

Supplementary Materials

Table S1. Mosquito trapping data for University of Sydney, Camperdown, by location, date and trapping method. Ae = *Aedes*, An = *Anopheles*, Cq = *Coquilleltidia*, Cx = *Culex*, Ma = *Mansonia*, Tp = *Tripteroides*, Ve = *Verrallina*

University of Sydney

Day 1 12 February 2024

[illegible]

3 2

University of Sydney

Day 2 13 February 2024

[illegible]

3 4

Table S2. Mosquito trapping data for Newington Nature Reserve, Sydney Olympic Park, by location, date and trapping method. Ae = Aedes, An = Anopheles, Cq = Coquillettia, Cx = Culex, Ma = Mansonia, Tp = Tripteroides, Ve = Verrallina

Adult Mosquito Collection Data Sheet - CO2 Trap Comparison 2024

Newington Nature Reserve Day 1 22 February 2024

Species/Trap Site	ACID 1	DRY-ICE 1	ACID 2	DRY-ICE 2	ACID 3	DRY-ICE 3	ACID 4	DRY-ICE 4	TOTAL
<i>Ad.venustipes</i>									0
<i>Ae. aculeatus</i>						1	1	1	3
<i>Ae. alboannulatus</i>									0
<i>Ae. alternans</i>	5	21	9	15	5	13	3	1	72
<i>Ae. australis</i>									0
<i>Ae. camptorhynchus</i>									0
<i>Ae. eidsvoldensis</i>									0
<i>Ae. flavifrons</i>									0
<i>Ae. imperfectus</i>									0
<i>Ae. mallochi</i>									0
<i>Ae. nr. monocellatus</i>									0
<i>Ae. multiplex</i>						1			1
<i>Ae. notoscriptus</i>	25	12	12	14	1	1		2	67
<i>Ae. procax</i>			2	3	4	4		4	17
<i>Ae. rubrithorax</i>									0
<i>Ae. theobaldi</i>									0
<i>Ae. vigilax</i>	58	117	131	232	82	119	91	215	1045
<i>Ae. vittiger</i>									0
<i>Ae. Marks #51</i>									0
<i>An. annulipes</i>	3	13	5	9	3	19	4	20	76
<i>An. atripes</i>									0
<i>Cq. linealis</i>	6	11	8	6	8	4	8	18	69
<i>Cq. variagata</i>									0
<i>Cq. xanthogaster</i>	1							1	2
<i>Cx. annulirostris</i>	3	31	24	40	16	28	20	37	199
<i>Cx. australicus</i>									0
<i>Cx. bitaeniorhynchus</i>									0
<i>Cx. halifaxii</i>									0
<i>Cx. molestus</i>				2				2	4
<i>Cx. orobostensis</i>		1		3		1	1	1	7
<i>Cx. postspiraculosus</i>									0
<i>Cx. quiquefasciatus</i>									0
<i>Cx. sitiens</i>	17	61	13	18	10	12	7	11	149
<i>Cx. squamosus</i>									0
<i>Ma. uniformis</i>	1		1			1		4	7
<i>Tp. atripes</i>						1			1
<i>Ur. pygmaea</i>									0
<i>Ve. funerea</i>						1			1
<i>Ve. Marks 52</i>									0
Total	119	267	205	342	129	206	135	317	1720

Mean ACID	Mean DRY-ICE
0	0
1	2
0	0
22	50
0	0
0	0
0	0
0	0
0	0
0	0
0	0
1	1
38	29
6	11
0	0
0	0
362	683
0	0
0	0
15	61
0	0
30	39
0	0
1	1
63	136
0	0
0	0
0	0
0	4
1	6
0	0
0	0
47	102
0	0
2	5
0	1
0	0
0	1
0	0
588	1132

