

ISU Monarch Data Summary for NCIG

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Table 1: Bee species: mean count across all surveys

year	Bee Species	Native Status	tbyd1a	tbyd2a	tcr1a	tuth1a	tuth2a	tuth3b
2016	bumble	introduced	-	1	-	-	1	-
2016	honey	introduced	-	2	1	-	-	-
2016	honey	native	-	-	-	-	-	2
2016	solitary	introduced	-	2	1	-	-	-
2016	solitary	native	-	-	-	-	-	2
2017	bumble	introduced	-	-	-	6	-	-
2017	bumble	native	2	-	-	1	-	-
2017	honey	introduced	-	-	5	-	-	-
2017	solitary	both	-	-	2	-	-	-
2017	solitary	introduced	-	-	2	-	2	-
2017	solitary	native	-	-	1	-	-	-
2018	bumble	introduced	3	4	-	-	3	-
2018	bumble	native	13	5	-	-	-	2
2018	honey	introduced	2	1	4	-	-	-
2018	honey	native	4	10	8	-	1	2
2018	solitary	both	-	1	-	-	-	-
2018	solitary	introduced	54	43	7	-	4	11
2018	solitary	native	5	9	6	8	49	13

Table 2: 2018 bee species: mean count across all surveys

year	Bee Species	Nectar Plant Species	tbyd1a	tbyd2a	tcr1a	tuth1a	tuth2a	tuth3b
2018	bumble	field thistle	-	-	-	-	-	0.20
2018	bumble	musk thistle	-	-	-	-	0.30	-
2018	bumble	ox eye sunflower	0.10	-	-	-	-	-
2018	bumble	red clover	0.30	0.40	-	-	-	-
2018	bumble	yellow coneflower	1.20	0.50	-	-	-	-
2018	honey	black eyed susan	-	-	0.80	-	-	0.30
2018	honey	hoary vervain	-	-	-	-	0.10	-
2018	honey	ox eye sunflower	0.20	0.40	-	-	-	-
2018	honey	white clover	0.20	0.10	0.40	-	-	-
2018	honey	wild parsnip	0.10	-	-	-	-	-
2018	honey	yellow coneflower	0.20	0.60	-	-	-	0.10
2018	solitary	black eyed susan	-	-	0.40	-	-	0.70
2018	solitary	brown eyed susan	0.10	-	-	-	-	-
2018	solitary	buffalobur nightshade	-	-	-	0.20	-	-
2018	solitary	butterfly milkweed	-	-	0.40	-	-	-
2018	solitary	canada thistle	-	-	-	-	0.10	-
2018	solitary	common dandelion	-	0.10	-	-	-	-
2018	solitary	common milkweed	-	-	0.10	-	-	-
2018	solitary	field thistle	-	-	-	-	-	0.40
2018	solitary	hoary vervain	-	-	-	0.10	0.30	-
2018	solitary	marestail	-	-	0.30	1.00	4.60	2.10
2018	solitary	marijuana	-	-	-	-	0.40	-
2018	solitary	musk thistle	-	-	-	-	0.20	0.40
2018	solitary	ox eye sunflower	0.30	0.20	-	-	-	0.10
2018	solitary	partridge pea	-	-	-	-	-	0.10
2018	solitary	red clover	0.25	0.20	0.20	-	-	-
2018	solitary	white clover	5.60	3.85	0.25	-	-	0.15
2018	solitary	white sweet clover	0.60	-	-	-	-	-
2018	solitary	wild parsnip	1.95	1.95	-	-	-	2.50
2018	solitary	yellow coneflower	0.10	0.70	0.20	-	-	0.25
2018	solitary	yellow sweet clover	-	1.20	-	-	-	-

Table 3: 2018 bumble bee: percent usage across all surveys

Nectar Plant Species	tbyd1a	tbyd2a	tuth2a	tuth3b
field thistle	0.00	0.00	0.00	1.00
musk thistle	0.00	0.00	1.00	0.00
ox eye sunflower	0.06	0.00	0.00	0.00
red clover	0.19	0.44	0.00	0.00
yellow coneflower	0.75	0.56	0.00	0.00

Table 4: 2018 honey bee: percent usage across all surveys

Nectar Plant Species	tbyd1a	tbyd2a	tcrala	tuth2a	tuth3b
black eyed susan	0.00	0.00	0.67	0.00	0.75
hoary vervain	0.00	0.00	0.00	1.00	0.00
ox eye sunflower	0.29	0.36	0.00	0.00	0.00
white clover	0.29	0.09	0.33	0.00	0.00
wild parsnip	0.14	0.00	0.00	0.00	0.00
yellow coneflower	0.29	0.55	0.00	0.00	0.25

