the specimen is lost (not shown).

Credibility of the record

An outstanding record like this current one, only known through two pictures posted online, deserves special attention for credibility, to rule out the possibility of a hoax. Furthermore, the possibility of a genuine mistake with picture location and date has to be ruled out.

To this end, VM contacted DB through a private message, exchanged contact details and discussed the matter over the phone with DB, including permission to contact AC. Subsequently, VM also contacted AC and discussed the matter through a phone call.

A key aspect is AC was willing to share his original photographs taken with his mobile phone camera. These two files contain the original metadata including GPS location and time of the photo. The first image was taken at 0847 am (Figure 2A) and has a GPS location (Figure 2B) corresponding to a building at the container terminal of Port Botany. The second image was taken at 0848 am (Figure 2C) and has a GPS location fitting the description of AC of where the pictures were taken (Figure 2D), i.e. a driveway at the actual wharf of the container terminal. VM believes this small discrepancy between the GPS locations of the two pictures (Figure 3) can easily be accounted for realising that mobile phones typically have a significant delay in updating the current GPS location. As the pictures were taken in quick succession, most likely the first picture was taken while AC's phone was just out of inactive mode and had not caught up yet with the new GPS location but instead assigned the last known GPS location to the metadata of this file. The second picture got the actual GPS location of AC photographing the specimen assigned to its metadata.