Species Richness	9	8	9	10	8	14	8	13	16
Species/Trap Site	ACID 1	DRY-ICE 1	ACID 2	DRY-ICE 2	ACID 3	DRY-ICE 3	ACID 4	DRY-ICE 4	TOTAL
<i>Ad.venustipes</i>									0
<i>Ae. aculeatus</i>			1			1	2	3	8
<i>Ae. alboannulatus</i>									0
<i>Ae. alternans</i>	14	12	19	29	6	30	4	3	117
<i>Ae. australis</i>									0
<i>Ae. camptorhynchus</i>									0
<i>Ae. eidsvoldensis</i>									0
<i>Ae. flavifrons</i>									0
<i>Ae. imperfectus</i>									0
<i>Ae. mallochi</i>									0
<i>Ae. nr. monocellatus</i>									0
<i>Ae. multiplex</i>			1						1
<i>Ae. notoscriptus</i>	24	13	12	33	1	4	4	2	93
<i>Ae. procax</i>	2	2		4	4	2		1	15
<i>Ae. rubrithorax</i>									0
<i>Ae. theobaldi</i>									0
<i>Ae. vigilax</i>	197	267	83	513	205	307	183	263	2018
<i>Ae. vittiger</i>									0
<i>Ae. Marks #51</i>									0
<i>An. annulipes</i>	5	16	1	72	1	13		23	131
<i>An. atripes</i>									0
<i>Cq. linealis</i>	19	29	9	64	12	23	21	23	200
<i>Cq. variagata</i>									0
<i>Cq. xanthogaster</i>		1	1						2
<i>Cx. annulirostris</i>	48	28	16	69	41	28	32	27	289
<i>Cx. australicus</i>									0
<i>Cx. bitaeniorhynchus</i>									0
<i>Cx. halifaxii</i>									0
<i>Cx. molestus</i>						1			1
<i>Cx. orobostensis</i>					1				1
<i>Cx. postspiraculosus</i>									0
<i>Cx. quiquefasciatus</i>		1		4				2	7
<i>Cx. sitiens</i>	8	20	12	17	21	19	14	13	124
<i>Cx. squamosus</i>									0
<i>Ma. uniformis</i>		1		1					2
<i>Tp. atripes</i>									0
<i>Ur. pygmaea</i>									0
<i>Ve. funerea</i>							1		1
<i>Ve. Marks 52</i>									0
Total	317	390	155	806	293	429	262	358	3010

Mean ACID	Mean DRY-ICE
0	0
5	3
0	0
43	74
0	0
0	0
0	0
0	0
0	0
0	0
0	0
1	0
41	52
6	9
0	0
0	0
668	1350
0	0
0	0
7	124
0	0
61	139
0	0
1	1
137	152
0	0
0	0
0	0
0	1
1	0
0	0
0	7
55	69
0	0
0	2
0	0
0	0
1	0
0	0
1027	1983

Species Richness	8	11	10	10	10	10	8	10	16
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Table S3. CO₂ cost per night per source, February 2024. Operational cost (1 night) excludes cargo change

Agent	Quantity sold	Unit cost	Quantity used for 1 night	Source	Operational cost (1 night)
Dry Ice	Variable	\$12/kg	1.5kg	Dry Ice Australia	\$18
				Industrial supply	
		\$8/kg			\$12
Citric Acid	10kg	\$62	500g	BLANTS Wellbeing & Lifestyle	\$3.1
NaHCO ₃	10kg	\$54	500g	BLANTS Wellbeing & Lifestyle	\$2.7