Table 5: 2018 solitary bee: percent usage across all surveys

Nectar Plant Species	tbyd1a	tbyd2a	tcrala	tuth1a	tuth2a	tuth3b
black eyed susan	0.00	0.00	0.32	0.00	0.00	0.10
brown eyed susan	0.01	0.00	0.00	0.00	0.00	0.00
buffalobur nightshade	0.00	0.00	0.00	0.27	0.00	0.00
butterfly milkweed	0.00	0.00	0.16	0.00	0.00	0.00
canada thistle	0.00	0.00	0.00	0.00	0.02	0.00
common dandelion	0.00	0.01	0.00	0.00	0.00	0.00
common milkweed	0.00	0.00	0.04	0.00	0.00	0.00
field thistle	0.00	0.00	0.00	0.00	0.00	0.06
hoary vervain	0.00	0.00	0.00	0.07	0.05	0.00
marestail	0.00	0.00	0.12	0.67	0.82	0.30
marijuana	0.00	0.00	0.00	0.00	0.07	0.00
musk thistle	0.00	0.00	0.00	0.00	0.04	0.06
ox eye sunflower	0.02	0.01	0.00	0.00	0.00	0.01
partridge pea	0.00	0.00	0.00	0.00	0.00	0.01
red clover	0.03	0.01	0.08	0.00	0.00	0.00
white clover	0.67	0.55	0.20	0.00	0.00	0.04
white sweet clover	0.04	0.00	0.00	0.00	0.00	0.00
wild parsnip	0.23	0.28	0.00	0.00	0.00	0.35
yellow coneflower	0.01	0.05	0.08	0.00	0.00	0.07
yellow sweet clover	0.00	0.09	0.00	0.00	0.00	0.00

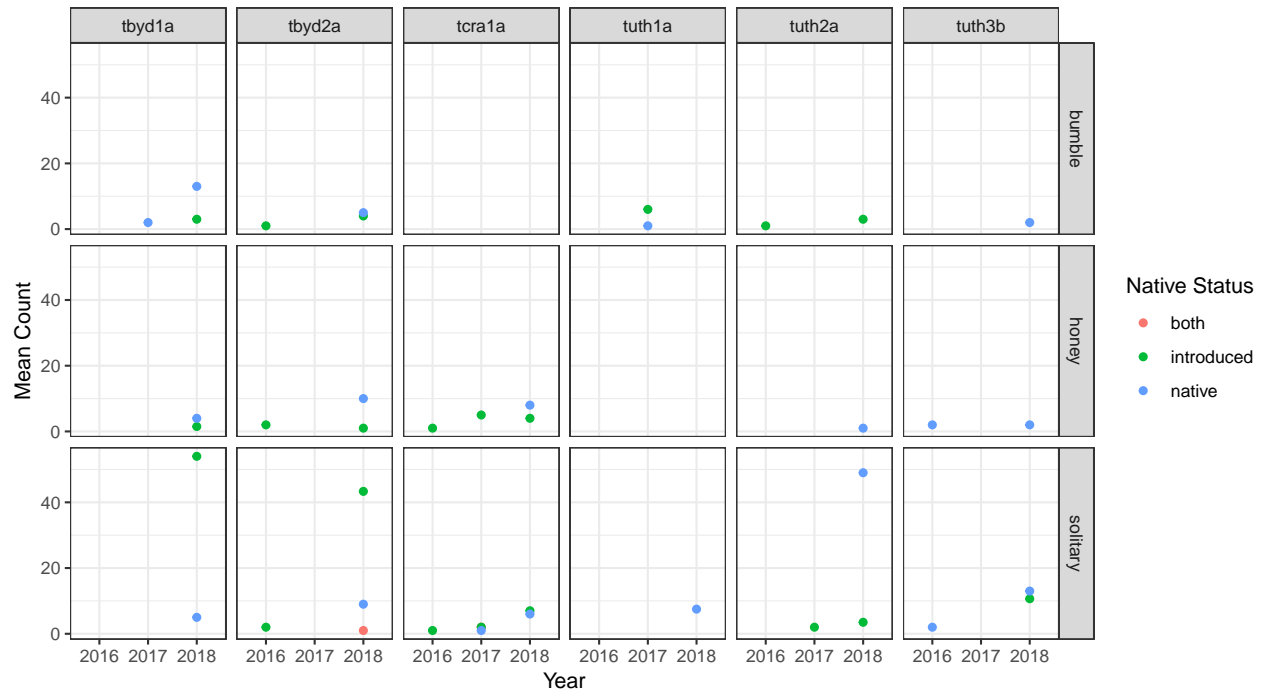


Figure 1: This is a visual representation of Table ef{t:bee}.

Table 6: Bee species: yearly counts across all species

2016	2017	2018
16	23	539

Table 7: Bee species: yearly counts broken down by species

Bee Species	2016	2017	2018
bumble	2	9	30
honey	8	5	35
solitary	6	9	474