Silvereye | **Tauhou** | *Zosterops lateralis* moult

David S. Melville

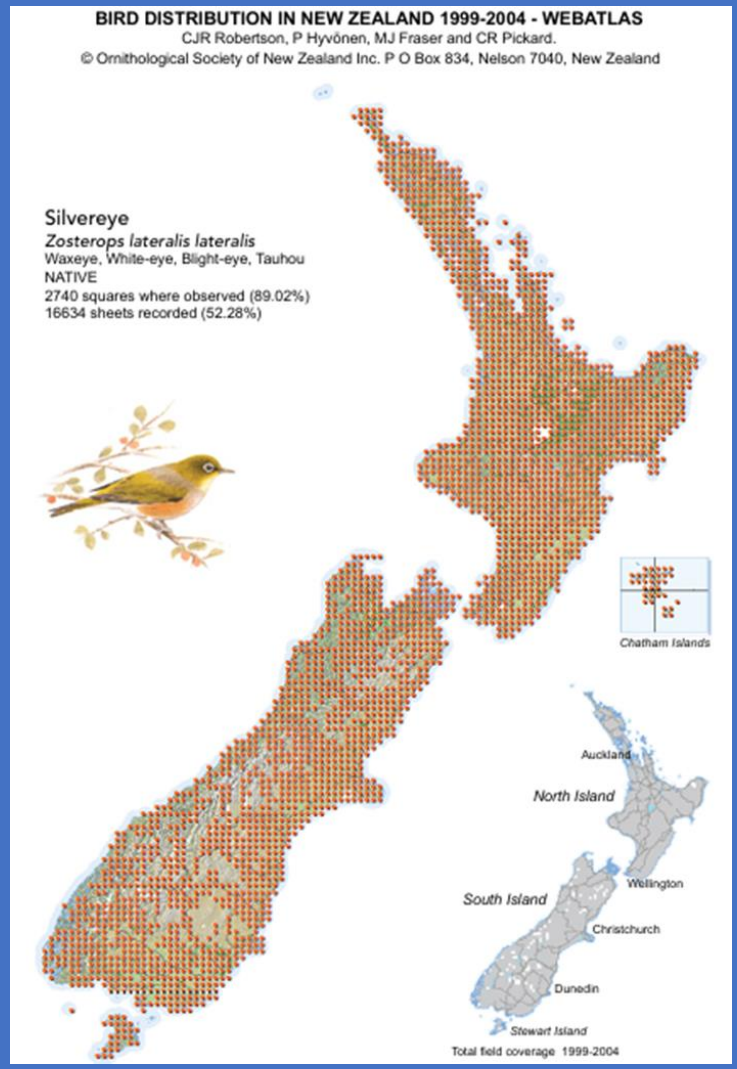
Ornithological Society of New Zealand/Birds New Zealand

Moult Workshop 2025

BIRDS NEW ZEALAND
Te Kāhui Mātai Manu o Aotearoa

Silvereye | Tauhou | *Zosterops lateralis*

- Native to New Zealand
- Among the most widespread and numerous species in New Zealand
- ~129,300 banded in New Zealand
- ~1,295 moult records (~1%)



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Breeding season

Jul	Aug	Sep
Oct	Nov	Dec
Jan	Feb	Mar
Apr	May	Jun

- 2 or 3 broods August-February
- Fledging period 10-11 days


John Kendrick, DOC/NZBirdsOnline


Malcolm Pullman/NZBirdsOnline


Robert Hanbury-Sparrow/NZBirdsOnline

NEW ZEALAND
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Grey Warbler I Riroriro I *Gerygone igata*


Dick Porter/NZBirdsOnline


Glenda Rees/NZBirdsOnline


Neil Fitzgerald/NZBirdsOnline

Fledging period 17 days

Higher Nest Predation Favors Rapid Fledging at the Cost of Plumage Quality in Nestling Birds

Lea M. Callan,[1] Frank A. La Sorte,[2] Thomas E. Martin,[3] and Vanya G. Rohwer[1,*]

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A bird in the hand: A bander's guide to ageing and sexing commonly caught birds in New Zealand

By Mike Bell and C. Blue Bell-Bhuiyan

Tauhou/Silvereye Zosterops lateralis

MOULT

Juvenile Complete post-juvenile moult January–April, although some late brood birds apparently suspend/arrest moult and retain some juvenile outer primaries.