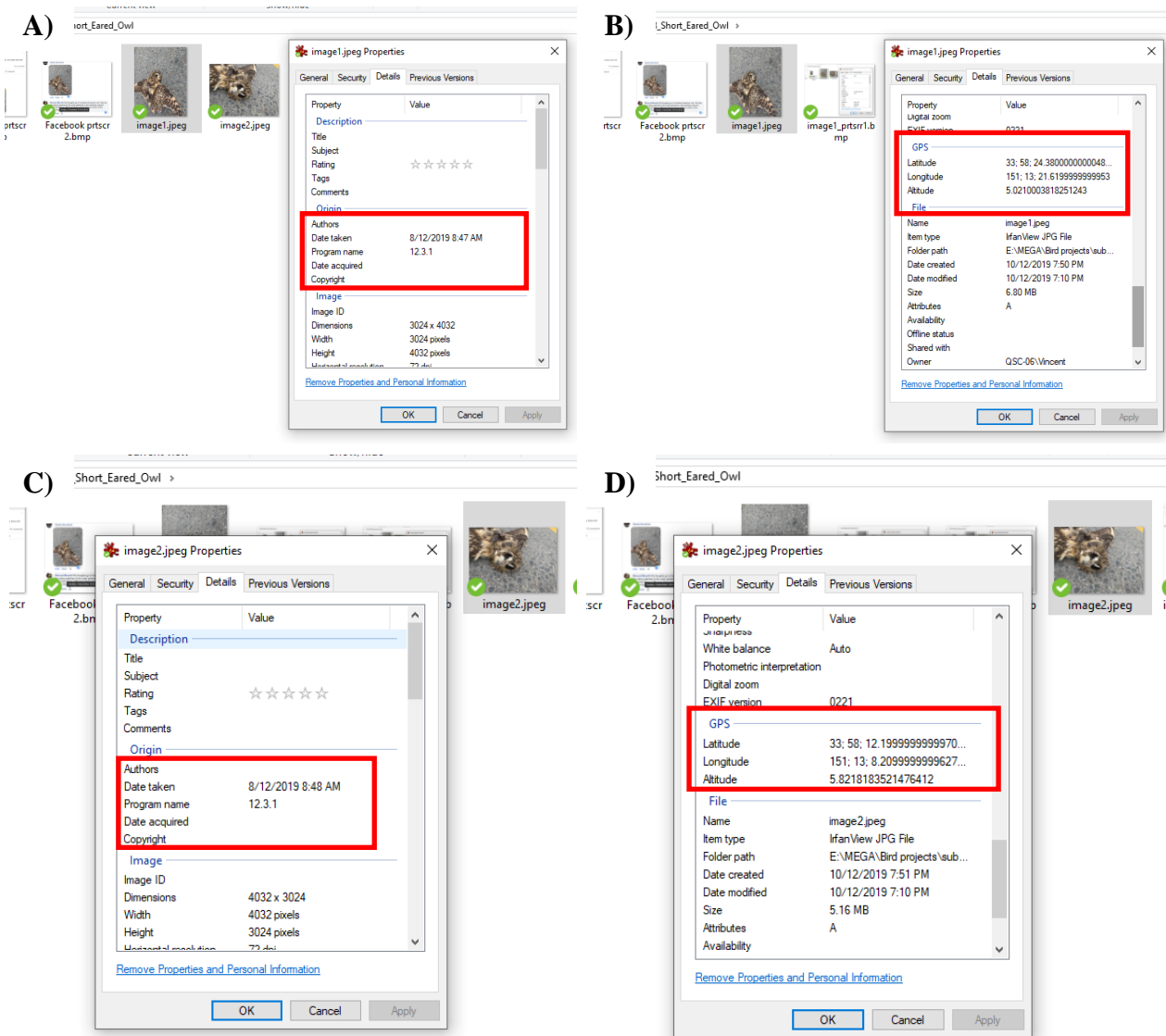


Figure 2 Screenshots of relevant metadata of the two original pictures taken by AC. image1.jpeg was taken at 0847 am on Sunday 08 December 2019 (A) at GPS -33°58'24.38" 151°13'21.62" (B). image2.jpeg was taken at 0848 am on Sunday 08 December 2019 (C) at GPS -33°58'12.20" 151°13'8.21" (D).

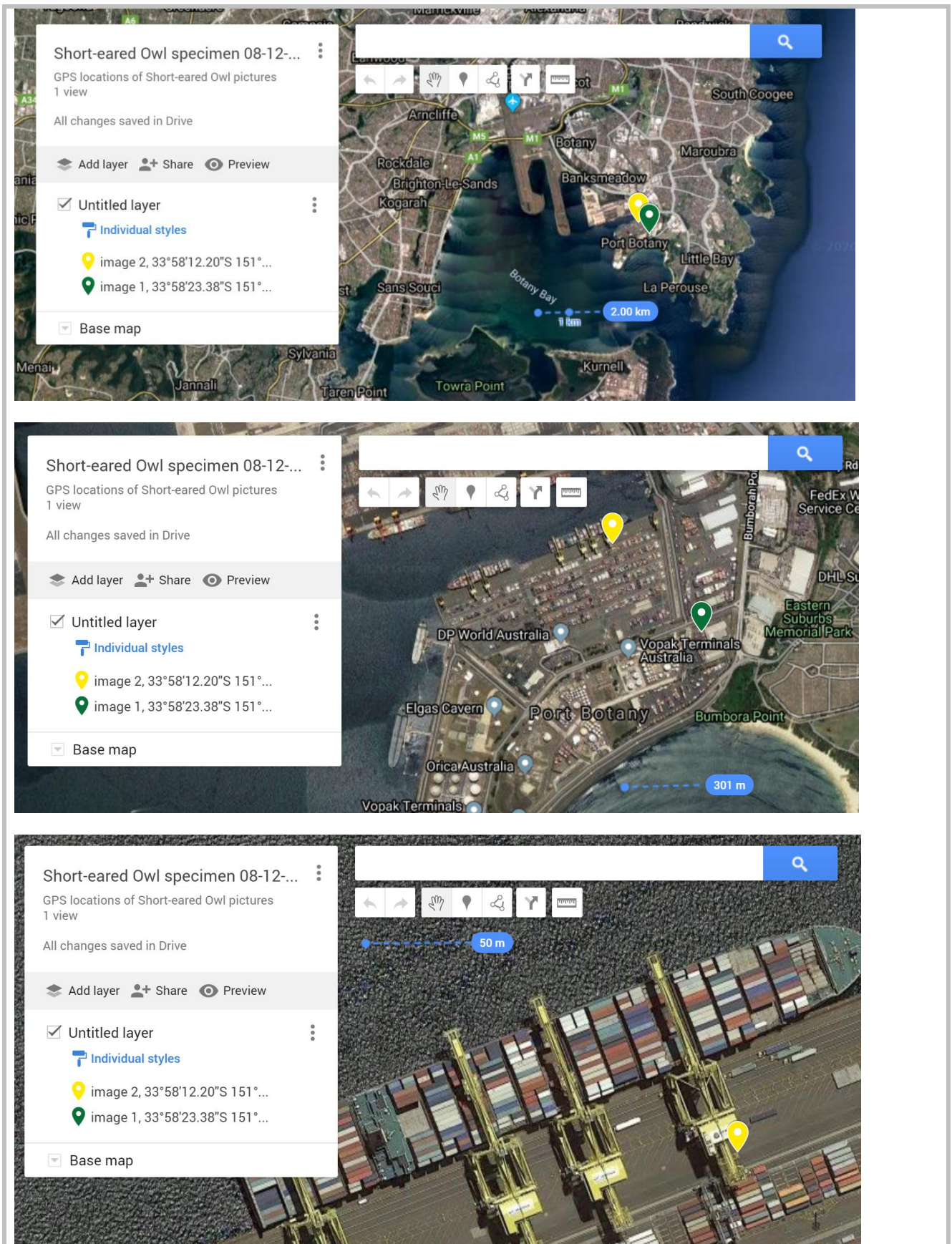


Figure 3 Location of the record. Top: Overview of Botany Bay, with the GPS location of image1.jpeg in green and image2.jpeg in yellow, at the container terminal. Middle: Overview of the relevant section of container terminal showing the GPS location of both images. Bottom: Close up of the location of image2.jpeg. Note the widespread usage of yellow lining matching the top right corner of image2.jpeg. GPS -33°58'12.20" 151°13'8.21" , the location of image2.jpeg, is the actual location of the specimen, within the precision of GPS. All maps adapted from Google maps.

