

SI Kākā Captive Breeding programme Flocking and Breeding plan for 24/25

Captive Coordinator: 9(2)(g)(ii)

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The captive South Island kākā breeding programme is very important in supporting the establishment of the species at new sites. The captive programme has the potential to provide a reliable, regular source of juveniles for release programmes.

Captive management objectives (from Captive Management Plan)

Objective 1: Maximise productivity of the captive population, to produce South Island (SI) kākā for release into the wild at release sites.

Objective 2: Manage the SI kākā captive population to maximise the genetic diversity available for each reintroduction site.

Objective 3: Support reintroduction programmes by providing quality captive-reared kākā suitable for release at ecosystem restoration sites approved by DOC, to establish viable self-sustaining populations.

Expectations of Current Release Sites:

A key objective of the captive population is to support the re-introduction and establishment of kākā at the release sites, so it is important that we understand and work towards the needs of the release site.

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Goals for 24/25 Breeding Season:

Based on the needs of the release sites, the captive management goals for 2024/25 are:

1. Maximise the output of the TOS pairs to provide as many birds as possible to the Brook Waimārama Sanctuary. The genetic diversity of the TOS captive population is extremely limited, so there is not an opportunity to significantly improve the genetic diversity unless a release site chooses to secure additional genetics for the captive population.
2. Focus on providing as many birds as possible with currently un- or under-represented genetics for release to Orokonui.
3. Future-proof the captive population by optimising the genetic diversity and age of the SSI captive population. This will be achieved by targeted releases/retirement of old and over-represented birds and retaining young birds from priority genetics.

These goals are aligned with the intent and main objectives of the captive management plan.

How We Will Achieve These Goals

Approach

The 23/24 breeding season saw us focussing clearly on all our objectives by utilising flocking and artificial insemination. The exercise of bringing all the breeding birds to Dunedin Botanic Gardens illustrated the advantage of having birds synchronised with their nesting efforts. It offered us the opportunity to swap eggs and foster chicks with experienced pairs. We also found it advantageous to cycle the youngest chicks in with the most experienced females until they were feeding and gaining weight, then move them in with a less experienced female to give her the opportunity to raise them. It also allowed us to fine tune the incubation of kākā eggs and assist hatching of chicks due to malposition and/or delays in hatching times. All of this worked to increase the productivity for the 2023/24 season:

Priority Birds Produced		Overrepresented birds Produced	
Toanga	4 chicks	Bling/L54	5 chicks
Ceasar	4 chicks	Hannah/Casey	2 chicks
TOS pairs	2 chicks		

Based on these results, this strategy will be used again in 2024/25 to focus on these goals.

Overview of Actions

This summary provides an overview of how we'll go about achieving this year's goals. The detailed recommendations for movements and holdings are provided in Table 1.

Goal 1: Maximise productivity of the TOS captive population.

- Retain the 2 TOS pairs that bred in 2023/24 at Dunedin Botanic Gardens (DBG) to maximise breeding by double clutching and fostering of eggs/chicks.
- Transfer the non-breeding TOS male (Tussock) to Natureland to be flocked with new females to see if this will prompt breeding behaviour.
- Transfer Tussock to Invercargill Queens Park to pair with Ceasar.

Goals 2 and 3: Maximising the genetic diversity available for releases to Orokonui and to future proof the SSI captive population.

- Prioritise breeding for Jimmy and Cleo. They are unrelated to any other birds in the captive population and any birds released at Orokonui so far. As such, they are the most genetically valuable SSI birds and offspring from them would contribute significantly to the Orokonui population and the future of the SSI captive population.

Both of these birds have physical limitations and are relatively old. While held together at DBG this year, they appeared bonded, showed interest in nest boxes, and we suspect there was a mating attempt. They will be retained at DBG as a priority for breeding while also maintaining AI as a possible option.

If we are successful in securing chicks from Jimmy and/or Cleo, we would likely retain one to several of these chicks as a new genetic line within the captive population, with remaining birds released to Orokonui.

- Retain a male and a female chick (2 chicks) from Toanga and Ceasar's pairings into the captive population to bolster that genetic line and release remaining birds. These genes are currently underrepresented in the released population. Retain an additional male (Toanga's chick) to house with Charlie
- Retain two chicks that have been held since 2022/23 as future breeders.
- Release some birds to free up space in the captive population for other genetic lines.
 - Release Betty into the wild. Her genes are well represented in the released population.
 - Release 2 of the birds that have been held since the 2022/23 season.
- Maintain 'retired' captive pairs that are no longer contributing but are not suitable for release.

Table 1. Recommendations for holdings and movements of birds for 24/25 season.

Institution	Institution/Current Holdings	Holdings proposed for 24/25	CHANGES from first draft	Purpose	Actions
Dunedin Botanical Gardens	TOS FLOCK Kauri (m) Kawakawa (f) Matai (f) Mahoe (m) Tussock (f) Tawa (m)	TOS FLOCK Kauri (m) Kawakawa (f) Matai (f) Mahoe (m) Tussock (f) SSI FLOCK Morhua (L54) Clarence (L53) Rascal Lady (L63) Rascal Lady (L63) Rascal (L62) Jimmy Cleo Toanga Bling Hannah Casey Charlie	TOS FLOCK Kauri (m) Kawakawa (f) Matai (f) Mahoe (m) SSI FLOCK Morhua (L54) Clarence (L53) Rascal Lady (L63) Rascal (L62) Jimmy Cleo Toanga Bling Hannah Casey Charlie SK2318 (M) Toanga chick	TOS 2 pairs that have bred remain at DBG for another season to allow fostering of eggs/chicks with proven breeding pairs and allowing TOS birds to raise non-priority chicks. SSI Jimmy and Cleo are the top priority. Chicks from this pairing are a completely new line for the breeding population. Taonga and Jimmy are another pairing that would increase the diversity of the captive population. Overrepresented pairs are still needed to foster eggs/chicks from inexperienced birds (SSI/TOS) <i>BUT breeding from these birds needs to be limited.</i>	Betty released to Orokonui Tawa moved to Natureland Caesar moved to Invercargill 3 foster pairs to allow for foster of any of TOS eggs and Jimmy's eggs <u>Focus will be:</u> TOS pairs Jimmy X Cleo Toanga X Jimmy

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23/24 Breeding season Chicks produced at Dunedin Botanic Gardens

This chart indicates the proposed releases and retention of chicks from this breeding season.

Studbook #	Sex	Parents	Destination
SK2401	F	L54 x Bling	Orokonui
SK2402	F	L54 x Bling	Orokonui
SK2403	U	Caeser x Betty	died
SK2404	F	Caeser x Betty	Orokonui
SK2405	M	Caeser x Betty	Willowbank
SK2406	M	Casey x Hannah	Orokonui
SK2407	M	Casey x Hannah	Orokonui
SK2408	M	Caeser x Hannah	Orokonui
SK2409	M	Caeser x Hannah	Orokonui
SK2410	U	Matai x Mahoe	Abel Tasman NP
SK2411	U	Kawakawa x Kairi	Abel Tasman NP
SK2412	M	L54 x Bling	Orokonui
SK2413	F	L54 x Bling	Orokonui
SK2414	M	L54 x Bling	Orokonui
SK2415	F	Toanga x L52	Orokonui
SK2516	F	Toanga x L52	Orokonui
SK2417	F	Toanga x L52	Queenstown
SK2418	M	Toanga x L52	Orokonui