Adult Complete summer moult January–April.

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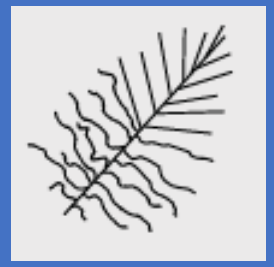
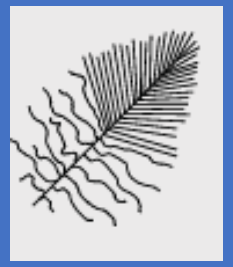
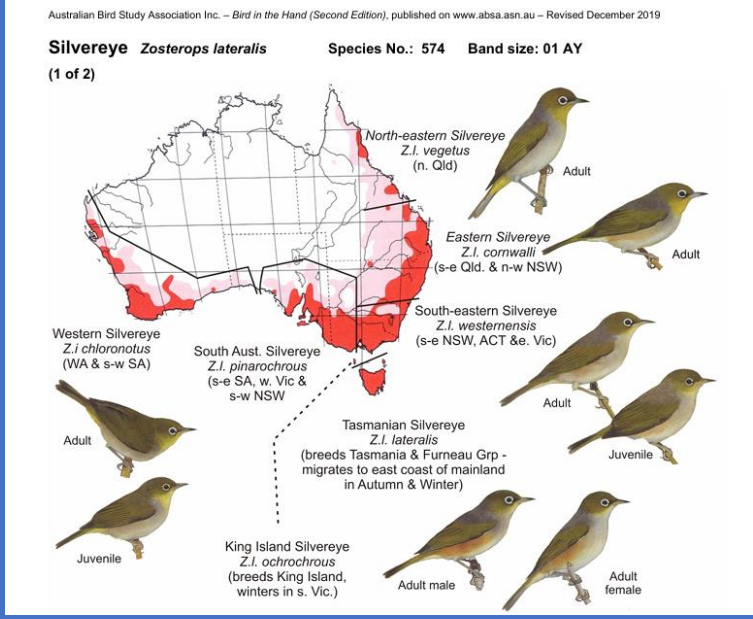
In Australia extent of post-juvenile moult apparently more variable







The overall plumage of Juveniles (J) is softer and more loosely textured than adults;

First Immatures (1) are difficult to distinguish from adults and some probably acquire adult plumage in a complete post-juvenile moult when only a few months old, but some retain all or most juvenile remiges, greater primary coverts, alula and rectrices;

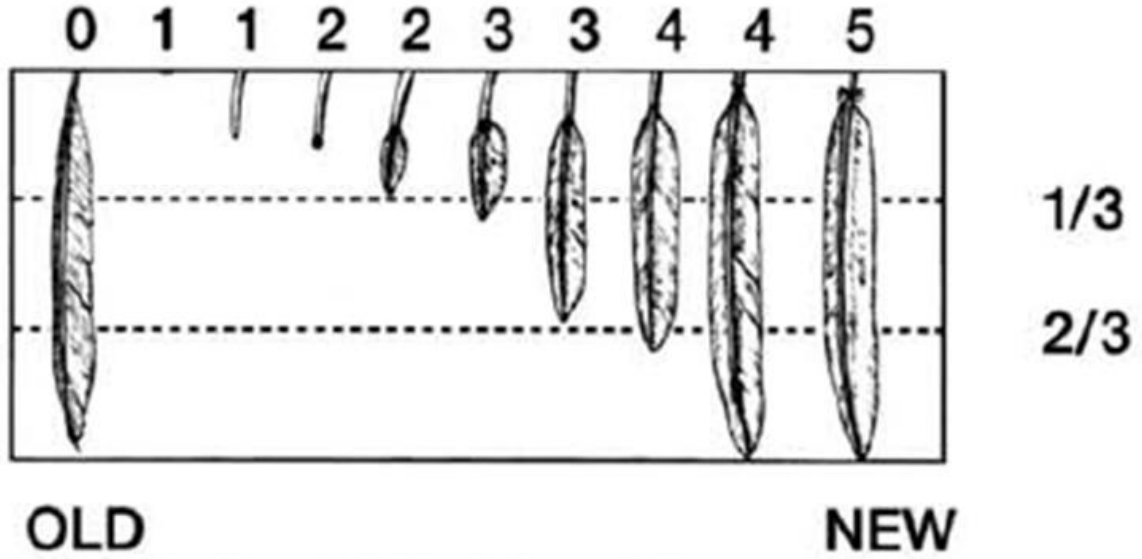
Retained juvenile rectrices are slightly narrower and have more acute tips than those of adults and often have synchronous growth-bars or fault-bars (asynchronous in adults;

Adult-like birds with synchronous growth-bars or fault-bars to primaries or secondaries, or both, are probably first immatures;

Adult plumage is attained in the first year and first breeding usually occurs toward the end of the first year, so age adults (1+).

