

## Supplementary material for

### Evidence for a recent decline in the distribution and abundance of the New Holland mouse (*Pseudomys novaehollandiae*) in Tasmania, Australia

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**Table S1** – Effort and capture records for small mammal surveys undertaken in *Pseudomys novaehollandiae* habitat in Tasmania between 1998 and 2016 where NHM = New Holland Mouse (*P. novaehollandiae*), HM = House Mouse (*Mus musculus*), SR = Swamp Rat (*Rattus lutreolus velutinus*), SA = Swamp Antechinus (*Antechinus minimus*), BR = Black Rat (*Rattus rattus*), EPP = Eastern Pygmy Possum (*Cercartetus nanus*), WFD = White-footed Dunnart (*Sminthopsis leucopus*), BTP = Brush-tailed Possum (*Trichosurus vulpecula*), FC = Feral Cat (*Felis catus*).

Site	Date	Easting	Northing	Accuracy of grid ref (km)	No. of traps	No. of nights	Trap nights	Small mammal captures	Predicted fire age	Surveyor	Device	NHM Det?
Coles Bay Conservation Area	Sep-98	603700	5337220	<1	70	3	210	9 NHM captures of 7 individuals; 2 BR captures of 2 individuals	3 to 5	Pye and Lazenby	Elliotts	Yes
Friendly Beaches	Oct-98	606376	5350222	5	75	2	150	2 HM captures of 2 individuals	<3	B Lazenby	Elliotts	No
Mt William: DS1	Nov-98	610724	5463585	<1	20	5	100	No captures	10 years or greater	Pye and Lazenby	Elliotts	No
Mt William: HS4/5	Nov-98	611845	5461251	<1	45	5	225	9 NHM captures of 5 individuals	3 to 5	Pye and Lazenby	Elliotts	Yes
Mt William: HS1	Nov-98	610575	5463242	<1	40	5	200	1 NHM capture of 1 individual	3 to 5	Pye and Lazenby	Elliotts	Yes

Site	Date	Easting	Northing	Accuracy of grid ref (km)	No. of traps	No. of nights	Trap nights	Small mammal captures	Predicted fire age	Surveyor	Device	NHM Det?
Mt William: HS2	Nov-98	610500	5463545	<1	20	5	100	1 NHM capture of 1 individual	3 to 5	Pye and Lazenby	Elliotts	Yes
Mt William: DS3	Nov-98	611907	5461056	<1	20	5	100	No captures	10 years or greater	Pye and Lazenby	Elliotts	No
Coles Bay Conservation Area: SS1	Nov-98	603987	5337008	<1	20	5	100	11 NHM captures of 4 individuals	Most patches 3 to 5 years	Pye and Lazenby	Longworths	Yes
Coles Bay Conservation Area: OH1	Nov-98	603838	5337139	<1	20	5	100	19 NHM captures of 7 individuals	Most patches 3 to 5 years	Pye and Lazenby	Elliotts	Yes
Coles Bay Conservation Area: OH2	Nov-98	603742	5337197	<1	20	4	80	9 NHM captures of 4 individuals	Most patches 3 to 5 years	Pye and Lazenby	Elliotts	Yes
Coles Bay Conservation Area: PH	Nov-98	603673	5337118	<1	20	3	60	4 NHM captures of 2 individuals	Most patches 3 to 5 years	Pye and Lazenby	Elliotts	Yes
Mt William: North Cobblers Rocks	Dec-98	605620	5472210	<1	20	5	100	1 New Holland Mouse capture of 1 individual	3 to 5	Pye and Lazenby	Elliotts	Yes
Mt William: Mid-Cobbler 1	Dec-98	605267	5472390	<1	20	3	60	No captures	3 to 5	Pye and Lazenby	Elliotts	No
Mt William: Mid-Cobbler 2	Dec-98	605009	5472447	<1	20	2	40	No captures	3 to 5	Pye and Lazenby	Elliotts	No
Mt William: Top campsite	Dec-98	600470	5478264	<1	20	5	100	1 NHM capture of 1 individual	<3	Pye and Lazenby	Elliotts	Yes
Flinders Is: Mt Boyes 1	Jan-99	577133	5587381	5	20	6	120	No captures	10 years or greater	Pye and Lazenby	Elliotts	No
Flinders Is: Mt Boyes 2	Jan-99	577700	5587119	5	20	6	120	1 SR capture of 1 individual; 1 SA capture of 1 individual	10 years or greater	Pye and Lazenby	Elliotts	No
Flinders Is: Mt Boyes 3	Jan-99	578358	5586871	5	20	5	100	2 SR captures of 2 individuals; 1 EPP capture of 1 individual	10 years or greater	Pye and Lazenby	Elliotts	No
Flinders Is: SRF	Jan-99	578300	5583700	<1	20	6	120	5 NHM captures of 2 individuals; 1 HM capture of 1 individual	3 to 5	Pye and Lazenby	Elliotts	Yes
Flinders Is: Xanth stand	Jan-99	587940	5561045	5	20	3	60	1 WFD capture of 1 individual	3 to 5	Pye and Lazenby	Elliotts	No
Flinders Island	Apr-01	589406	5586302	<1	Unknown	Unknown	Unknown	At least 1 NHM detection	Unknown	S Koehler	Hair tubes	Yes

