

Query re. parrot ARBs



Ngaio Beausoleil

To [REDACTED]

UNCLASSIFIED

This message was sent with High importance.

Reply Reply All Forward [REDACTED] [REDACTED]

Tue 17/12/2024 9:46 am

Dear [REDACTED]

Your name was passed to me by [REDACTED] as an expert in abnormal repetitive behaviours in captive psittacines. I am currently undertaking a confidential welfare evaluation of a NZ parrot with a chequered history, and hoping to have a chat with an expert in this area to inform my recommendations. Is there any possibility you could spare me 30 minutes before the holiday break to chat and perhaps have a look at some short videos I captured? Many thanks in advance, Ngaio.

Re: Query re. parrot ARBs



Reply Reply All Forward [REDACTED] [REDACTED]

Tue 17/12/2024 10:50 am

You replied to this message on 17/12/2024 12:19 pm.

Hi Ngaio,

Thanks for getting in touch.

Yes, I'd be pleased to. Feel like I should point out that I'm a behavioural biologist by training, rather than a parrot behaviour specialist per se. But, should it be something I feel outside my expertise I suspect I'll be able to signpost you.

Are there dates / times that work for you?

Best wishes,



Re: Query re. parrot ARBs



[REDACTED]

Reply Reply All Forward [REDACTED] [REDACTED]

Tue 17/12/2024 12:20 pm

Hi [REDACTED]

Thank you, that is incredibly generous of you! I think we are [REDACTED] suit you sometime this week?

Cheers,  
Ngaio.

RE: Query re. parrot ARBs



Ngaio Beausoleil

To [REDACTED]

UNCLASSIFIED

Reply Reply All Forward [REDACTED] [REDACTED]

Wed 18/12/2024 9:46 am

That's fantastic, thank you. I'll send a Teams invitation.  
Cheers,  
Ngaio.

[REDACTED]  
Sent: Tuesday, 17 December 2024 10:56 pm  
To: Ngaio Beausoleil <N.J.Beausoleil@massey.ac.nz>  
Subject: Re: Query re. parrot ARBs

Morning Ngaio,

It's a pleasure!

How does Fri sound?

Is your time-zone Pacific/Auckland? If so, I think you might be [REDACTED]

Best wishes,



Re: Query re. parrot ARBs



Ngaio Beausoleil

To [REDACTED]

UNCLASSIFIED

Reply Reply All Forward [REDACTED] [REDACTED]

Fri 20/12/2024 8:17 pm

[https://wetransfer.com/downloads/44feaf2ac5610f5deda7263905dc728020241219074010/69b6a9726e6013b0e6a8fee96b95721c20241219074122/80b2597t\\_exp=1734853210&t\\_lsld=4124c838-8ff8-461f-9967-e0ed55f58814&t\\_network=email&t\\_rid=ZW1haWx8Njc2M2NkZGRkODI3Zjg0MWYyMWU3ZjI4&t\\_s=download\\_link&t\\_ts=1734594082](https://wetransfer.com/downloads/44feaf2ac5610f5deda7263905dc728020241219074010/69b6a9726e6013b0e6a8fee96b95721c20241219074122/80b2597t_exp=1734853210&t_lsld=4124c838-8ff8-461f-9967-e0ed55f58814&t_network=email&t_rid=ZW1haWx8Njc2M2NkZGRkODI3Zjg0MWYyMWU3ZjI4&t_s=download_link&t_ts=1734594082)

From: [REDACTED]  
Sent: Wednesday, 18 December 2024 10:24 pm  
To: Ngaio Beausoleil <N.J.Beausoleil@massey.ac.nz>  
Subject: Re: Query re. parrot ARBs

Got it, thanks!

[REDACTED] there's a reasonable chance they might pop in to say 'hello' - hope you don't mind? (!)

See you on Fri

Best wishes,



RE: Query re. parrot ARBs



Ngaio Beausoleil

UNCLASSIFIED

Reply Reply All Forward

Fri 20/12/2024 8:17 pm

[https://wettransfer.com/downloads/44fea2ac5610f5dada7263905dc728020241219074010/69b6a9726e6013b0e6a0fee96b95721c20241219074122/80b25921\\_exp=17348532106t\\_ls=4124c038-9ff8-461f-9967-e0ed55f58814&t\\_network=email&t rid=ZW1haWx8NjZM2NkZGRkODI3Zjg0MWYyMWU3ZjI4&t\\_s=download\\_link&t\\_ts=1734594082](https://wettransfer.com/downloads/44fea2ac5610f5dada7263905dc728020241219074010/69b6a9726e6013b0e6a0fee96b95721c20241219074122/80b25921_exp=17348532106t_ls=4124c038-9ff8-461f-9967-e0ed55f58814&t_network=email&t rid=ZW1haWx8NjZM2NkZGRkODI3Zjg0MWYyMWU3ZjI4&t_s=download_link&t_ts=1734594082)

From: [REDACTED]  
Sent: Wednesday, 18 December 2024 10:24 pm  
To: Ngaio Beausoleil <[N.J.Beausoleil@massey.ac.nz](mailto:N.J.Beausoleil@massey.ac.nz)>  
Subject: Re: Query re. parrot ARBs

Got it, thanks!

[REDACTED], there's a reasonable chance they might pop in to say 'hello' - hope you don't mind? (!)

See you on Fri

Best wishes,  
[REDACTED]

Re: Question about ARBs



Reply Reply All Forward

Fri 20/12/2024 10:13 pm

Follow up: Start by Tuesday, 20 May 2025. Due by Tuesday, 20 May 2025.  
You replied to this message on 23/01/2025 11:21 am.  
If there are problems with how this message is displayed, click here to view it in a web browser.  
Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

- Mason & Latham 2004 Stereotypes reliability more research needed.pdf  
655 KB
- Mason & Rushen 2008 Abnormal Repetitive Behaviour and Stereotypes ARB.pdf  
3 MB
- Baskir et al. 2023 Bird Abnormal repetitive behaviour ARB feather plucking cognitive enrichment progressive challenge.pdf

Hi Ngaio,

Thanks for your email and for sharing this case - sounds interesting, and yes we have some experience researching and (attempting to) treat ARBs in practice.

I'm sorry I didn't reply earlier, I've been on a week's annual leave and am now about to go off for Christmas, but I'd be happy to chat earlier in the New Year if that would help?

In the meantime, I've included some of the key publications I use to understand ARBs (and one good bird one) and [REDACTED]

Basically you're right that ARBs are either from current or previous poor environmental conditions, and if you want to try and tell which one it is, you need welfare data from additional measures, which should help you work out whether the animal seems to be in poor welfare generally, behaviour still has triggers and the animal responds to stimuli while doing it.

If we don't speak before have a great Christmas period and New Year, but as I said, happy to meet in early 2025!

On Mon, Dec 23, 2024 at 11:22 AM Ngaio Beausoleil <[N.J.Beausoleil@massey.ac.nz](mailto:N.J.Beausoleil@massey.ac.nz)> wrote:

9(2)(a)

s.9(2)(a)

Following a whirlwind visit to Dunedin and Te Anau two weeks ago and reading your assessments and management plan, I have a few remaining questions. One or two may be better directed to [REDACTED] but I thought I'd ask you in the first instance. I've listed these questions below but happy to have a quick chat if that is easier for you.