Hardy 2019. www.absa.au

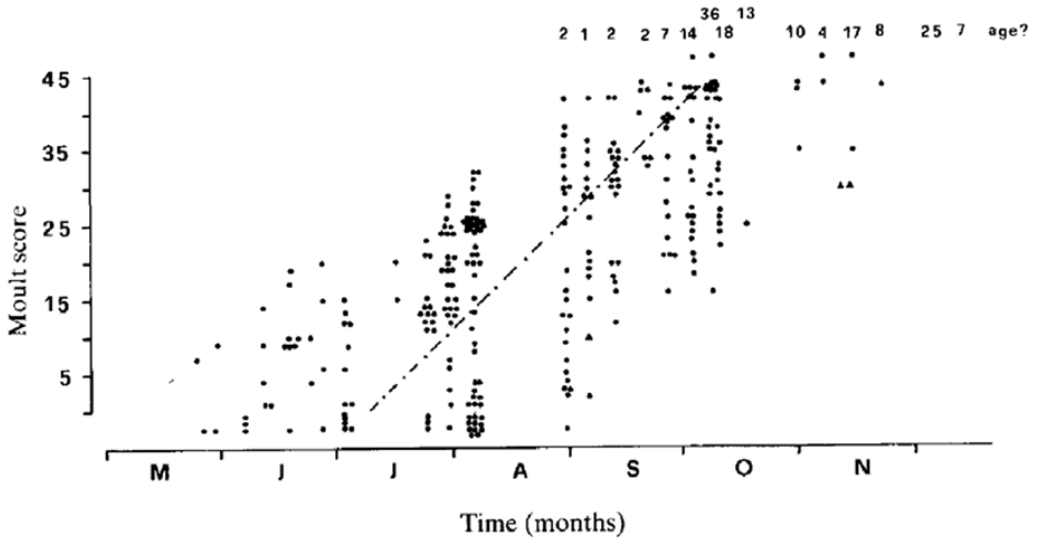
O.S.N.Z Moult Recording Scheme - reference notes



The scoring system for major feathers (wing and tail).
The dashed horizontal line represents one third and two thirds growth.
The numerical scoring system is:
0 = Old feather remaining
1 = Old feather missing or new feather completely in pin
2 = New feather just emerging from the sheath up to one third grown
3 = New feather between one and two thirds grown
4 = New feather more than two thirds grown and with remains of waxy sheath at base
5 = New feather fully developed with no trace of waxy sheath remaining at base