Site	Date	Easting	Northing	Accuracy of grid ref (km)	No. of traps	No. of nights	Trap nights	Small mammal captures	Predicted fire age	Surveyor	Device	NHM Det?
Flinders Island	Apr-01	583271	5584664	<1	Unkno wn	Unkno wn	Unkno wn	At least 1 NHM detection	Unknown	S Koehler	Hair tubes	Yes
Hepburn Point	Jul-01	604012	5337028	<1	Unkno wn	Unkno wn	Unkno wn	At least 1 NHM detection	3 to 5	B Lazenby	Elliotts	Yes
Hepburn Point	Nov-02	604012	5337028	<1	Unkno wn	Unkno wn	Unkno wn	At least 1 NHM detection	3 to 5	B Lazenby	Elliotts	Yes
4x4 access trail to Cobblers Rocks	Aug-04	603606	5473442	5	25	1	25	1 NHM capture of 1 individual	3 to 5	B Lazenby	Elliotts	Yes
Sloop Lagoon	Sep-06	606363	5437730	<1	49	3	147	17 HM captures individuals not marked	5 to 10	B Lazenby	Elliotts	No
Stock Route north of The Gardens	Sep-06	606309	5447462	<1	75	2	150	1 HM capture; 3 SR captures individuals not marked	5 to 10	B Lazenby	Elliotts	No
Site 1 Grants Lagoon	Jun-08	608935	5432268	<0.5	20	2	40	2 SR captures of 1 individual; 4 captures of HM	Gen 4	M Driessen	Elliotts	No
Site 2 Grants Lagoon	Jun-08	608524	5432873	<0.5	20	4	80	2 SA captures of 2 individuals; 19 SR captures of 18 individuals; 17 captures of HM	Long unburnt	M Driessen	Elliotts	No
St Helens (opposite 24751 Tasman Hwy)	Sep-08	606024	5421808	5	20	7	140	No definite detections, one probable BTP	Unknown	T Duddley	Hair tubes	No
The Gardens (northern side of Big Lagoon)	Oct-08	606250	5440720	<1	100	5	500	1 SA capture of 1 individual; 5 HM captures of 3 individuals	5 to 10	B Lazenby	Elliotts	No
Binalong Bay	Nov-08	606923	5434111	5	20	7	140	No definite detections, four Rattus sp.	Unknown	T Duddley	Hair tubes	No
Mt William: North Cobblers Rocks	Nov-08	605620	5472210	<1	100	5	500	3 SR captures of 2 individuals; 6 HM captures of 4 individuals	5 to 10	B Lazenby	Elliotts	No
Waterhouse Conservation Area	Nov-08	556870	5478900	<1	100	5	500	14 SR of 7 individuals; 17 HM captures of 7 individuals	5 to 10	B Lazenby	Elliotts	No
Coles Bay Conservation Area	Nov-08	603700	5337220	<1	100	5	500	35 SR captures of 14 individuals; 4 HM captures of 3 individuals	5 to 10	B Lazenby	Elliotts	No
Behind Swimcart Beach Long Bay	Apr-09	607248	5434358	1	20	7	140	One questionable probable detection of NHM (due to few hairs), 17 definite detections of HM	Unknown	T Duddley	Hair tubes	Yes
Site A The Gardens	Jun-09	606177	5439391	<0.5	25	4	100	2 SR captures of 1 individual; 4 captures of HM	Part 8 year/part long unburnt	M Driessen	Elliotts	No