Health/medical/management questions:

- Could you clarify the reason, diagnosis and treatment for Charlie visiting DWH in 2020 and 2023? Did you note any abnormal repetitive behaviours during those admissions/stays?
- What kind of enclosure (size, complexity) would a bird like Charlie be kept in for quarantine at DWH?
- Were repeat blood tests (e.g. for fibrinogen) done in late October this year as indicated would happen in your report?
- Is a body weight available from after 1/10/12?
- Has the dose of Metacam been reduced or remained the same as when Charlie moved to DBG? Why/why not?
- What specific concerns have you had/do you have about the management of kākā at the Te Anau facility?

Questions about DBG activities referred to in your reports:

- Has T perch (or any other) training been undertaken with any of the kākā at DBG over the last 2 years?
- Is a water blaster used to clean the inside areas of the kākā (or other bird) enclosures at DBG?
- When/how was Charlie allowed to choose her own aviary + cagemate after arriving in 2024? I didn't see a way that the adjacent enclosures could be opened to provide movement between them.
- Mention is made that DBG does 'alters method of feeding so birds have to manipulate objects and/or work to obtain food' - do you know how/what is done?

Many thanks in advance and happy holidays,

Ngaio.

RE: Questions about Charlie case



Ngaio Beausoleil  
T: 9(2)(a)@wildlifehospitaldunedin.org.nz

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This message was sent with High importance.

9(2)(a)

Hope you have had a restful break.  
I'm just following up on the requested information below please.  
Many thanks in advance,  
Ngaio

Mon 6/01/2025 1:47 pm

Re: Questions about Charlie case

9(2)(a)

Follow up. Start by Tuesday, 20 May 2025. Due by Tuesday, 20 May 2025.  
You replied to this message on 11/01/2025 10:40 pm.



Charlie Kaka Metacam Plan.pdf  
175 KB



Charlie Kaka Clinical Summary.pdf  
808 KB

9(2)(a)

I've attached Charlie's clinical summary for you incase you want to troll through some of the finer details. Back in 2020 our record keeping wasn't as thorough unfortunately so I have no record of any of the email comms between us and Te Anau.

I've pasted your questions below with answers.

Health/medical/management questions:

- Could you clarify the reason, diagnosis and treatment for Charlie visiting DWH in 2020 and 2023? Did you note any abnormal repetitive behaviours during those admissions/stays?

2020 - Charlie was admitted with two of her chicks as necropsy results from two deceased chicks indicated they died due to toxoplasmosis. Blood tests on Charlie and both chicks returned positive toxo results so they were kept in hospital and treated. Bling was also finally admitted to hospital although the keepers were reluctant. Bling also had toxo based on blood tests so was also treated in hospital. No abnormal behaviour observed while in hospital. She was very focused on her chicks. The keepers in Te Anau have indicated that once Charlie is breeding that her stereotypical behaviours disappear while she focuses on chicks.

2023 - Charlie was not admitted to DWH this year. I believe she was seen by vets in Te Anau who diagnosed arthritis? I provided an opinion on the x-rays they took.

2024 - next admission, pre-transfer health check prior to moving to the Botanic Gardens. We did see her display abnormal swinging behaviour in hospital this time.

- What kind of enclosure (size, complexity) would a bird like Charlie be kept in for quarantine at DWH?

Hospital cage we don't have big aviaries as we focus on sick patients which need small spaces or those just staying short term. We provide parrots with natural enrichment including chew logs, fresh natural brows for foraging and cardboard box forage toys they can destroy and find food.

- Were repeat blood tests (e.g. for fibrinogen) done in late October this year as indicated would happen in your report?

Everything was played unfortunately due to the protests etc. at DBG. We ended up repeating the blood test in December. The fibrinogen was very low in the normal range - see attached medical records for the email update and plan I sent to 9(2)(g)(ii).

- Is a body weight available from after 1/10/12?

The attached records have the known weights we have. 9(2)(g)(ii) will have more in her aviary records. We requested records from Te Anau once Charlie was moved, however the diaries that were provided were inadequate and there were no regular weigh-ins (that we could detect) recorded in these.

- Has the dose of Metacam been reduced or remained the same as when Charlie moved to DBG? Why/why not?

I've attached the metacam plan I created for Charlie, I'm not sure if you were provided this? Also refer to attached medical notes for revised plan based on the latest fibrinogen result.

- What specific concerns have you had/do you have about the management of kākā at the Te Anau facility?

**Enclosure** - no weather/wind proof area for kaka to shelter in. Current structure does not have solid walls to protect the kaka from the wind and rain. No fully off display area for kaka to retreat to if they want. Ground is mainly concrete and needs to be water blasted regularly (weekly) due to algae buildup - this is stressful for the birds and increases the chance of respiratory disease. Enclosure has minimal sunlight.

There is an expectation, which is outlined in the kākā husbandry manual but is also just good animal husbandry, that animals in your care should have adequate shelter among other things of course. These aviaries do not, in my opinion, meet minimum standards, in particular for a bird such as Charlie that has been diagnosed with arthritis which is aggravated by cooler/damp conditions.

s.9(2)(a)

**Hygiene** - not minimum standard, toxo outbreak in Nov 2020. Possibly has improved now as no reported further outbreaks of toxo however no birds have been sent to us for testing since 2020.

I also noted in the diaries that there were instances when they were unable to medicate Charlie with metacam as well as other birds in their care. There were also notes in the diaries about not being able to correctly identify birds which meant meds were not administered.

Questions about DBG activities referred to in your reports: [Best to get this info from s.9\(2\)\(a\) for accuracy.](#)

- Has T perch (or any other) training been undertaken with any of the kākā at DBG over the last 2 years? [Unsure](#)
- Is a water blaster used to clean the inside areas of the kākā (or other bird) enclosures at DBG? [As far as I am aware no, they will use the water blaster on the outdoor paths but not inside.](#)
- When/how was Charlie allowed to choose her own aviary ≠ cagemate after arriving in 2024? I didn't see a way that the adjacent enclosures could be opened to provide movement between them. [There is an area close to the ground where some of the fencing can be removed to provide the birds access to two aviaries s.9\(2\)\(a\) should be able to elaborate more.](#)
- Mention is made that DBG does 'alters method of feeding so birds have to manipulate objects and/or work to obtain food' – do you know how/what is done? [s.9\(2\)\(a\) can hopefully elaborate on the enrichment items/forage boards they provide.](#)

Happy to discuss further.

Ngā mihi

**9(2)(a)**

**9(2)(a)**

RE: Questions about Charlie case

**9(2)(a)**

UNCLASSIFIED

Many thanks for this information **s.9(2)(a)**  
Cheers,  
Ngaio.

 Sat 11/01/2025 10:41 pm

duplicate

duplicate

RE: Question about ARBs



Ngaio Beausoleil

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This message was sent with High importance.  
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😊 Reply Reply All Forward 📧 ⋮

Thu 23/01/2025 11:22 am

Dear [REDACTED]

So many thanks for your generous reply and so many apologies for the delay in expressing my thanks. I've been working flat out for the last month on this evaluation and I'm so over it! It would be great to talk to you about it at some point because it is quite fascinating but also sad.