All old = 0

All new = 5 x 9 = 45



Melville 1988. *Hong Kong Bird Report* 1987: 85-92

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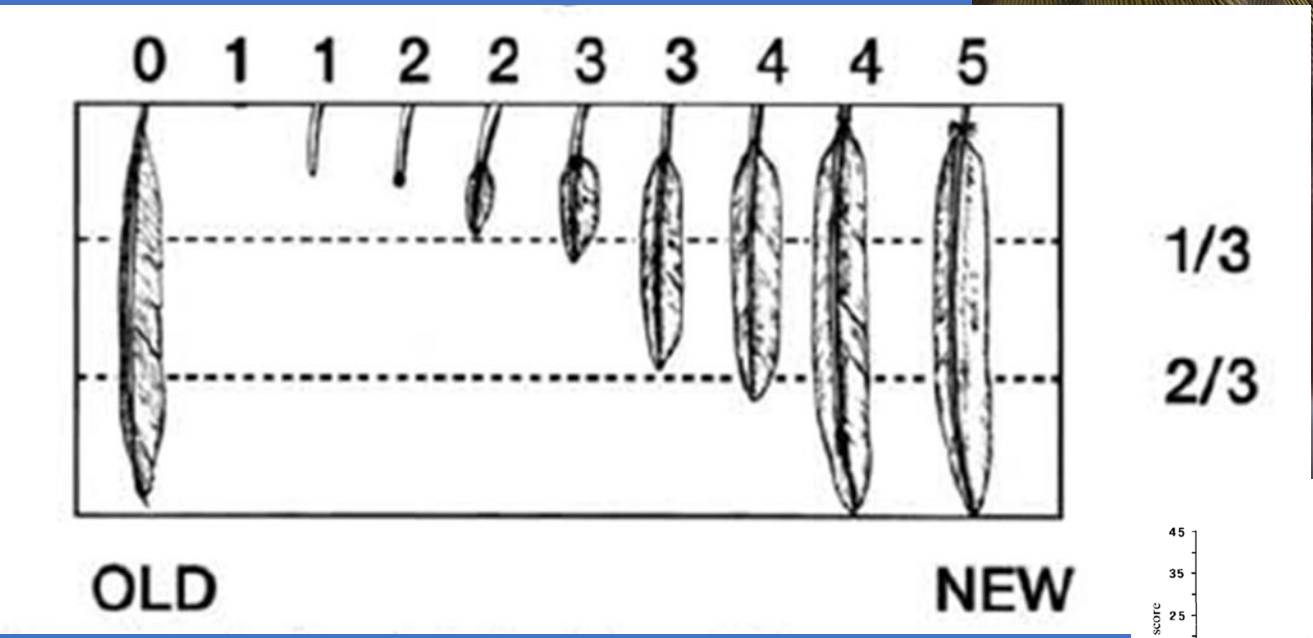
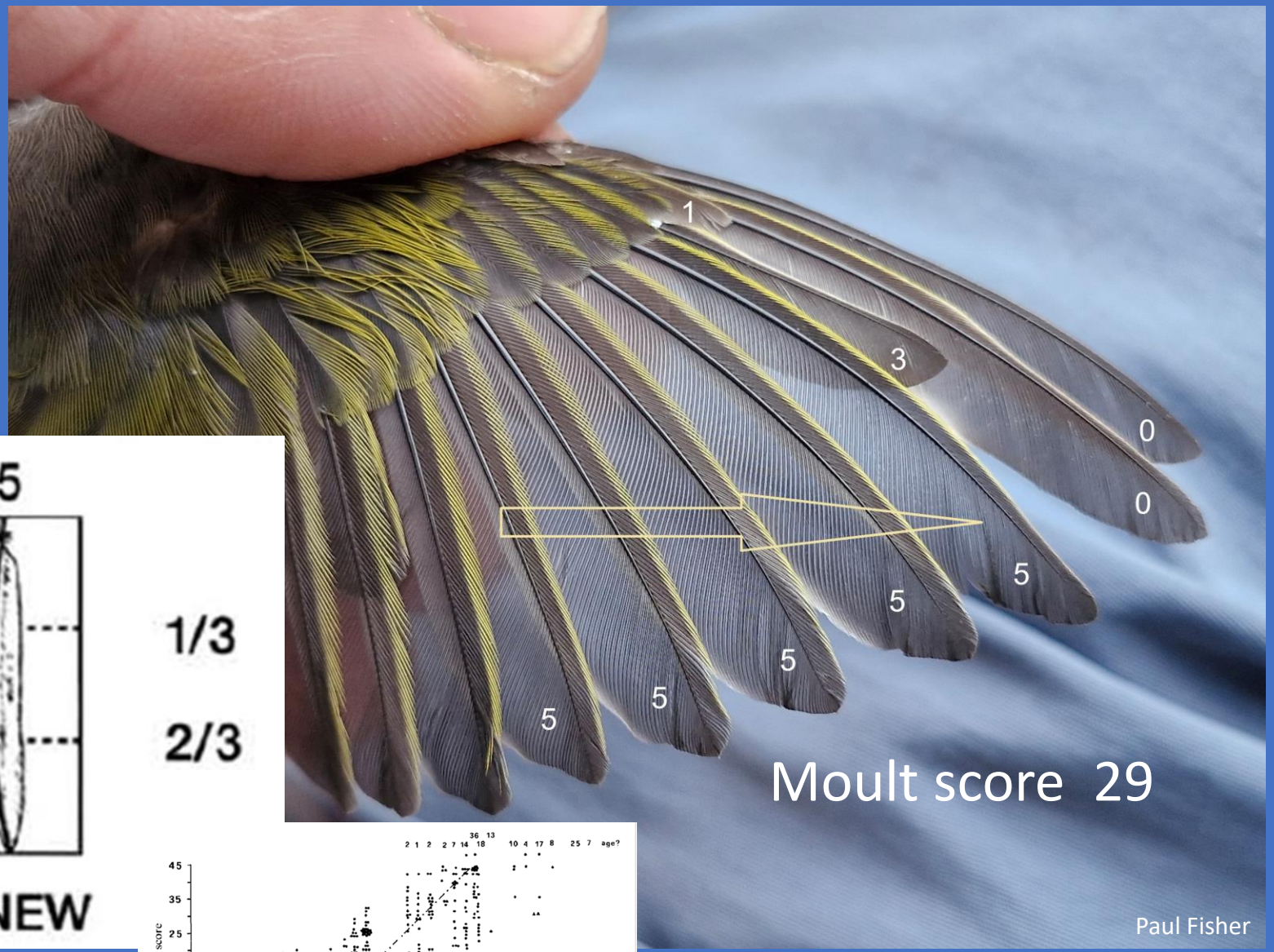
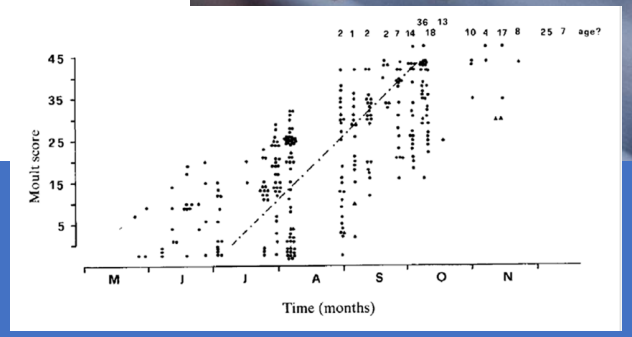
Juvenile
8 February