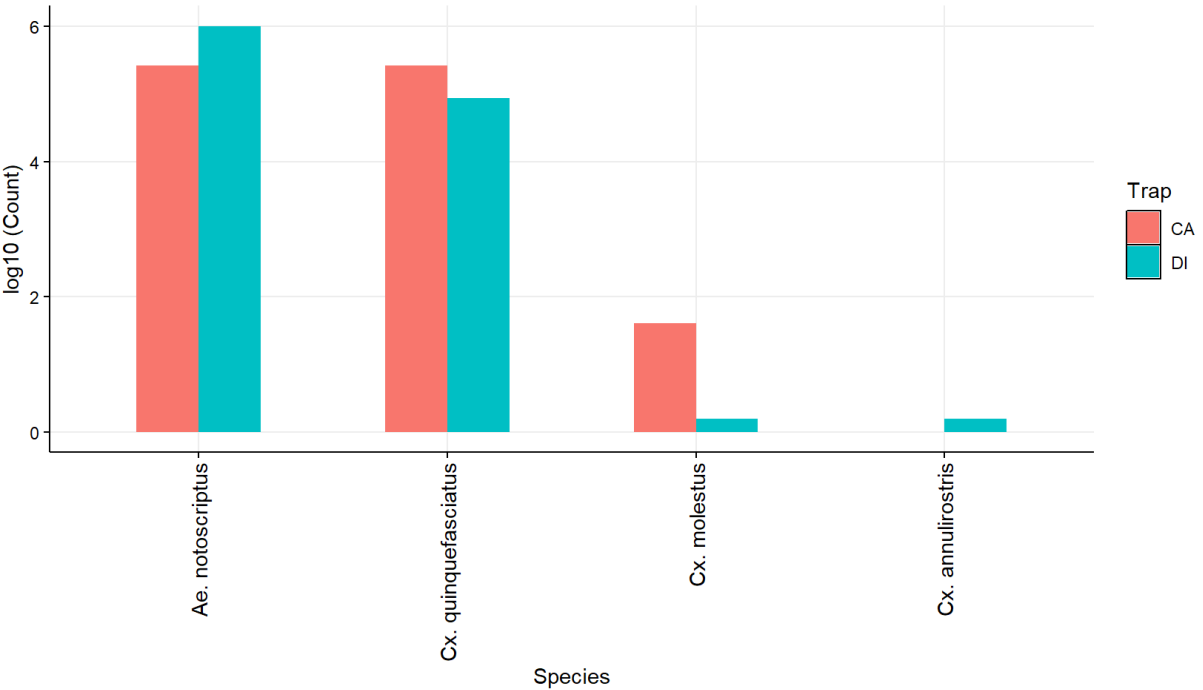


Figure S1 Distribution of mosquito species captured at the University of Sydney, Camperdown, using citric acid-based (CA) and dry ice-based (DI) traps. The bar plot illustrates the total count of four mosquito species. The y-axis mosquito count is presented in a log10 scale to facilitate visualisation of differences in species counts. Ae = *Aedes*, Cx = *Culex*