In summary - this large parrot was kept in a tiny cage in someone's living room for a year when it was young(ish) and showed severe ARBs (and abnormal social behaviour though it did breed and successfully raise chicks a number of times) for most of its 20+ years living at a single facility. These behaviours had apparently reduced greatly over that time (though no records so hard to know). Recently it was moved to another facility where things are really different though considered excellent management and appropriately enriched (i.e. very different enclosure, now male cage-mate, lots of other conspecifics right next door and another group out of view but within earshot, unfamiliar keepers and total cessation of all positive human interactions e.g. familiar visitors and training). Perhaps unsurprisingly she started stereotyping like mad and she's been at it for 6 months. My interpretation, based on the readings you sent is: likely CNS/behaviour regulation dysfunction due to early impoverished environment leading to perseverative tendencies that have been reasonably quiescent in a very stable environment but then set off big time by the novelty and socially demanding nature of the new situation. Some involved parties say 'the ARB was pre-existing so there's no problem' while others are VERY upset to see her like this and interpret the behavioural changes as severe distress. My conclusion is that she IS likely upset by all the changes and they can do a few things to improve her likely welfare state even though the ARBs might take a long time to recede again.

Whaddya reckon?


Hope you're doing well.

Best,  
Ngaio.

Re: Question about ARBs

 [Reply](#) [Reply All](#) [Forward](#)  [...](#)

Mon 27/01/2025 10:03 pm

  
[Follow up.](#) Start by Wednesday, 25 June 2025. Due by Wednesday, 25 June 2025.  
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 Piseddu et al. 2025 Evaluation of welfare indicators for companion parrots in a Delphi consultation survey.pdf  
663 KB

 Piseddu et al. 2025 Full list companion parrot welfare indicators assessment.docx  
177 KB

Hi Ngalo,

Your interpretation sounds spot on to me, and the only thing I'd add is to also evaluate whether she's showing other signs of poor/reduced welfare, or stress, apart from the recently increased ARBs. If there are other signs of reduced welfare, this should stop the debate between stakeholders about whether the ARB levels are a significant welfare indicator or not.

Also worthwhile is to evaluate whether she can be disrupted out of her ARB patterns or not once she's started them... if so, it may be they are still quite reactive and able to be reduced again once she acclimates to the new facility, and/or her stress dissipates.

You alluded to it but since she grew up with lots of human interaction (and maybe less parrot interaction), it might be an easy stress mitigator to offer her some positive human interaction opportunities in this new facility.

I've included a 2025 paper on companion parrot welfare indicators (and the supplementary information doc) I came across recently, which includes some useful parameters that could be assessed with this animal.

Good luck - v. happy to chat on a meeting if needed!



Released under the Official Information Act



Dunedin Wildlife Hospital  
Otago Polytechnic, School Of Animal  
Health  
N Block, Albany Street  
Dunedin, 9016

Email  
s.9(2)(a)  
nz

**CLINICAL SUMMARY**  
**Animal No.** 2011155  
**Attending Vet(s)** 9(2)(a)  
**Printed At** 08-01-2025  
**Printed By** 9(2)(a)

Client Details

**Name** Dunedin Botanic Gardens  
**Address** 12 Opoho Road  
North Dunedin  
Dunedin, 9016  
**Phone** 03 477 4000  
s.9(2)(a)

Animal Details

**Name** 2011155 SI Kaka 'Charlie'  
L49336  
**Age** 26 years 1 month  
**Sex** Female  
**Species** Psittaciformes (Parrot)  
**Breed** South Island Kaka  
**Colour**  
**Microchip**

Health Status

Date/Time	Weight (kg)	Attitude	Respiratory Effort
26-06-2024 10:51:09am	0.46	BAR	Normal
19-06-2024 11:17:55am	0.478		
18-06-2024 11:05:41am	0.475		
17-06-2024 11:05:32am	0.47		
16-06-2024 11:05:24am	0.47		
15-06-2024 11:05:14am	0.474		
14-06-2024 9:52:16am	0.469		
13-06-2024 9:52:05am	0.4677		
12-06-2024 9:51:55am	0.463		
11-06-2024 9:51:46am	0.464		
10-06-2024 2:30:59pm	0.455		
09-06-2024 2:30:51pm	0.459		
08-06-2024 2:30:43pm	0.461		
07-06-2024 1:30:53pm	0.478	BAR	Normal
17-12-2020 2:54:08pm	0.0005		
28-11-2020 2:50:35pm	0.52	BAR	Normal

Presenting Problem

Routine monitoring bloods

Repeat Fibrinogen

Disp Metacam

Health and Behavioural checks at DBG

Write all new observations/records under this tab.

ID Banding

Pre-screening Health check - Te Anau



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Dunedin, 9016

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	CLINICAL SUMMARY
Animal No.	2011155
Attending Vet(s)	9(2)(a)
Printed At	08-01-2025
Printed By	9(2)(a)

Possible toxoplasmosis

#### History

01-10-2024 12:36:41pm, 9(2)(a)

9(2)(a) caught up Charlie for weigh-in due to continued presence of 9(2)(a) and the resultant behavioural changes Charlie displays when she is on site. 9(2)(a) attended to check her over.

24-07-2024 12:50:46pm, 9(2)(a)

Outpatient visit to assess Charlie's weight and Body condition as well as check in on her behaviour.

20-07-2024 3:27:16pm, 9(2)(a)

Outpatient History - Captive Facility

Location held : Dunedin Botanic Gardens

Age: Adult

Reason for check : Behavioural check after recent move from Te Anau to Dunedin Botanic Gardens. Charlie has been at DBG for 4 weeks now.

26-06-2024 10:51:18am, 9(2)(a)

Outpatient History - Captive Facility

Location held : Dunedin Botanic Gardens

Contact person: 9(2)(a)

Age: Adult

Reason for check : Place ID Band

Charlie has been doing well at DBG Aviary, taking metacam once daily in cheese.

07-06-2024 1:31:04pm, 9(2)(a)

Admission History - Captive Facility

Location Held : Te Anau BS

Contact Person : DOC

Reason for admission : Pre-Transfer health check. Being transferred to DBG

Patient Details

Name: Charlie

Age: Adult

Other ID:





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	CLINICAL SUMMARY
Animal No.	2011155
Attending Vet(s)	9(2)(a)
Printed At	9(2)(a)
Printed By	08-01-2025 9(2)(a)

Any other history: On Metacam BID for arthritis

28-11-2020 2:52:18pm, 9(2)(a)

Location found : Te Anau Bird Sanctuary  
Brought in by : DOC  
Age: Adult 22 years old  
Any other information : 22 y/o female - Possible toxoplasmosis 2 chicks died

#### Physical Exam

18-10-2024 2:50:33pm, 9(2)(a)

#### Distance Exam

S/O: BAR. Charlie was sitting on a perch when I arrived at 11:15am. She was just observing what was going on around her and did not appear distressed or bothered. At 11:39 she moved along the perch to the left side of the aviary, swung for 3 seconds but then proceeded to move to one of her favoured spots at the front of the aviary amongst the browse. I have seen her use this spot a fair amount since she arrived. There is reasonable sunlight, dependant on time of day and weather as well as decent browse for security so she can feel safe sitting there and watching what is happening in her environment. She sat there and preened, snoozed and watched me. Bling was chilled and just hanging out and doing some exploring at the back of the aviary. The neighbouring kākā were not extremely active either and were just chilling, roosting, preening or out of site. Occasionally the pair in the aviary on the right of Charlie and Bling would fly to the front perch, check me out and then retreat to the back of the aviary.

Charlie's wing was held normally (for her) the entire time I was present, I saw nothing that concerned me with regards her pre-existing injury.

I stopped my observations around 12:30. Charlie was still roosting in the browse at the front of the aviary when I left.

P 9(2)(g)(ii) to send me obs data and videos she has taken for me to further assess Charlie's behaviour and if breeding season and hormones have resulted in any changes since her last assessment.