Ginn & Melville 1983. Moult in birds





Melville 1988. *Hong Kong Bird Report* 1987: 85-92

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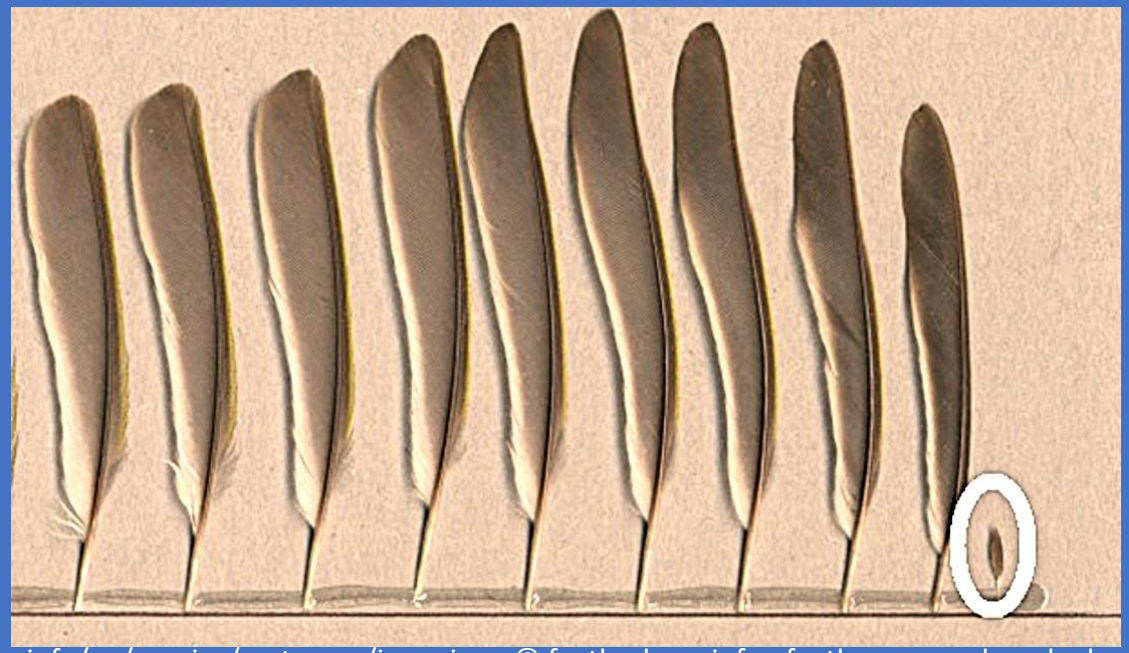

https://www.featherbase.info/en/species/zosterops/japonicus © featherbase.info - feather research and education