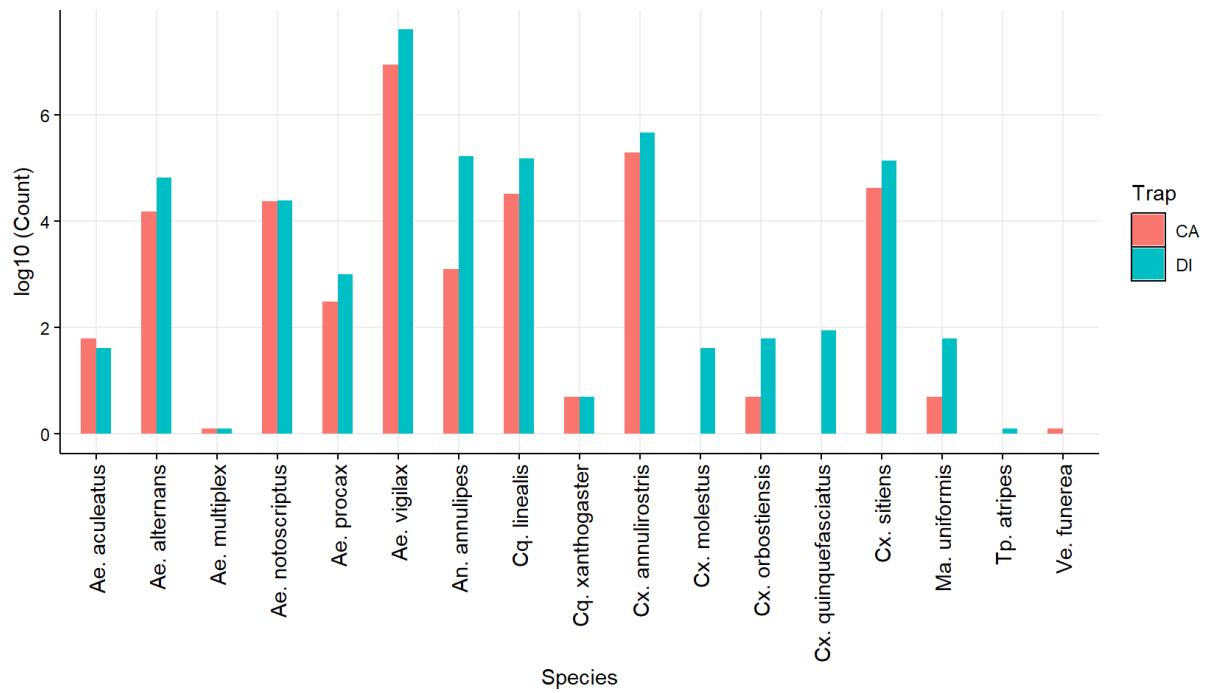


Figure S2 Distribution of mosquito species captured in Newington Nature Reserve using citric acid-based (CA) and dry ice (DI)-based traps. The bar plot illustrates the total count of seventeen mosquito species. The y-axis mosquito count is presented in log10 scale to facilitate visualisation of differences in species counts. Ae = *Aedes*, An = *Anopheles*, Cq = *Coquillettidia*, Cx = *Culex*, Ma = *Mansonia*, Tp = *Tripteroides*, Ve = *Verrallina*