01-10-2024 12:35:39pm, 9(2)(a)

S/O: BAR and very curious. BCS 4/9 - lean but to be expected as is normal for her as she doesn't have much pectoral muscle mass due to reduced flying ability. Feather condition good. Wings feel ok. No deterioration in preexisting healed left radius/ulna fracture. Old healed fracture in left tibiotarsus feels ok as well. No other injuries or issues noted.

04-08-2024 2:21:43pm, 9(2)(a)

Visited Aviary on a casual basis to have lunch so took the opportunity to observe Charlie and the other kākā in that aviary group.

Time 13:30 - 14:15

Bling and Ceasar? In the far aviary were flying around, investigating browse and enrichment, calling back when the TOS kākā were calling and were generally just behaving as I would expect.



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CLINICAL SUMMARY	
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Attending Vet(s)	9(2)(a)
Printed At	9(2)(a)
Printed By	08-01-2025 9(2)(a)

Charlie was in the in the 3rd aviary, usually where Bling hangs out. She spent the entire time on a perch preening and roosting (right leg tucked up) and just watching what was going on around her. I saw no signs of distress and she displayed no stereotypical behaviour while I was there.

01-08-2024 2:24:45pm, 9(2)(a)

Visit to DBG to drop a young kākā off for rehab.

Visit 11:30am.

Observed Charlie for a short while. Noted a mix of swinging behaviour in very short bursts (less than 45 seconds) but mostly she was on the perch preening and watching activity around her or out of site presumably on the ground interacting with the logs and other enrichment in the aviary.

24-07-2024 12:51:27pm, 9(2)(a)

Visited aviary at around 11:00am to assess Charlie's weight and BCS with curator.

S/O: Satisfactory weight (468g) which is slowly increasing after the initial decline when she first arrived. Body condition 4/9 - lean, slightly reduced pectoral mass but not surprising as she doesn't fly much. Quick PE while in the hand indicates no obvious concerns.

Released back in to aviary and she quickly returned to the top perch where she watched us suspiciously for a while. She then climbed onto the aviary mesh and did a brief spell of swinging behaviour for around 5-10 seconds after which she returned to the perch. We exited the aviary at this point so as not to cause any unnecessary stress and continue to observe her from the front to ensure no negative impact from being caught to weigh her.

She spent most of the time on the perches either waking along the mesh between them or flying short bursts between them. Incidentally it was great to see her flying as we have reports that she didn't fly much/at all when in Te Anau? We would need her full records from Te Anau to be able to properly quantify this however.

Cesar showed some interest in engaging with Charlie however she remains quite aloof and not too interested in bonding with him. For the rest of the observations of around 45 minutes Charlie was relaxed, showed no stereotypical behaviour, sat on the perch with one of her legs tucked which is a sign of contentment, and she just watched what was going on around her. Occasionally she would move to a different perch if Caesar got too close to her.

I observed no aggressive behaviour between these two kākā, just disinterest from Charlie in spite of Caesar's attempts to engage with her.

Overall it was nice to see Charlie in a very relaxed manner with only a single short burst of swinging behaviour. There is a chance she was sulking because we had captured her to weigh her however her posture and demeanour the entire time was very relaxed.

23-07-2024 1:10:34pm, 9(2)(a)

I observed Charlie alongside the MPI welfare inspector on 23 July. Our visit initiated at 10:30am where we first discussed the welfare complaint as well as some important history around the issue which is essential to develop a full understanding of the complaint in my opinion.



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CLINICAL SUMMARY	
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Printed At	9(2)(a)
Printed By	08-01-2025 9(2)(a)

We then started our walk around the aviaries. This section focuses specifically on Charlie kākā.

Initially we kept our distance so I could point out the 4 aviaries that housed some of the breeding kākā as well as observe Charlie from a distance. From a distance we could see she was displaying the swaying behaviour which is the behaviour DWH/DOC/DBG have flagged as consistent with stereotypical behaviour. We observed her from a distance for around 15-30 minutes and during this time she also displayed normal behaviour which involved moving between perches, accessing the floor of the aviary, during which time she was out of sight but was likely eating and/or engaging with her enrichment items. She did reappear and intermittently display the swinging behaviour.

Our observations of Charlie from the front of the aviary were similar in that we noted the swinging/stereotypical behaviour in conjunction with a range of normal behaviours we'd expect a kākā to display. These included investigating perches, preening, interacting with adjacent birds, observing her surrounds, eating and likely interacting with the foraging/enrichment logs at the bottom of the aviary (out of sight due to the barriers on the front of the aviary).

We were then taken behind the scenes by 9(2)(a), where we were invited to observe Charlie from inside the aviary. Due to reports from Te Anau keepers that people/keepers entering her aviary stresses her out we ensured we kept a respectful distance so as not to cause undue stress to Charlie. Charlie did not display any stereotypical behaviour while we observed her but she was quite suspicious of us and watched what we were doing with interest. She remained high in the aviary either on a perch or on the mesh wire. We kept this internal assessment short so as not to cause unnecessary stress to Charlie and the other kākā she is housed with.

We had the opportunity to observe Charlie once again from the front of the aviary and this second time she displayed the stereotypical behaviour with much less frequency and engaged in more normal behaviours including roosting on the perch, chewing, moving between perches, engaging with adjacent kākā, observing other activities around the gardens.

20-07-2024 3:49:03pm, 9(2)(a)

Visit to DBG at 12:30pm.

S/O: Charlie was observed from afar (through the window in the Curator's office) for a period of around 45 minutes. During this time she was engaged with other kākā in the adjacent aviary, including her ex-mate Bling. She did intermittently display swinging behaviour from the side of the aviary and/or the roof but these bursts lasted no longer than 1 minute at a time on average and then she would return to the perch and/or the ground of the aviary where we then couldn't observe what she was doing.

We then proceeded to observe her from the front of the aviary where she seemed interested in us but didn't come down from the high perch. We observed her for around 15 minutes and again the swinging displays were short and intermittent.

We then moved to the service area and entered the aviary. In the scant email communications 9(2)(a) has received thus far from her keepers in Te Anau there is mention that she doesn't like it when keepers etc. enter her aviary. While Charlie didn't seem unduly distressed by our presence we kept a respectful distance and just stayed at the back of the aviary so we didn't unnecessarily stress her. Charlie remained high at the front and continued to remain engaged with the activity of Bling and other kākā in the adjacent aviaries. She also showed a lot of interest in children, a behaviour that has been noted by her keepers in Te Anau. We remained in the aviary for less than 10 minutes as we didn't want to cause unnecessary distress to Charlie. In this time she again displayed intermittent bouts of swinging but most of the time was spent on the perch chewing the bark or wandering down the aviary mesh to the trees at the front to chew on the leaves.

We did a final observation from the front of the aviary, this was around 1:45pm or thereabouts. Charlie spent lot of time relaxing on the perch and just observing the visitors to the gardens. She did do some short bursts of swinging behaviour in response to children but for the most part she was relaxed and just sitting on her perch or climbing to the aviary floor to investigate.





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s.9(2)(a)  
nz

	CLINICAL SUMMARY
Animal No.	2011155
Attending Vet(s)	9(2)(a)
Printed At	9(2)(a)
Printed By	08-01-2025 9(2)(a)

#### A/Conclusions:

Charlie has been residing in this aviary for 4 weeks so there is understandably going to be an adaptation period. The swinging behaviour is definitely stereotypical but as yet we are struggling to determine a consistent trigger and it is possible it is just now habitual and not triggered by any specific stressor. In some instances she will perform this behaviour in response to noisy children but not all the time. This is a pre-existing stereotypic that has been observed in Te Anau however it is difficult to determine extent/frequency/severity and how it compares to what she is doing now as we have still not received any of the health, nutrition, husbandry and behaviour records from Te Anau keepers. This info would provide useful information for us to more closely monitor and make an assessment of how Charlie is progressing with settling in.