Figure 3 shows the exact locations of the GPS locations assigned to the two different pictures. Crucially, the GPS location found in the metadata of image2.jpeg matches the description given by AC to DB and VM well. In short, the metadata of these two images leave little doubt about their legitimacy in supporting this record.

VM performed a reverse Google searching for these images, without any positive results, as a further check. VM concludes therefore that following all reasonable means accessible to him there is no reason to doubt the legitimacy of these pictures.

As a final remark VM wishes to express his opinion to the committee that upon talking to both DB and AC over the phone he did not find any inconsistencies in their testimonies and believes both people, and in particular AC as the original observer, are credible.

Physical description and identification

The two pictures taken by AC are all available evidence for the description of this record. Underparts and feet are not visible, but head, upperparts and upperwings are reasonably well visible.

Head:

Bird has a large round head, with a somewhat inconspicuous facial disk present. Combined with the position of the eyes in the centre of the face, and shape of the beak, this bird clearly is an owl species. The facial disk is mid-brown with lighter streaks, becoming black near the eyes. Eyebrows and lores are whitish, contrasting with the dark region around the eyes, and this creates the impression of a mask. Crown is mid-brown with lighter streaks. Eyes are still present and dark, but pupils seem fully dilated, so iris colour cannot be judged. Ear tufts are barely distinguishable. Combination of facial markings, overall colour of the head, and barely distinguishable ear tufts, could be considered diagnostic in itself.

Upperbody (other than head and upperwings):

In poor condition, hard to assess. What is visible is of a similar mid brown colouration with light streaks as visible on the head. A wound, or at least dried blood, appears present on the back. Tail appears missing, and a flesh wound seems visible at the lower body.



Figure 4: Image 1, dorsal view of specimen.



Figure 5: Image 2, close up of head of specimen.

Upperwings:

The inner upperwing, i.e. the arm, shows a pattern of dark brown coverts with broad light ochre tips and blotches. The upper handwing is particularly important to consider. A darker brown section of feathers is created by the alula and lesser primary coverts. This contrast with the ochre base of the outer primaries. In a stretched wing in flight, this would form a diagnostic pattern typical for Short-eared Owl.

The outer primaries have a pattern of alternating broad ochre and dark brown bands. Furthermore, on P10, the inner vane is visible, showing that these bands are restricted to the outer vane only for P10. All this seamlessly fits the appearance of a Short-eared Owl in flight, as can be easily verified online by comparing to abundantly available flight shots of Short-eared Owls.

In summary, the overall appearance combined with the specific features mentioned in the above, leave no doubt this bird is a Short-eared Owl. VM asked for judgement of his assessment of the identity of this bird from Dr Leah Tsang (Technical officer, Ornithology, Australian Museum), Dr Steve Debus and Jeff Davies. All three have no doubts about the identification, although Dr Steve Debus explicitly remarks that in his opinion this specimen cannot be identified at the subspecies level.

Comments on time since death and origin of specimen

The specimen is clearly damaged. The tail is missing, and exposed flesh is visible. Furthermore, on the back, the feathers appear to be dirty, perhaps from dried blood. This suggests the owl died an unnatural death due to e.g. collision or squashing. AC explicitly mentioned that the specimen wasn't stiff. Furthermore, it is important to note the right eye is still intact (left eye cannot be assessed on the photograph). This contradicts AC's statements to VM, as he mentioned he thought the eyes were gone, but VM suspects he might have overlooked this, as the pupils are fully dilated. Lastly, AC didn't mention to VM any smell coming from the specimen.



Figure 6 Zoom in on head, crop from image 2. Note the right eye being intact (left eye is hard to assess). The red arrow indicates the suspected ear tuft.



Figure 7 Zoom in on back, crop from image 1. Note the absent tail and fleshwound to the lower body. However, also higher on the back there is damage and dried blood is visible.

To get an estimate of the time passed since death, VM asked Dr Leah Tsang and Dr Steve Debus to assess the age of the specimen. We quote from their responses:

Dr Leah Tsang, in an email to VM on 10-12-2019:

'Based on the location of the bird (i.e. it appears to have been run over a little?) on the pavement, it suggests to me that it died on Australian territory.

The appearance of the eyes indicate perhaps 1-2 days at most. If the port worker did not notice any smell (indicating decomposition), that would indeed place the bird likely within 24-48 hours of being found.'