Nine functional primaries

PFMG = Proportion Feather Mass Grown

Table 1. Relative masses (%) of the nine primary feathers averaged for two adult silvereyes (*Zosterops lateralis*). The birds were roadkills in Hamilton, North Island, in June and July 2007 (Peter G. Ryan *in litt.*)

Primary	P1	P2	P3	P4	P5	P6	P7	P8	P9
Relative mass (%)	8.73	9.23	9.81	10.31	11.29	12.37	12.66	12.84	12.75

Scott *et al*. 2023. *Notornis* 70: 97-110

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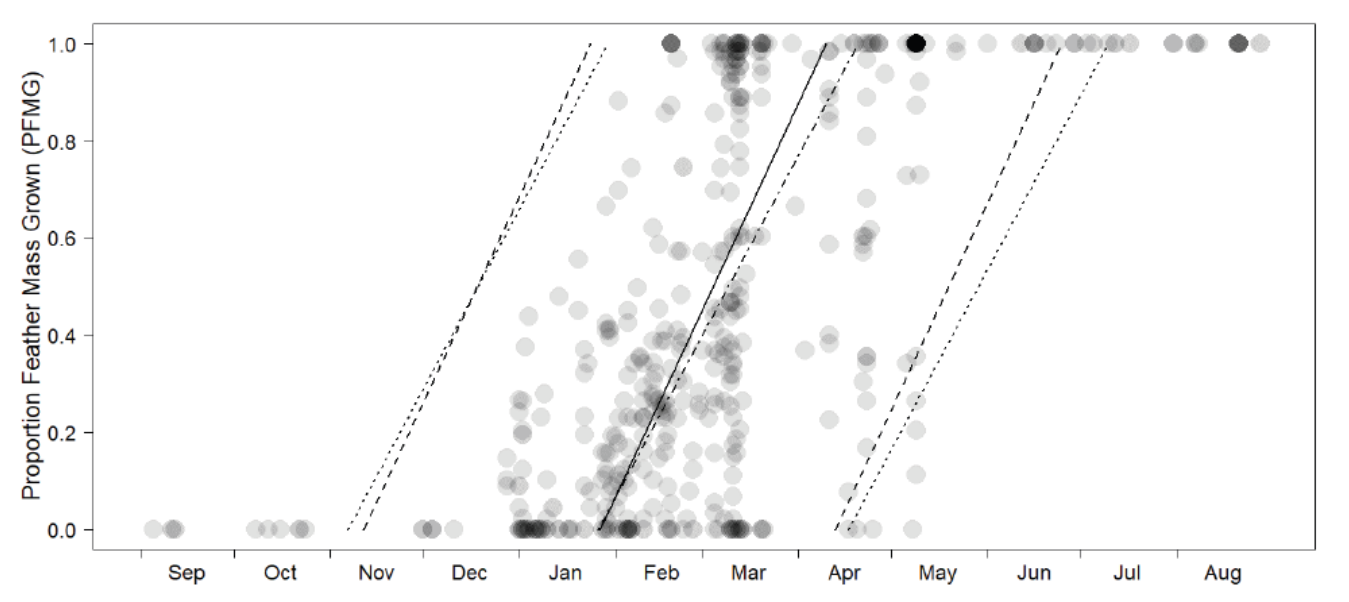
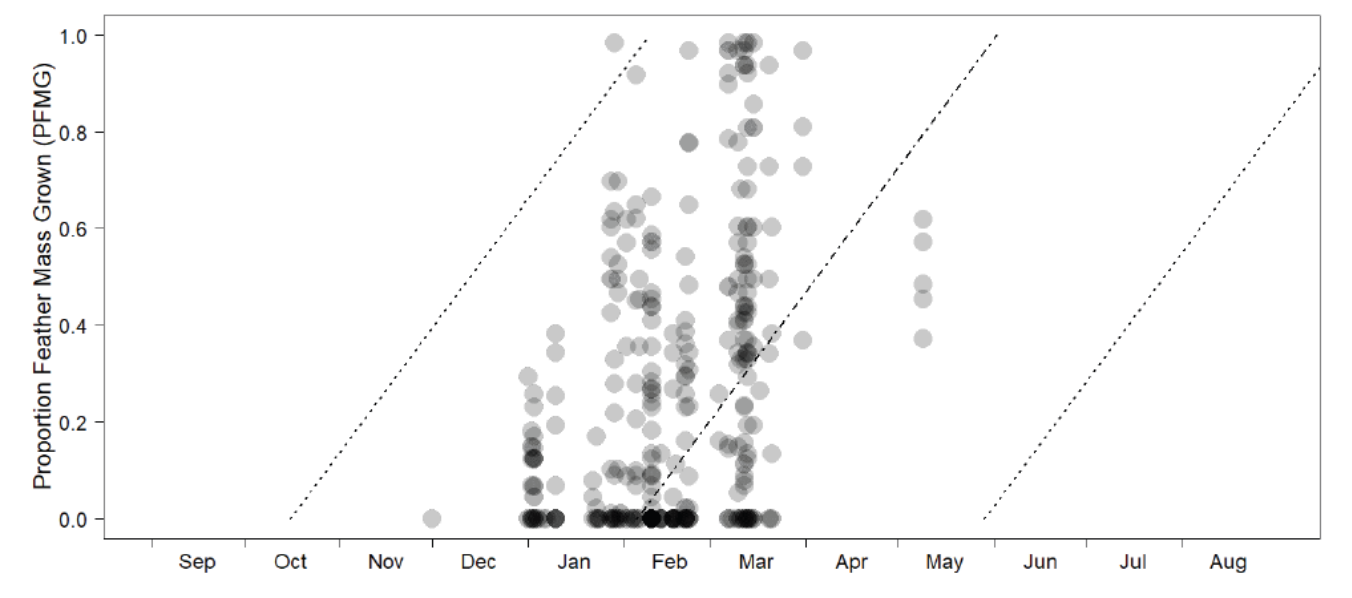