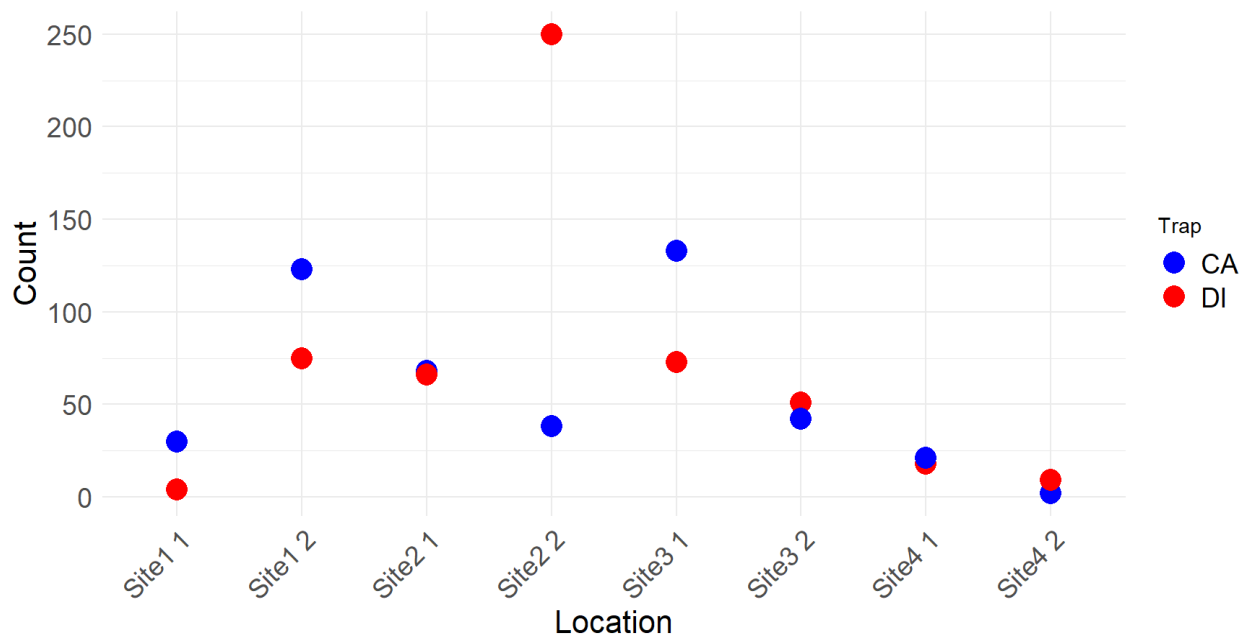


Figure S3 Comparison of mosquito catch between the citric acid (CA) treatment and the dry ice (DI) treatment in University of Sydney, Camperdown.

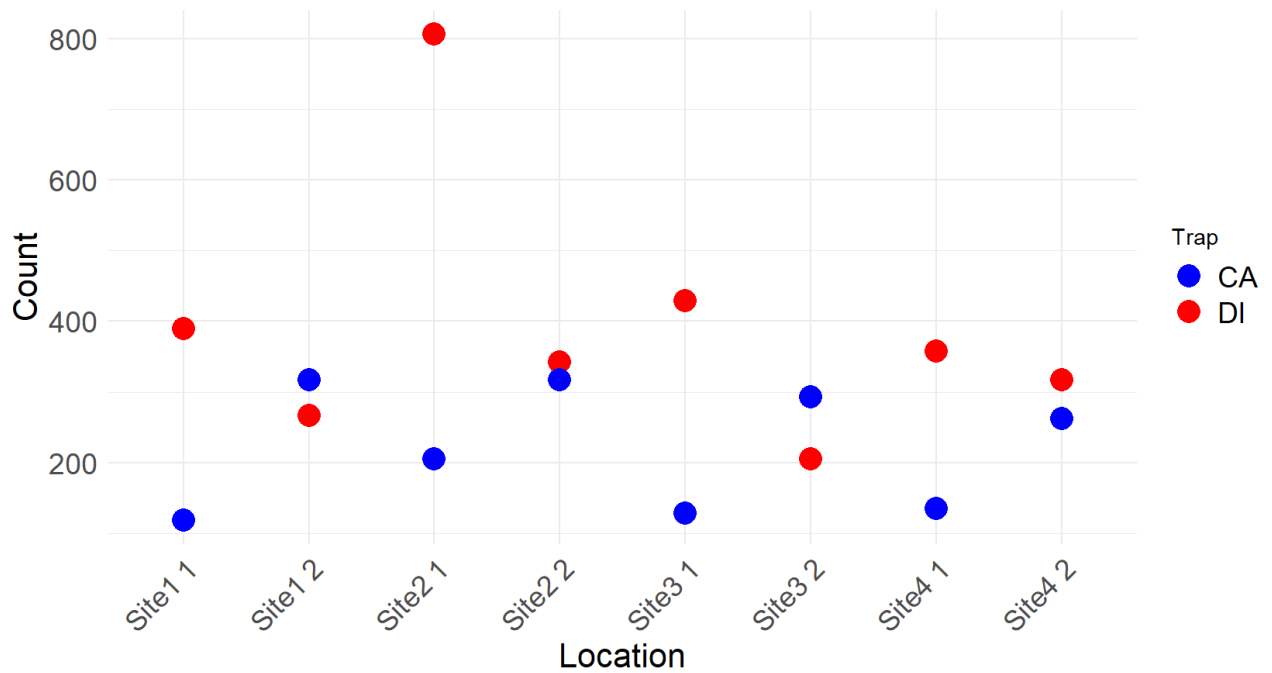


Figure S4 Comparison of mosquito catch between the citric acid (CA) treatment and the dry ice (DI) treatment in Newington Nature Reserve, Sydney Olympic Park.