Site	Date	Easting	Northing	Accuracy of grid ref (km)	No. of traps	No. of nights	Trap nights	Small mammal captures	Predicted fire age	Surveyor	Device	NHM Det?
Site B The Gardens	Jun-09	605970	5439149	<0.5	25	4	100	9 captures of HM	8	M Driessen	Elliotts	No
Site C The Gardens	Jun-09	606268	5439415	<0.5	25	3	75	2 SR captures of 2 individuals; 4 captures of HM	8	M Driessen	Elliotts	No
Site D The Gardens	Jun-09	606130	5439543	<0.5	15	6	44	6 SA captures of 2 individuals; 6 SR captures of 4 individuals; 4 captures of HM	long unburnt	M Driessen	Elliotts	No
Site E The Gardens	Jun-09	606130	5439543	5	25	25	50	6 captures of HM	5	M Driessen	Elliotts	No
Site S The Gardens	Jun-09	607061	5434599	<0.5	25	25	50	4 captures of HM	5	M Driessen	Elliotts	No
Waterhouse Conservation Area	Dec-09	556870	5478900	<1	100	28	2800	1 definite and 3 probable NHM; 10 definite and 15 probable HM	3-5 years	B Lazenby	Hair tubes	Yes
Waterhouse Conservation Area	Feb-10	556870	5478900	<1	80	6	480	36 HM captures of 16 individuals	3 to 5	B Lazenby	Elliotts	No
Pipers River	Aug-10	506386	5451119	<1	100	28	2800	2 definite and 14 probable HM	< 3 years	B Lazenby	Hair tubes	No
Coles Bay Conservation Area	Aug-12	603700	5337220	<1	40	28	1120	11 definite HM	< 10 years	B Lazenby	Hair tubes	No
Freycinet 1 (heathland)	Aug-12	604567	5349830	<1	30	28	840	4 definite HM	3-5 years	B Lazenby	Hair tubes	No
Freycinet 2 (heathland)	Aug-12	605872	5350761	<1	30	28	840	3 definite HM	< 10 years	B Lazenby	Hair tubes	No
Freycinet 3 (Mudstone Ridge)	Aug-12	605551	5349334	<1	20	28	560	1 definite BTP	< 10 years	B Lazenby	Hair tubes	No
Flinders Is:Carnacs 1	Dec-12	583600	5583900	<1	20	4	80	3 SR captures of 1 individual; 1 BR capture of 1 individual	3	B Lazenby	Elliotts	No
Flinders Is:Carnacs 2	Dec-12	583900	5584200	<1	20	4	80	5 SR captures of 3 individuals	3	B Lazenby	Elliotts	No
Flinders Is:Foochow	Dec-12	585800	5585200	<1	20	4	80	2 SR captures of 2 individuals; 1 EPP capture of 1 individual	3	B Lazenby	Elliotts	No
Flinders Is:PCM1	Dec-12	577700	5583500	<1	20	4	80	7 SR captures of 3 individuals; 2 SA captures of 2 individuals	3 to 5	B Lazenby	Elliotts	No
Flinders Is:PCM2	Dec-12	578300	5583700	<1	20	4	80	1 EPP capture of 1 individual; 1 HM capture of 1 individual	3	B Lazenby	Elliotts	No
Flinders Is:PCM3	Dec-12	580200	5583700	<1	20	3	60	2 SA captures of 2 individuals; 2 SR captures of 2 individuals	3 to 5	B Lazenby	Elliotts	No