Modified scatter diagram of the progression of primary moult for adult Silvereyes using PFMG as the moult index



Modified scatter diagram of the progression of juvenile primary moult in Silvereyes using PFMG as the moult index

Scott, T.; Scholer, M; Melville, D.S.; Underhill, L.G. 2023. Timing and duration of primary moult in New Zealand's silvereye (tauhou, *Zosterops lateralis*). *Notornis 70(3)*: 97–110.

Silvereyes had an estimated primary moult duration of 74 days, with a mean population start date of 3 February and a mean completion date of 19 April.

Juvenile primary moult is estimated to start approximately two weeks after the start of post-breeding moult in adults.

Post-breeding primary moult in adult silvereyes starts soon after the breeding season and ends shortly before some of the more southern birds embark on their seasonal northward migratory movements.

Scott, T.; Scholer, M; Melville, D.S.; Underhill, L.G. 2023. Timing and duration of primary moult in New Zealand's silvereye (tauhou, *Zosterops lateralis*). *Notornis 70(3)*: 97–110.

J	F	M	A	M	J	J	A	S	O	N	D
B M	B M	M	M	M			B	B	B	B	B M
J/1	J/1						J/1	J/1	J/1	J/1	J/1
2+	2+	1+	1+	1+	1+	1+	1+	1+	1+	2+	2+

Hatch day 1 November

End moult 19 April

CODE NUMBER	DEFINITION
U	Age unknown—No attempt made to determine the age of the bird, or data is lost.
P	Pullus—a young bird either in the nest or out of the nest, but which cannot fly (for volant species).
J	Juvenile—a young bird in juvenile plumage.
1	1st year—a bird within its first year of life.
1+	1st year or older—a bird within its first year of life or older. **This code applies to any bird of unknown age** (but c.f. U).
2–	2nd year or younger—a bird within its second year of life or younger (excluding P and J).
2	2nd year—a bird within its second year of life.
2+	2nd year or older—a bird within its second year of life or older.