Overall, while it is not ideal that she is displaying this stereotypical behaviour, it is pre-existing so not a new behaviour, and she does need time to adjust to her new surrounding. As only 4 weeks have gone by it is too soon to make any conclusions about how she is settling especially without the benefit of the records from Te Anau for comparison.

Recommendation: Obtain records from Te Anau ASAP.

P: 9(2)(a) will continue 3x a day behavioural obs and let us know if she has any concerns. 9(2)(a) will look at doing a behavioural assessment, similar to what was done for Jimmy kākā, within the next 4-6 weeks, sooner if necessary.

26-06-2024 10:54:18am, 9(2)(a)

BAR

07-06-2024 11:18:11am, 9(2)(a)

BAR

No obvious health issues apart from known pre-existing conditions (left radius/ulna and left tibiotarsus - calloused old fractures)

28-11-2020 2:56:04pm, 9(2)(a)

Admission Physical exam:

BCS: poor - moderate

General: Normal -

Integument: Normal -

Musculoskeletal: Normal -

Circulatory: Normal -

Respiratory: Normal -

Digestive: Normal -

Genitourinary: Normal -

Eyes: Normal -

Ears: Normal -

Nervous System: Normal -

Extra Comments:



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Printed At	9(2)(a)
Printed By	08-01-2025 9(2)(a)

#### Assessment / Differential Diagnosis

07-06-2024 11:19:14am, 9(2)(a)

A - Medical  
Pre-transfer health screening

28-11-2020 2:57:25pm, 9(2)(a)

Medical

#### Initial Treatment and Plans

26-06-2024 10:54:25am, 9(2)(a)

Place metal ID band on right tarsometatarsus

07-06-2024 11:19:31am, 9(2)(a)

No tx required on admission. On-going meloxicam at 0.5mg/kg PO BID for arthritis.

28-11-2020 2:57:55pm, 9(2)(a)

Trim/sulfa 40mg/kg PO BID  
Malarone 7mg/kg PO SID  
Fluids 20ml PO BID

Plan: Medical management and supportive care.

#### Diagnostic Request

09-12-2020 10:05:02am, 9(2)(a)

- Toxoplasma Ab titre

Awanui External Pathology

09-06-2024 12:14:41pm, 9(2)(a)

- Packed Cell Volume and Total Protein

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09-06-2024 12:14:41pm, 9(2)(a)

- Estimated White Cell Count

Dunedin Wildlife Hospital

09-06-2024 12:14:41pm, 9(2)(a)

- Avian/Reptile Profile Plus

SVS

09-06-2024 12:14:41pm, 9(2)(a)

- Faecal Egg Count - Birds/Others

Awanui External Pathology

09-06-2024 12:14:41pm, 9(2)(a)

- Fibrinogen

Awanui External Pathology

09-06-2024 12:14:41pm, 9(2)(a)

- Lead - Companion (Blood)

Awanui External Pathology

09-06-2024 12:14:41pm, 9(2)(a)

- PBFD PCR

InfogenNZ

18-12-2024 10:56:36am, 9(2)(a)

- Fibrinogen

Awanui External Pathology

18-12-2024 10:56:56am, 9(2)(a)

- Estimated White Cell Count
- Packed Cell Volume



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Printed By 08-01-2025  
9(2)(a)

Diagnostic Result

18-12-2024 2:52:18pm, 9(2)(a)  
- 9(2)(a) Ref: NZ10644-DR4171)

Outcome

Thrombocyte count: adequate  
Polychromasia: 1-5%  
Plasodium sp: negative  
Leucocytozoonsp: negative

Comments: Normal cell morphology - healthy looking smear

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
WCC	10.2	x10 <sup>9</sup> /L			
Heterophils	9.7	x10 <sup>9</sup> /L			
Heterophils	95	%			
Lymphocytes	0.5	x10 <sup>9</sup> /L			
Lymphocytes	5	%			
Monocytes		x10 <sup>9</sup> /L			
Monocytes		%			
Basophils		x10 <sup>9</sup> /L			
Basophils		%			
Eosinophils		x10 <sup>9</sup> /L			
Eosinophils		%			
PCV		%	40	60	

18-12-2024 12:08:01pm, 9(2)(a)  
Fibrinogen - 9(2)(a) Ref: NZ10644-DR4170)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
Fibrinogen	1	g/L			

19-06-2024 11:15:53am, 9(2)(a)  
Faecal Egg Count - Birds/Others - 9(2)(a) (Ref: NZ10644-DR3743)

Outcome

FEC all negative



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09-06-2024 12:20:38pm, 9(2)(a)  
Packed Cell Volume and Total Protein - 9(2)(a) (Ref: NZ10644-DR3739)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
PCV	36	%	40	60	
TP	39	g/L			

09-06-2024 11:16:59am, 9(2)(a)  
Lead - Companion (Blood) - 9(2)(a) (Ref: NZ10644-DR3745)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
Lead	0.01	mg/L	0.033	0.15	

09-06-2024 11:16:24am, 9(2)(a)  
Fibrinogen - 9(2)(a) (Ref: NZ10644-DR3744)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
Fibrinogen	2	g/L	2	4	

09-06-2024 11:14:27am, 9(2)(a)  
PBFD PCR - 9(2)(a) (Ref: NZ10644-DR3746)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
PBFD	Negative				
Chlamydia	Negative				

09-06-2024 11:12:18am, 9(2)(a)  
Avian/Reptile Profile Plus - 9(2)(a) (Ref: NZ10644-DR3741)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
AST	176	U/L			
BA	<35	umol/L			
CK	1832	U/L			
UA	102	umol/L			
GLU	16.4	mmol/L			
CA	2.09	mmol/L			
PHOS	1.57	mmol/L			
TP	31	g/L			
ALB	26	g/L			
GLOB	5	g/L			





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Test	Results	Unit	Lowest Value	Highest Value	Qualifier
K+	3.5	mmol/L			
NA+	144	mmol/L			

09-06-2024 11:11:12am, 9(2)(a)  
Estimated White Cell Count - 9(2)(a) (Ref: NZ10644-DR3740)

#### Outcome

Thrombocyte count: adequate  
Polychromasia: 1-5%  
Plasodium sp: negative  
Leucocytozoonsp: negative

Comments: Normal cell morphology, smear looks healthy

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
WCC	13.2	$\times 10^9/L$			
Heterophils	10.3	$\times 10^9/L$			
Heterophils	78	%			
Lymphocytes	2.8	$\times 10^9/L$			
Lymphocytes	21	%			
Monocytes	0.1	$\times 10^9/L$			
Monocytes	1	%			

13-12-2020 10:05:30am, 9(2)(a)  
Toxoplasma Ab titre - 9(2)(a) (Ref: NZ10644-DR1240)

Test	Results	Unit	Lowest Value	Highest Value	Qualifier
Toxo	1/64				

#### Therapeutic Procedure

09-06-2024 12:14:41pm, 9(2)(a)  
GA for Radiographs - Avian  
Specifics

Diagnostic Imaging procedure: Whole body rads and full health screen  
Weight: 459g

Preop:  
2/5 [ASA - Anaesthetic risk: /1/2/3/4/5]

Anaesthesia:



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Premed: 2mg/kg Butorphanol + 1mg/kg Midazolam IM  
Premed effect: mild . Comments: Still alert and screamed on capture.  
Anaesthetic Induction: Isoflurane  
Anaesthetic maintenance: Isoflurane  
Reversal: 0.05mg/kg Flumazenil, Route: IM

Diagnostic Imaging - radiography:

Type of study: Whole bird  
Number of films: 3  
Views: Lateral and VD

Radiograph Findings: Old displaced fracture of the left radius and ulna. Large amount of bony callus.  
Old mid shaft fracture of the left tibiotarsus - large amount of callus between fragments  
Rest of radiographs within normal limits.  
Great vessels of the heart visible but hear normal size and general good coelomic detail

Procedure notes:

General physical exam under GA - eyes, nares and ears clear/  
Good range of motion in both shoulders. Left elbow has a reduced range of motion and unable to fully extend wing due to old injury.  
Left leg good ROM but slight outward rotation due to old fracture  
No evidence of parasites  
Moderate BCS  
Vent clean  
Normal heart sounds on auscultation  
Blood sample collected for PCV, TP, CBC, biochemistry, lead, fibrinogen and PBFD. Also swab taken for Chlamydia screen

Conclusions: NSF on physical exam except previous injuries. Elbow has reduced ROM

Plan: Await diagnostic test results for health screen prior to translocation to DBG

Monitoring:

Anesthetic monitoring comments: Induced at 3% masked iso and maintained on 2%. Stable GA HR 200bpm.  
Went to sleep very smoothly.

Total time 25 mins

#### Medication

Date/Time	Drug Name	Qty	Instructions	Prescribed By
09-12-2024 12:26:32pm	Metacox (metacam) Dog Oral 1.5mg 100ml - per bottle	100	CONTINUE AS PRESCRIBED FOR JIMMY AND CHARLIE	9(2)(a)
23-08-2024 1:25:41pm	Meloxicam Oral Dog Twin Pack 2 X 50mL (Per Bottle)	1	CONTINUE TO GIVE JIMMY AND CHARLIE METACAM AS PRESCRIBED	9(2)(a)



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09-06-2024 12:14:41pm	Midazolam amps 15mg/3ml 5 BAX	0.09	9(2)(a)
09-06-2024 12:14:41pm	Jurox Butordyne Injection - 50ml	0.09	9(2)(a)
09-06-2024 12:14:41pm	Flumazenil inj 0.5mg/5ml 10x5ml	0.23	9(2)(a)
07-06-2024 11:27:08am	Metacam Oral 180mL For Dogs (Per Bottle)	3.84 0.5mg/kg PO BID	9(2)(a)
28-11-2020 2:32:49pm	Deprim Oral Susp 100ml	14.34 40mg/kg PO BID	9(2)(a)
28-11-2020 2:32:49pm	Malarone 10mg/ml WHD SUSPENSION	3.6 7mg/kg PO BID	9(2)(a)

#### In Clinic Notes

19-06-2024 11:09:31am, 9(2)(a)

#### Discharge Summary

Weight: 478g

Recovered from: N/A - pre-transfer health screening

Discharged to: Dunedin Botanic Gardens

18-06-2024 11:05:53am, 9(2)(a)

Clinical summary 15/6 - 18/6

BAR, active, like chewing browse

Not self feeding but weight is good with 45ml Kaytees BID

Normal faeces

Continuing with Meloxicam as prescribed.

PBFD results negative, awaiting Chlamydia result and can then be discharged

14-06-2024 9:52:25am, 9(2)(a)

Clinical summary 11/6 - 14/6

BAR, not self feeding

Crop tubing 45ml Kaytees BID - maintaining/steadily gaining weight



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Continuing with meloxicam BID  
Most results back from laboratories and all normal  
This waiting on PBFD and Chlamydia test

10-06-2024 2:33:39pm, 9(2)(a)

Clinical summary 7/6 - 10/6

BAR, not self feeding so crop tubing with 40-45ml Kaytees BID  
Weight dropped a little post GA but otherwise doing well  
9/6 - GA, radiographs and blood test for health screening  
PCV, TP, WCC, biochemistry, fibrinogen, lead, and FEC all within normal limits/clear  
Awaiting PBFD and Chlamydia results prior to transfer to DBG

15-12-2020 3:01:17pm, 9(2)(a) (0.4870 kg)

Observed drinking water and feeding to chicks (only a small volume)  
No kaytees or food being transferred.

13-12-2020 3:00:38pm, 9(2)(a) 0.4900 kg)

Regurgated after feeding this evening.

12-12-2020 3:00:19pm, 9(2)(a) (0.5000 kg)

Ready to go home.

11-12-2020 2:59:24pm, 9(2)(a) (0.5000 kg)

Regurgated after 35ml this morning.  
Regurgated after 20ml this evening.

08-12-2020 2:58:56pm, 9(2)(a) (0.5000 kg)

Regurgated most of HBD this evening

07-12-2020 2:57:55pm, 9(2)(a) (0.5010 kg)

Small/moderate regurg of HBD this evening



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03-12-2020 2:57:04pm, 9(2)(a) (0.5040 kg)

Weight slightly up.  
Changed to SID malarone today.

02-12-2020 2:56:35pm, 9(2)(a) (0.4925 kg)

No regurge today.

01-12-2020 2:55:35pm, 9(2)(a) (0.5000 kg)

Regurged in the evening about half the volume of food given. Try Kaytees tomorrow.

30-11-2020 2:55:12pm, 9(2)(a) (0.5000 kg)

Drinking from nectar feeder

29-11-2020 2:54:10pm, 9(2)(a) (0.5030 kg)

Lost weight overnight.  
Loved flax flowers.

28-11-2020 2:53:31pm, 9(2)(a) (0.5200 kg)

Arrived this afternoon

#### + Hospital Notes

20-12-2024 9:18:51am

Email update re: fibrinogen and metacam plan

9(2)(a)  
Fri, Dec 20, 2024, 1:16 PM  
9(2)(g)(ii)

Kia ora Koutou

Lab results from Charlie's recent check-up indicate that her arthritis is well controlled. Her white cell count is normal and the fibrinogen result has come back low (1g/L) which indicates that there is no active inflammation causing arthritic pain.



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Printed By	9(2)(a)

This is what I suspected we would find as her previous fibrinogen result when she first arrived in Dunedin was only 2g/L. The normal reference range is 1-4 and anything 6g/L or above I would start to be concerned about active inflammation causing pain.

Based on this I am keen to reduce her meloxicam over the summer months with the aim to even stopping it if all seems to go well. The goal would be to just give metacam (if needed) in the colder months. As there is a risk of renal and GIT issues with long term metacam it will be great if we only need to medicate her in the cooler months.

9(2)(g)(ii) reckon give Charlie the prescribed dose every second day for a couple of weeks and then if there are no indications of increased discomfort you can stop all together and see how she goes. We can repeat fibrinogen early Feb to keep an eye on how she's going.

Ngā mihi

9(2)(a)

9(2)(a)

26-06-2024 10:54:44am

#### Banding Record

Band Number: L49336  
Band Type: metal butt  
Banded on : Right tarsometatarsus  
Banded by : 9(2)(a)

19-06-2024 4:22:04pm

Email sent 19th June. Pasted into medical records 20th July.

9(2)(a)

Wed, Jun 19, 12:34 PM

9(2)(g)(ii)

Kia ora koutou

Just an update, Charlie has been moved to Dunedin Botanic Gardens this morning.

