

Supplementary material for

Where are the platypuses (*Ornithorhynchus anatinus*) now? A snapshot in time of their distribution in the Greater Brisbane region

Tamielle Brunt^{A,F}, *Matt Cecil*^B, *Josh Griffiths*^C, *Christine Adams-Hosking*^D and *Peter Murray*^E

^ASchool of Agriculture and Food Sciences, The University of Queensland, Gatton, Queensland.

^BThe Wildlife Preservation Society of Queensland, Brisbane, Queensland.

^CEnviroDNA Pty Ltd, Parkville, Melbourne.

^DThe University of Queensland, St Lucia, Queensland.

^ESchool of Sciences, University of Southern Queensland, Toowoomba, Queensland.

^FCorresponding author. Email: tamielle.brunt@uqconnect.edu.au

Table S1. Fifty-four waterways sampled for platypus eDNA including 36 waterways where there had been previously recorded sightings of platypus from 1990 to 2016. Twenty-four waterways were positive for platypus eDNA (*). Twenty positively eDNA recorded waterways were waterways previously recorded, from sightings, to have platypus. Yearly eDNA results and the number of times the sites had sampling repeated over the four years.

No.	Previously recorded platypus observation waterways			Sites	Environmental DNA yearly results at sites				No. times repeated sampling
	Waterway	Year recorded	Source		2016	2017	2018	2019	
1	Albany Creek*	2001	Natrass (2002)	ALBA01	Negative	NA	Equivocal	Equivocal	3
				ALBA02	Negative	NA	Positive	Positive	3
				ALBA03	NA	Positive	Positive	Positive	3
2	Albert River*	1994, 2001	Natrass (2002); Platypus Watch Network	LCA01	NA	NA	Negative	Negative	2
				LCA02	NA	NA	Negative	Negative	2
				LCA03	NA	NA	Negative	Negative	2
				LCA05	NA	NA	Positive	Positive	2
				LCA06	NA	NA	Negative	Negative	2

				LCA08	NA	NA	Equivocal	Negative	2
				LCA09	NA	Negative	Positive	Negative	3
				LCA10	NA	Negative	Equivocal	Negative	3
				LCA12	NA	NA	Equivocal	Positive	2
				LCA13	NA	NA	Positive	Positive	2
				LCA14	NA	NA	Equivocal	Equivocal	2
				LCA15	NA	NA	NA	Negative	1
				LCA16	NA	NA	NA	Negative	1
3	Bremer River	1992	Platypus Watch Network	BREM01	Negative	Negative	Negative	NA	3
				BREM02	Negative	Negative	Negative	NA	3
				BREM03	Negative	Negative	Negative	NA	3
				BREM04	Negative	Negative	Negative	NA	3
				BREM05	Negative	Negative	Negative	NA	3
4	Buhot Creek	2005	Public land holder observation	BUHOT01	NA	Negative	NA	NA	1
				BUHOT02	NA	NA	NA	Negative	1
5	Bullock Head Creek*	2011	Local record	BULL01	Positive	Equivocal	Equivocal	Equivocal	4
				BULL02	NA	Positive	Positive	Positive	4
6	Bundamba Creek*	2015	Local record	BUND01	Negative	Negative	Positive	Negative	4
				BUND02	Negative	Negative	Negative	Negative	4
				BUND03	Negative	Negative	Negative	Negative	4
				BUND04	NA	NA	NA	Positive	1
				BUND05	NA	NA	NA	Negative	1
				BUND06	NA	NA	NA	Negative	1
7	Burpengary Creek*	2001	Nattrass (2002)	BURP01	Positive	Negative	Positive	NA	3
				BURP02	Equivocal	Positive	Positive	NA	3
8	Cabbage Tree Creek	2001	Nattrass (2002)	CABT01	Negative	NA	NA	NA	1
				CABT02	Negative	NA	NA	NA	1
				CABT02 19	NA	NA	NA	Negative	1
				CABT03	NA	NA	NA	Negative	1
				CABT04	NA	NA	NA	Negative	1
				CABT05	NA	NA	NA	Negative	1