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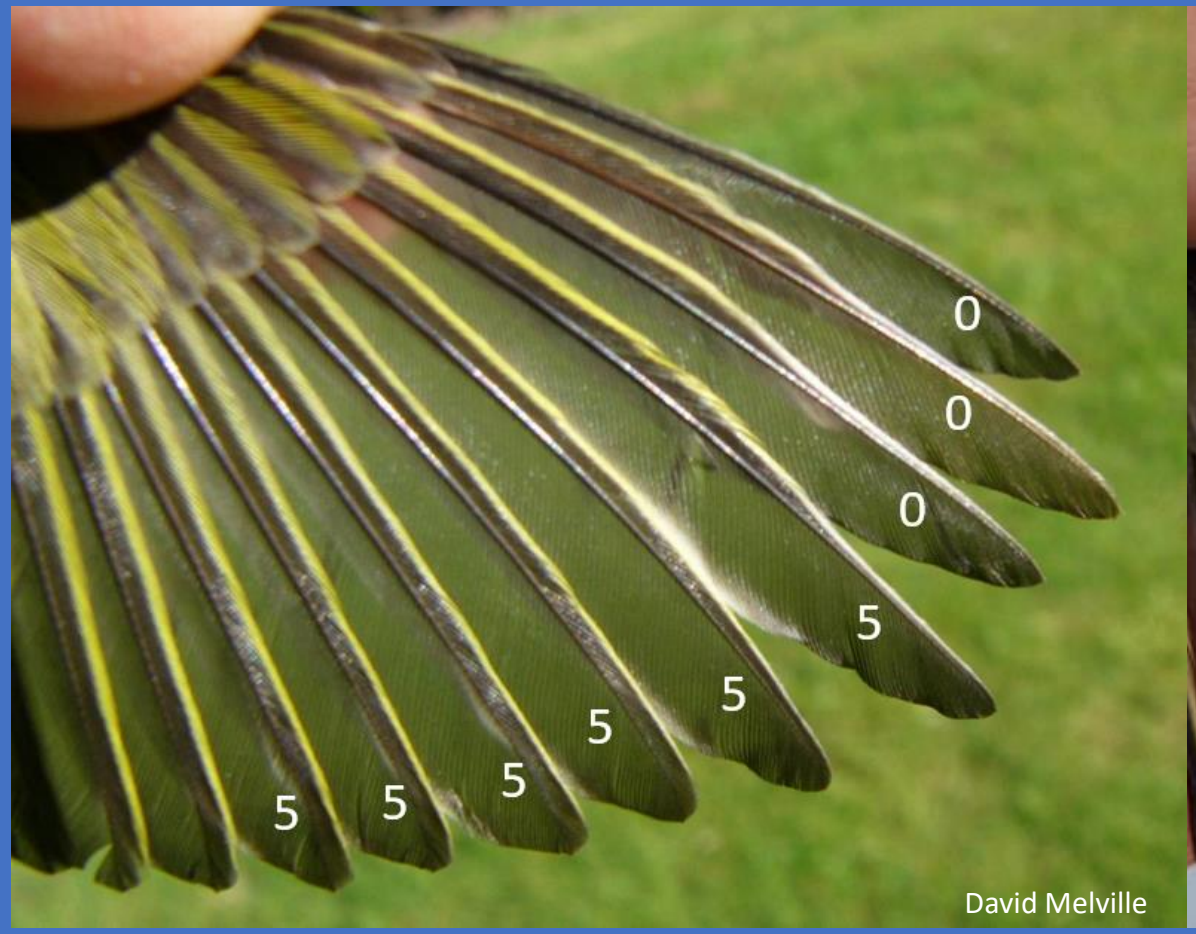
Silvereye after partial moult - age code “1” with retained old outer primaries



David Melville

Paul Fisher

Late brood juveniles that ran out of time?

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Recomendations

Scott *et al*. (2023):
We therefore recommend that the bird banding scheme in New Zealand encourages the routine and ongoing collection of moult data at a latitudinal spread of locations for four reasons:

(1) It will help to fill a gap in knowledge because there are few quantitative moult studies in New Zealand;

(2) the geographical configuration of New Zealand provides opportunities for studies along a latitudinal range;

(3) the southern geographical location of New Zealand provides important opportunities to understand the timing of moult in relation to climate change;

(4) the geographical location combined with a well-developed network of bird banders enables a unique contribution to be made to the global understanding of the biogeographical patterns of moult, breeding, and migration

Scott, T.; Scholer, M; Melville, D.S.; Underhill, L.G. 2023. Timing and duration of primary moult in New Zealand's silvereye (tauhou, *Zosterops lateralis*). *Notornis 70(3)*: 97–110.

Daniel Murphy/Birds of the World

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