In a follow up email that same day, after VM wrote Dr Leah Tsang a synopsis of his conversation with AC, she writes:

'Indeed, my assessment seems pretty close to what the worker describes – it wasn't dead for very long and was run over. This indicates that it died while on Australian land.'

Dr Steve Debus, in email to VM on 13-12-2019:

'The owl has some damage to its rear section (tail missing; some exposed bone?) but I couldn't say for sure it was road-killed. It could have died on board ship and been nibbled by rats, or the carcass thrown on the road and been partly run-over. I can't see enough detail in the photos to guess age or sex, or subspecies. I also can't see the legs/feet. By the eyes it looks freshly dead; if dead for a few hours, e.g. overnight, it would be stiff (rigor mortis). The eyes are open but the person may not have distinguished them among the facial feathers; the pupils are fully dilated, as the iris is orange in that species. The pupils can dilate during the death process. If it was injured in life, there would likely be more blood given the damage to its hind parts.'

Based on all of the above, we conclude the following:

- The presence of intact eyes puts an upper limit on the age of the specimen of 24-48 hours.
- AC's observation of stiffness being absent places death either shortly before his observations, prior to rigor mortis occurring, or several hours later after disappearance of rigor mortis.
- The bird died most likely an unnatural death, as blood is present on the back. However, it is possible the bird got further damaged post-mortem.

Regarding the circumstances of death, we conjecture the following: This bird almost certainly arrived to Australia ship-assisted (see below for in depth discussion of this aspect). We find it unlikely that under normal circumstances aboard a container ship a castaway bird would get squashed. In other words, why would this happen prior to the containers actually moving? Given the type of injuries, and the location where the bird was found, it seems most likely that either the bird got squashed somehow while a container was unloaded, or the bird got hit by a vehicle of some sort at the wharf, or a combination of both. These possible scenarios explain 1) the location of the specimen 2) the fresh appearance of the specimen and 3) the damage to the specimen. The only aspect left unexplained is Dr Steve Debus' remark about the lack of blood. However, we stress that there is blood present on the back of the bird, upon close inspection. Furthermore, AC likely moved the bird a little before taking the picture, and the pictures therefore don't necessarily capture the undisturbed site of death. We therefore feel that this aspect leaves our conjectures intact. This implies the bird died on Australian territory, in our opinion.

Next we comment on the origin of this bird. The nearest Short-eared Owl population to Australia is in Micronesia. Short-eared Owls are renowned 'wanderers' among owls and are known to cross large stretches of open water. However, the distance from the nearest population to Port Botany is vast, with vast stretches of open ocean and unsuitable habitat in between. We are therefore of the opinion that this scenario is extremely unlikely. Of course, the specimen was found at the wharf of the container terminal of an international shipping port. A ship-assisted arrival is therefore a very plausible explanation. There is a lot of traffic between north-east Asian shipping ports and Port Botany, and Short-eared Owls often reside in coastal areas during the winter season. Perhaps the bird boarded the ship prior to departure. Alternatively, the bird could have boarded the ship while it was out at sea, this is a known phenomenon among birds. We do not know the exact duration of a typical container ship's journey from e.g. north-east Asia to Port Botany, but we suspect it will be of the order of 2-3 weeks. A castaway bird could survive this period without food, although it might end up weakened (which would make it more susceptible to collisions, fitting the unnatural death of the specimen). Unfortunately, Port Botany has a rather busy container terminal, and we are skeptical a single ship could be pinpointed as the ship from which the bird came. However, AC did mention that mostly Asian ships arrived, and this seems therefore the likely region of origin.

Please indicate other species with which you think it might be confused and how these were eliminated?

No native owl species can be confused with this species. VM's initial guess after a first quick look at the pictures was a very strange looking Boobook, but even that possibility was a complete misfit. VM can't think of any other owl species this bird could be confused with, the Short-eared Owl is a distinct species.

The Galapagos Short-eared Owl *A. flammeus galapagoensis* is sometimes treated as a separate species. VM is confident this taxon can be ruled out, as it is much darker in facial and head colouration. VM doesn't feel confident in further discriminating between the different taxons at subspecies level, and conjectures that either the nominate ssp. *flammeus*, or perhaps the Micronesian ssp. *ponapensis* are the most likely candidates, given that major shipping ports are in the range of ssp. *flammeus* and major shipping routes to Australia may come close to Micronesia. However, as this pertains most likely a ship assisted record, even the Hawaiian ssp. *sandwichensis* and the various South-American taxons remain a faint possibility.

Was the description written from memory?

No, based on photographs.

Were photographs taken? (please include where possible)

Yes, see figures included above.

What experience have you had with the species in question? (Did you know it was a Rare bird when you first saw it?)

VM has seen Short-eared Owl occasionally in the Netherlands, where it is a rare breeder and scarce wintering migrant. He straightaway realised this was not a known Australian owl species and thought straightaway of Short-eared Owl as the likely contender.

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Please email all material