9	Caboolture River*	2001	Natrass (2002)	UPCAB01	positive	Positive	Positive	NA	3
				UPCAB02	positive	NA	Positive	NA	2
				UPCAB03	NA	Positive	NA	NA	1
10	California Creek	1993	Platypus Watch Network	CAL01	Negative	NA	NA	NA	1
				CAL02	Negative	NA	NA	NA	1
11	Cedar Creek*	2001	Natrass (2002)	CEDAR01	Positive	NA	NA	NA	1
12	Collins Creek	NA	Logan City Council	COLL01	Negative	NA	NA	NA	1
13	Delaney's Creek*	NA	Anecdotal – local camping area	DEL01	NA	Positive	NA	NA	1
14	Dunn Creek	NA	Logan City Council	DUNN01	Negative	Negative	Negative	NA	3
15	Enoggera Creek	2001	Natrass (2002)	ENOG01	Negative	NA	Negative	NA	2
				ENOG02	Negative	Negative	Negative	NA	3
				ENOG03	NA	Negative	Negative	NA	2
16	Eprapah Creek	NA	Anecdotal – public observation	EPRA01	Negative	NA	NA	NA	1
17	Fish Creek	2001	Natrass (2002)	FISH01	Negative	NA	NA	NA	1
18	Flagstone Creek	NA	Logan City Council	FLAG01	Negative	Negative	Negative	NA	3
19	Four Mile Creek	NA	Anecdotal – public observation	FM01	NA	NA	Negative	Negative	2
				FM02	NA	NA	NA	Negative	1
				FM03	NA	NA	NA	Negative	1
20	Hilliards Creek	2005	Platypus Watch Network	HILL01	Negative	NA	NA	NA	1
				HILL02	Negative	NA	NA	NA	1
				HILL03	Negative	NA	NA	NA	1
21	Kedron Brook/Creek	2001	Natrass (2002), Platypus Watch Network	KED01	Negative	NA	Negative	NA	2
				KED02	Negative	NA	Negative	NA	2
				KED03	NA	Negative	Negative	Negative	3
				KED04	NA	NA	Negative	NA	1
				KED05	NA	NA	NA	Negative	1
				KED06	NA	NA	NA	Negative	1
				KED07	NA	NA	NA	Negative	1
				KED08	NA	NA	NA	Negative	1

22	Kholo Creek*	2001	Nattrass (2002)	KHOL001	Negative	Positive	Negative	NA	3
				KHOL002	Equivocal	Negative	Equivocal	NA	3
23	Kobble Creek - tributary of North Pine River	1990, 1991	PlatypusWatch Network	NP01	Negative	NA	NA	NA	1
24	Logan River	1991	Logan City Council	LOG01	NA	Negative	NA	NA	1
				LOG02	NA	Negative	NA	NA	1
				LOG03	NA	Negative	NA	NA	1
25	Lagoon Creek*	2001, 2015	Nattrass (2002), Local records – Friends of Lagoon Creek	LAG01	Equivocal	NA	Positive	NA	2
				LAG02	Positive	NA	Positive	NA	2
				LAG03	NA	NA	NA	Positive	1
				LAG04	NA	NA	NA	Positive	1
26	Moggill Creek*	2005 – on-going	Annual local survey from Moggill Creek Catchment Group	MOG 01	Positive	NA	NA	NA	1
27	Nerum Creek*	1993, 2001	PlatypusWatch Network, Nattrass (2002)	NER01	NA	Positive	NA	NA	1
28	North Pine River*	2002, 2003, 2005	PlatypusWatch Network	NP02	Negative	Negative	Equivocal	Equivocal	4
				NP03	NA	Positive	Positive	NA	2
				NP04	NA	Positive	Positive	NA	2
29	One Mile Tributary	NA	Moreton Bay Regional Council	OMT01	NA	NA	NA	Negative	1
				OMT02	NA	NA	NA	Negative	1
30	Opossum Creek*	NA	Ipswich City Council	OPOSS01	NA	Negative	Positive	Positive	3
				OPOSS02	NA	NA	NA	Negative	1
				OPOSS04	NA	NA	NA	Negative	1
31	Oxley Creek	1993	PlatypusWatch Network	OX01	Negative	NA	NA	NA	1
				OX03	Negative	NA	NA	NA	1
32	Priest Gully	NA	Logan City Council	PG01	Negative	NA	NA	NA	1
				PG02	NA	NA	NA	Negative	1
33	Pullen Pullen Creek*	1994, 2004	PlatypusWatch Network	PULL01	Positive	NA	NA	NA	1
				PULL02	Positive	NA	Positive	NA	2