I also wanted to flag a behaviour we noted on the weekend (see video attached).

It might be stereotypical or just something she does when she is excited (or perhaps annoyed). I was chatting with her a little when she started doing this display but I wasn't sure how to interpret it. She didn't seem distressed by my presence so at this stage we're just noting it down.





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Printed By	9(2)(a)

9(2)(a) has let us know that she has just observed similar behaviour once Charlie was released into her new aviary a short while ago. So maybe an excitement response to new/different stimuli? Either way along with 9(2)(g)(ii) we'll keep a close eye on this to see if we can figure out the cause/reason and also of course also make sure she hasn't got some long standing stereotypical behaviour that we need to now work on. Hopefully the stimulating environment at DBG and also now being able to socialise with so many other kākā will eliminate any pre-existing behavioural issues.

9(2)(a), do you know if this behaviour has been observed in Te Anau? It will be helpful to help me figure out some timelines. She hasn't been in hospital long enough to develop any stereotypies and when she was in hospital previously (2019) we did not note this behaviour.  
IMG\_8973.MOV

Ngā mihi

9(2)(a)

9(2)(a)

Reply from 9(2)(g)(ii)

9(2)(g)(ii)

Jun 19, 2024, 3:35 PM

9(2)(g)(ii)

Kia ora all,

Just adding to 9(2)(a) email above.  
Charlie appeared unphased, clam and interested in her surroundings and the other kaka on release today. Unfortunately, it was noted within the hour what appeared to me to be stereotypical swaying behaviour.

Can we please get any relevant records for Charlie from the bird park staff or internal record system. This would help greatly as we move forward with Charlie's care in the coming months. As 9(2)(a) has indicated she has not been in Dunedin long enough to have established this stereotypical looking swaying behaviour so it would be great to get clarity from your staff via managers thanks. It may just be initial excitement from her new environment but it's good to flag this early. Other than the moments of swaying initially she has been actively exploring her enrichment and seems at ease.

Thanks, team

9(2)(g)(ii)

Reply from 9(2)(g)(ii) on 20th:

9(2)(g)(ii)

Jun 20, 2024, 4:43 PM

9(2)(g)(ii)

Kia ora koutou,

9(2)(g)(ii) and I have just had a catch up, and can confirm that Charlie's swinging is a pre-existed behaviour. It has been observed recently and has emerged (or re-emerged) since she has been on her own. 9(2)(g)(ii) also witnessed it the day she was transferred.



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Printed By	9(2)(a)

While our permanent Rangers are on leave, I'd prefer not to ask them for more detail. Would it be suitable to provide you with a more thorough report once staff return to work? This would likely be mid-July. Please let myself or 9(2)(g)(ii) know if there are concerns with this.

Thank you all for your hard work with testing, transfer and settling in this week.

Ngā mihi nui,

9(2)(g)(ii)  
Supervisor, Biodiversity | Kaitiaki Tauawhi, Kanorau Koiora  
Te Papa Atawhai | Department of Conservation  
s.9(2)(a), 9(2)(g)(ii)  
Te Anau District Office, Lakefront Drive, Te Anau 9600

17-06-2024 4:22:52pm

Email sent 17th June. Pasted into medical records 20th July.

9(2)(a)  
Jun 17, 2024, 2:41 PM  
9(2)(a)

Kia ora koutou

I've looped 9(2)(a) into the email chain now that she is back from leave.

Almost all of Charlie's test results are back (Chlamydia due tomorrow apparently), and I am happy to say we have not picked up any infectious diseases or any other health issues (excluding pre-existing of course).

One of the tests we ran is to assess the level of inflammation in the body, something we've found extremely handy in determining how a patient with arthritis is responding to therapy. This test came back in the normal range which suggests that the metacam Charlie is on for her arthritis is working to manage her discomfort. We have room to move now on trying to reduce the dose rate of this drug to the minimum amount that will still effectively manage her pain. This is always the goal with any long term treatment, to find the lowest effective dose. Long term metacam can have side effects on the kidneys so it is important we try to reduce the amount as much as possible. Arthritis is generally worse over winter so we won't do anything to reduce the dose until Spring and we will work closely with 9(2)(g)(ii) to come up with a plan for how we do this.

In herself Charlie is taking everything in her stride and is pretty interactive with our team. She is likely starting to get bored though, hospital is not a super stimulating environment so I'm keen to discharge her ASAP.

9(2)(a), can we tentatively aim for tomorrow (Tuesday) or Wednesday for Charlie to head over to DBG, pending the results of the Chlamydia PCR? I am 99% sure we'll get a negative result.

Ngā mihi

9(2)(a)

9(2)(a)





Dunedin Wildlife Hospital  
Otago Polytechnic, School Of Animal  
Health  
N Block, Albany Street  
Dunedin, 9016

Email  
s.9(2)(a)  
nz

	CLINICAL SUMMARY
Animal No.	2011155
Attending Vet(s)	9(2)(a)
Printed At	08-01-2025
Printed By	9(2)(a)

Released under the Official Information Act

Test Report: DU2414031 - Haematology - Issue 1

### Test Report: DU2414031 - Final

**Report To:** The Wildlife Hospital Trust (WHT) **Species:** Native Bird **Age:** 26 YEAR(S)  
School of Vet Nursing, Otago **Breed:** Kaka **Sex:** Female  
Private Bag 1910  
DUNEDIN 9054  
**Submitted By:** The Wildlife Hospital Trust **Date Sent:** 18/12/2024  
**Submitter ref:** NZ10644-DR4170 **Date Received:** 18/12/2024 14:41  
**Owner:** Dunedin Wildlife Hospital **Lab Activities**  
**From:** 18/12/2024  
**To:** 18/12/2024  
**Animal/Herd:** 2011155 CHARLIE

All client, owner and animal details supplied by the submitter.

Tests Requested:  
1 x EDTA - Fibrinogen

#### Haematology - Cumulative

	DU2414031 18/12/2024 2011155 CHARLIE	Units	Ref Interval
Fibrinogen	1	g/L	

Test methodology references are available on request.

(Note: Results apply only to samples received, on an as found basis. Reference intervals are standard Awanui Veterinary reference intervals.)

Signed

9(2)(a)

Signed

9(2)(a)

**Report Date:** 18/12/2024 17:05

**Final**

Awanui Veterinary make every effort to collect, analyse and report the results of tests accurately and promptly but accepts no responsibility for any factors which influence the results that are beyond our control. This report should not be reproduced except in full. All sample identification supplied by the submitter.

Test Report: DU2406913 - Toxicology - Issue 1

**Test Report: DU2406913 - Final**

**Report To:** The Wildlife Hospital Trust (WHT)  
The Wildlife Hospital Dunedin  
School of Vet Nursing, Otago  
DUNEDIN

**Submitted By:** 9(2)(a)

**Submitter ref:**

**Owner:** Wildlife Hospital  
195 Albany Street

**Animal/Herd:** CHARLIE 2011155

**Species:** Native Bird

**Breed:** Kaka

**Age:** 0 ADULT

**Sex:** Female

**Date Sent:** 10/06/2024

**Date Received:** 10/06/2024 13:12

**Lab Activities**

**From:** 10/06/2024

**To:** 10/06/2024

All client, owner and animal details supplied by the submitter.