Site	Date	Easting	Northing	Accuracy of grid ref (km)	No. of traps	No. of nights	Trap nights	Small mammal captures	Predicted fire age	Surveyor	Device	NHM Det?
HS2 Iarapuna	Sep-13	610575	5463242	5	24	3	72	7 HM captures of 5 individuals	2	M Driessen	Elliotts	No
HS3 Iarapuna	Sep-13	610575	5463242	5	24	3	72	7 HM captures of 4 individuals	2	M Driessen	Elliotts	No
HS4 Iarapuna	Sep-13	610575	5463242	5	24	3	72	No captures	2	M Driessen	Elliotts	No
HS5 Iarapuna	Sep-13	610575	5463242	5	24	2	72	No captures	2	M Driessen	Elliotts	No
HS4U Iarapuna	Sep-13	610575	5463242	5	24	3	72	4 SR captures of 2 individuals	long unburt	M Driessen	Elliotts	No
HS6 Iarapuna	Sep-13	610575	5463242	5	24	3	72	5 SR captures of 3 individuals	long unburt	M Driessen	Elliotts	No
HS7 Iarapuna	Sep-13	610575	5463242	5	24	3	72	10 SR captures of 5 individuals	long unburt	M Driessen	Elliotts	No
DS4 Iarapuna	Sep-13	610575	5463242	5	24	2	48	1 SR capture of 1 individuals; 1 BR capture of 1 individual	long unburt	M Driessen	Elliotts	No
EP Iarapuna	Sep-13	610575	5463242	5	25	1	25	2 SR captures of 2 individuals; 2 BR capture of 1 individual; 3 HM captures of 2 individuals	long unburt	M Driessen	Elliotts	No
Coles Bay Conservation Area	Dec-14	603700	5337220	<1	25	28	700	No definite detections; one probable rodent	< 3 years	B Lazenby	Hair tubes	No
Freycinet (historic Hocking site)	Dec-14	605517	5349917	<1	20	28	560	No definite detections; one probable HM	< 3 years	B Lazenby	Hair tubes	No
Freycinet (adjacent to Hepburn Point)	Dec-14	605130	5337153	<1	35	28	980	No detections	10 years or greater	B Lazenby	Hair tubes	No
Ansons Bay 1 (lodge)	Nov-15	609384	5457540	<1	20	3	60	No captures	10 years or greater	B Lazenby	Elliotts	No
Mt William: Eddystone 1 (near Deep Creek)	Nov-15	610548	5463225	<1	20	3	60	No captures	3 to 5	B Lazenby	Elliotts	No
Mt William: Eddystone 2 (west of historic)	Nov-15	611109	5461126	<1	21	3	63	No captures	3 to 5	B Lazenby	Elliotts	No
Ansons Bay 2 (ecotone burnt/unburnt)	Dec-15	608001	5457686	<1	20	2	40	No captures	<3 to 10 years (ecotone)	B Lazenby	Elliotts	No

Site	Date	Easting	Northing	Accuracy of grid ref (km)	No. of traps	No. of nights	Trap nights	Small mammal captures	Predicted fire age	Surveyor	Device	NHM Det?
Mt William: Eddystone 3 (middle)	Dec-15	610765	5462388	<1	20	2	40	No captures	3 to 5	B Lazenby	Elliotts	No
Mt William: Eddystone 4 (historic)	Dec-15	611841	5461159	<1	15	2	30	1 SA capture of 1 individual	10 years or greater	B Lazenby	Elliotts	No
Musselroe Conservation Area	Mar-16	597583	5478013	<1	50	28	1400	1 definite detection of an Antechinus sp. probably SA; 7 definite and 2 probable HM	3-5 years	P Wise	Hair tubes	No
North of Cobbler Rocks	Mar-16	605620	5472210	<1	50	28	1400	15 definite and 1 probable HM	3-5 years	P Wise	Hair tubes	No
Musselroe Conservatio Area	Apr-16	597583	5478013	<1	45	3	135	17 HM captures of 10 individuals	3 to 5	B Lazenby	Elliotts	No
Mt William: North Cobblers Rocks	Apr-16	605620	5472210	<1	50	3	150	2 HM captures of 2 individuals	3 to 5	B Lazenby	Elliotts	No
St Helens and surrounds	May-16	602345	5425782	10	49	7		4 definite HM detections	5 to 15	T Duddley	Hair tubes	No
Winifred Curtis Reserve Scamander	Jun-16	605532	5411136	5	20	7	140	1 BTP, 1 FC	10	T Duddley	Hair tubes	No
Coles Bay block, Flacks Rd, Lot 7	Oct-16	600025	5342211	5	10	7	70	No captures	Unknown	T Duddley	Hair tubes	No
St Helens and surrounds	Unknown	602345	5425782	10	30	7	210	26 definite and 4 probable detections of HM	5 to 15	T Duddley	Hair tubes	No