34	Purga Creek	NA	Ipswich City Council	PURGA01	Negative	NA	Negative	NA	2
35	Samford Creek*	NA	Moreton Bay Regional Council	SAM01	NA	NA	NA	Positive	1
36	Sandy Creek at Albany Creek*	2001	Nattrass (2002)	ALBSAN01	NA	NA	Positive	Positive	2
				ALBSAN02	NA	NA	Positive	Positive	2
37	Sandy Creek*	1993	PlatypusWatch Network	SAND01	NA	Negative	Positive	Negative	3
				SAND02	NA	Positive	Positive	Positive	3
				SAND03	NA	Negative	Negative	Positive	3
				SAND04	NA	NA	Negative	Negative	1
				SAND05	NA	NA	NA	Negative	1
38	Scrubby Creek	2004, 2005	PlatypusWatch Network	SCRUB01	Negative	Negative	NA	NA	2
				SCRUB02	Negative	Negative	NA	NA	2
39	Sheep Station Creek	1994	PlatypusWatch Network	SHEEP01	NA	Negative	NA	NA	1
40	Sideling Creek*	NA	Moreton Bay Regional Council	SIDE01	NA	NA	NA	Positive	1
				SIDE02	NA	NA	NA	Negative	1
				SIDE03	NA	NA	NA	Positive	1
41	Six Mile Creek*	2015	Ipswich City Council	SIXM01	Negative	Negative	Negative	Negative	4
				SIXM02	NA	NA	Positive	Negative	2
				SIXM03	NA	NA	Positive	Positive	2
				SIXM04	NA	NA	NA	Negative	1
				SIXM05	NA	NA	NA	Negative	1
42	Slacks Creek	2003	PlatypusWatch Network	SLAC01	Negative	NA	NA	NA	1
				SLAC02	Negative	Negative	NA	NA	2
43	Small Creek – tributary of the Albert River	NA	Logan City Council	LCA07	Equivocal	Equivocal	Negative	Equivocal	4
44	South Pine River*	2007, 2015, 2016	PlatypusWatch Network, Queensland Government (2017)	STHP01	Positive	NA	NA	NA	1
				SP02	NA	NA	NA	Positive	1
				SP03	NA	NA	NA	Positive	1
				SP04	NA	NA	NA	Positive	1

				SP05	NA	NA	NA	Equivocal	1
				SP06	NA	NA	NA	Positive	1
45	South Waraba Creek*	1992	PlatypusWatch Network	SOUWARA01	NA	Positive	Positive	NA	2
				SOUWARA02	Positive	NA	Positive	NA	2
46	Tingalpa Creek	NA	Anecdotal – public observation	TING01	Negative	NA	NA	NA	1
				TING02	Negative	NA	NA	NA	1
				TING03	NA	NA	NA	Negative	1
47	Todd’s Creek	NA	Anecdotal – public observation	TODD01	NA	Negative	NA	NA	1
48	Undullah	NA	Logan City Council	UND01	Negative	NA	NA	NA	1
49	Wallaby Creek	2005	PlatypusWatch Network	WALL01	Negative	NA	NA	NA	1
				WALL02	Negative	NA	NA	NA	1
50	Waraba Creek*	1991, 1993, 2003, 2004	PlatypusWatch Network	WAR01	Negative	Positive	Positive	NA	3
51	Warrill Creek	NA	Anecdotal – public observation	WARR01	NA	Negative	Negative	NA	2
				WARR02	NA	Negative	NA	NA	1
52	Windaroo Creek – tributary of the Albert River	2001	Nattrass (2002)	WIND01	NA	Negative	NA	NA	1
				WIND02	NA	Negative	NA	NA	1
				WIND03	NA	NA	NA	Negative	1
				WIND04	NA	NA	NA	Negative	1
53	Woogaroo Creek*	2015	Ipswich City Council	WOOG01	Negative	Equivocal	Positive	Negative	4
				WOOG02	Positive	Negative	Equivocal	Negative	4
				WOOG03	Positive	Negative	Equivocal	Positive	4
				WOOG04	NA	NA	NA	Negative	1
				WOOG05	NA	NA	NA	Negative	1
54	Woolaman Creek	NA	Logan City Council	WOLL01	Negative	NA	NA	NA	1