Tests Requested:  
1 x EDTA - Lead - Companion (Blood)  
1 x EDTA - Fibrinogen  
1 x Heparin Blood - Hold

**Chemistry**

	CHARLIE	Units	Ref Interval
Blood Lead	0.01	mg/L	

Blood lead concentrations in birds exceeding 0.2 mg/L have been considered evidence of abnormal exposure which may result in signs of toxicity. However, in a recent update (October 2014) the WHO indicated that lead concentrations which were once thought to be safe in humans are no longer considered so and concentrations as low as 0.05 mg/L can induce subtle abnormalities in behaviour and cognitive function in some individuals.

Consequently, Wildbase at Massey University recommends that avian blood lead concentrations should not exceed 0.1 mg/L. Wildbase also suggests that when monitoring birds during treatment, the aim should be to reduce blood lead to < 0.05 mg/L because concentrations may increase slightly on cessation of therapy.

Test methodology references are available on request.  
Opinions and interpretations of test results expressed in this report are outside the scope of the laboratory's terms of accreditation.  
(Note: Results apply only to samples received, on an as found basis. Reference intervals are standard Awanui Veterinary reference intervals.)

**Signed** 9(2)(a)  
(Technician - Du)

**Signed** 9(2)(a)  
(Anatomic Pathology Dunedin)

**Report Date:** 10/06/2024 16:49**Final**

Awanui Veterinary make every effort to collect, analyse and report the results of tests accurately and promptly but accepts no responsibility for any factors which influence the results that are beyond our control. This report should not be reproduced except in full. All sample identification supplied by the submitter.



Test Report: DU2406913 - Haematology - Issue 1

### Test Report: DU2406913 - Final

**Report To:** The Wildlife Hospital Trust (WHT)  
The Wildlife Hospital Dunedin  
School of Vet Nursing, Otago  
DUNEDIN

**Species:** Native Bird  
**Breed:** Kaka

**Age:** 0 ADULT  
**Sex:** Female

**Submitted By:** 9(2)(a)

**Date Sent:** 10/06/2024  
**Date Received:** 10/06/2024 13:12

**Submitter ref:**

**Lab Activities**

**Owner:** Wildlife Hospital  
195 Albany Street

**From:** 10/06/2024  
**To:** 10/06/2024

**Animal/Herd:** CHARLIE 2011155

All client, owner and animal details supplied by the submitter.

Tests Requested:  
1 x EDTA - Lead - Companion (Blood)  
1 x EDTA - Fibrinogen  
1 x Heparin Blood - Hold

#### Haematology

CHARLIE

Units

Ref Interval

Fibrinogen

2

g/L

VETERINARY INTERPRETATION: likely a normal.level

Test methodology references are available on request.

(Note: Results apply only to samples received, on an as found basis. Reference intervals are standard Awanui Veterinary reference intervals.)

Signed

9(2)(a)

Signed

9(2)(a)

**Report Date:** 10/06/2024 15:25

**Final**

Awanui Veterinary make every effort to collect, analyse and report the results of tests accurately and promptly but accepts no responsibility for any factors which influence the results that are beyond our control. This report should not be reproduced except in full. All sample identification supplied by the submitter.

Test Report: DU2406913 - Parasitology - Issue 1

## Test Report: DU2406913 - Final

**Report To:** The Wildlife Hospital Trust (WHT)  
The Wildlife Hospital Dunedin  
School of Vet Nursing, Otago  
DUNEDIN

**Species:** Native Bird  
**Breed:** Kaka

**Age:** 0 ADULT  
**Sex:** Female

**Submitted By:** 9(2)(a)

**Date Sent:** 10/06/2024  
**Date Received:** 10/06/2024 13:12

**Submitter ref:**

**Lab Activities**

**Owner:** Wildlife Hospital  
195 Albany Street

**From:** 10/06/2024  
**To:** 12/06/2024

**Animal/Herd:** CHARLIE 2011155

All client, owner and animal details supplied by the submitter.

Tests Requested:  
1 x Faeces - Faecal Egg Count - Birds/Others  
1 x EDTA - Lead - Companion (Blood)  
1 x EDTA - Fibrinogen  
1 x Heparin Blood - Hold

### Parasitology

	Strongyle	Ascarid	Capillaria	Heterakis	Coccidia
CHARLIE	Not Seen	Not Seen	Not Seen	Not Seen	Not Seen
	Pinworm	Tapeworm			
CHARLIE	Not Seen	Not Seen			

Faecal Egg/Cyst Counts performed and reported by Gribbles Veterinary, Carbine Rd, Auckland

Test methodology references are available on request.  
Opinions and interpretations of test results expressed in this report are outside the scope of the laboratory's terms of accreditation.  
(Note: Results apply only to samples received, on an as found basis. Reference intervals are standard Awanui Veterinary reference intervals.)  
A \* indicates the test is outside the scope of the laboratory's IANZ accreditation.

**Signed** 9(2)(a)

**Signed** 9(2)(a)

**Report Date:** 12/06/2024 10:15

**Final**



Awanui Veterinary make every effort to collect, analyse and report the results of tests accurately and promptly but accepts no responsibility for any factors which influence the results that are beyond our control. This report should not be reproduced except in full. All sample identification supplied by the submitter.

# International Report

InfogeneNZ  
Certificate of DNA Analysis  
Private Bag 11 222  
Massey University  
Palmerston North  
New Zealand  
ISAG member 84455

Animal Name	Charlie (D43977)	InfogeneNZ DNA No.	43977
Registration No.	2011155	Microchip No.	
DOB		Sex	
Breed	South Island Kaka	Sample Received	12/06/2024
Breeder/Owner	Wildlife Hospital Dunedin		
Sire Name		Sire DNA No.	
Dam Name		Dam DNA No.	

TEST RESULT				
Test	Result	Explanation	Test Date	Gene Details
PBFD	Negative	No PBFD was detected in this sample	17/06/2024	
Chlamydia	Negative	No Chlamydia was detected in this sample	18/06/2024	

Sample Collected By		Approved Sample Collection Method	
Sample Submitted By	Wildlife Hospital Dunedin		

9(2)(a)

9(2)(a)

18/06/2024



## Avian Long Term Medication Plan

### General Information

Species	South Island Kākā ( <i>Nestor meridionalis</i> )						
Name	Charlie	Life stage	Adult	Age	24+	Sex	Female
Hospital ID	2011155	Band	L49336 (right leg)				

### History:

Old injury to left wing. Previously no issues associated however in recent years (2023) has caused intermittent discomfort. Initial assessment done by Vets in Te Anau. Most recent health check at DWH in June 2024 indicated no high inflammatory markers and repeat x-rays showed no change in her wing. This along with her demeanour suggested good control of the arthritis.

### Current Medication:

Charlie was prescribed 1mg/kg meloxicam daily by vets in Te Anau. The keepers in Te Anau split her daily dose into two due to observations of her being unwell post treatment. So essentially she receives 0.5mg/kg PO BID.

### Treatment Goal:

The goal of therapy for osteoarthritis is to determine the lowest dose of medication that will still provide adequate anti-inflammatory and analgesic effects to ensure welfare of the patient. As Charlie's arthritis over winter was seemingly well managed on her current dose the goal over the next few months will be to determine what the lowest dose for Charlie is going to look like in the warmer months.

### Treatment Plan:

Date range	Plan
5/9 – 4/10	Reduce to 0.5mg/kg meloxicam given ONCE daily (0.16mls based on weight of 480g)
Week of 7 <sup>th</sup> October	Blood test to assess fibrinogen level and blood cell morphology

If the blood results are still favourable we will transition to every other day medication at the same dose rate and repeat blood tests a month a later to determine whether this is still sufficient to manage the pain.

s9(2)(a)