ISU Monarch Data Summary for NCIG

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2019-04-05

Table 1 provides mean count of milkweed ramets averaged across all data collection events. Values in table represent the specific counting unit for each species, not necessarily a whole plant. Table 5 provides mean density of milkweed ramets (per 100m2) averaged across all data collection events. Values in table represent the specific counting unit for each species, not necessarily a whole plant.

Table 1: 2017 ramet plant species: mean count across all surveys

Nectar Plant Species	tall1a	tall2a	tapp1a	tarm1b	tarm2a	tbcr1a	tbcr2a	tber1a	tber3a	tbyd1a	tbyd2a	tcra1a	tcre1a	tdav1a	tdun2a	tdun3a	tgro1a	tgro2a	thar1a	tjon1a	tnie1a	tnkn1a	tnkn2a	tnor1b	tpio1a
butterfly milkweed ramet	-	-	-	-	-	-	-	-	-	0.3	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
common milkweed ramet	-	-	-	2.0	-	-	-	-	-	2.7	1.7	0.3	-	111.0	-	-	-	4.7	4.0	8.3	13.3	-	-	88.3	8.3
swamp milkweed ramet	-	-	-	0.3	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	9.0	1.7

Table 2: 2018 ramet plant species: mean count across all surveys

Nectar Plant Species	tall1a	tall2a	tapp1a	tarm1b	tarm2a	tbcr1a	tbcr2a	tber1a	tber3a	tbyd1a	tbyd2a	tcra1a	tcre1a	tdav1a	tdun2a	tdun3a	tfis1a	tgro1a	tgro2a	thar1a	tjon1a	tnie1a	tnkn1a	tnkn2a	tnor1b
butterfly milkweed ramet	2.7	-	-	-	-	0.3	-	-	0.3	0.3	-	-	-	-	-	0.3	0.3	-	-	-	-	-	-	-	-
common milkweed ramet	-	-	0.3	-	0.3	1.3	0.3	1.0	0.3	2.3	1.7	2.3	0.3	1.7	-	1.0	-	0.7	4.7	5.7	2.3	16.0	-	0.3	9.3
swamp milkweed ramet	-	-	0.3	-	-	-	-	1.7	-	-	0.3	-	-	-	-	-	-	0.3	-	-	-	-	-	-	1.7

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Table 3: 2017 ramet plant species: mean count across all surveys

Nectar Plant Species	tall2a	tarm1b	tber3a	tnkn1a
milkweed strip: common milkweed ramet	0.3	20.3	-	-

Table 4: 2018 ramet plant species: mean count across all surveys

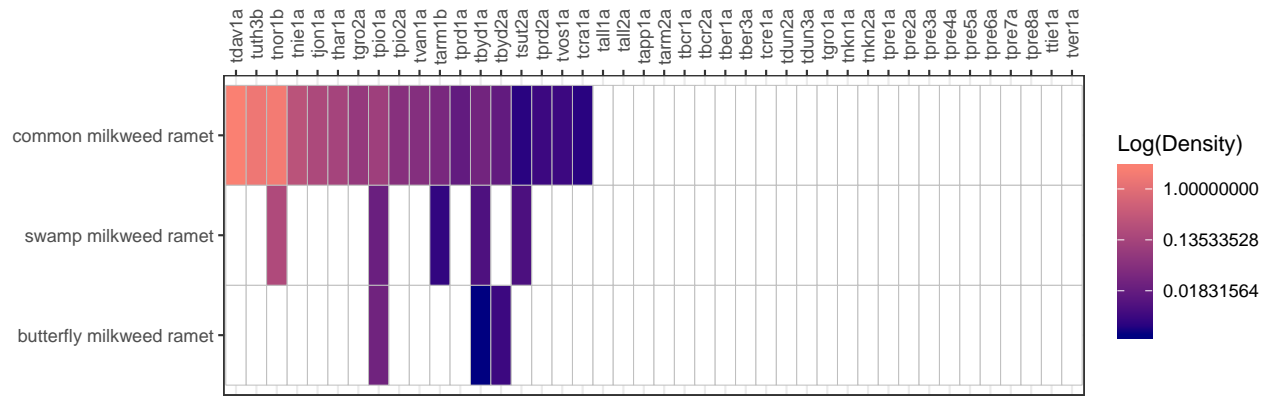| Nectar Plant Species	tall2a	tarm1b	tber3a	tnkn1a
milkweed strip: common milkweed ramet	4.0	14.3	-	-

Figure 1: This is a heatmap for density of ramet species with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2017.
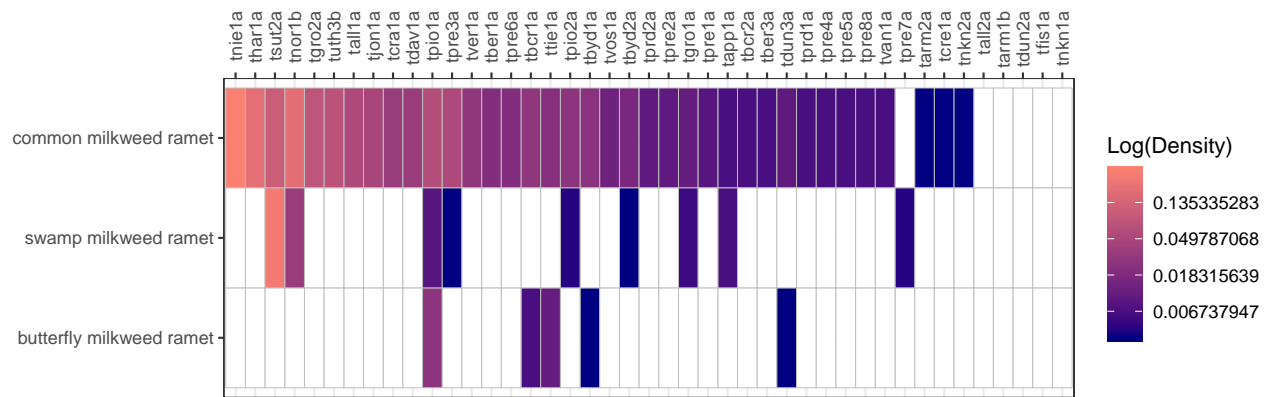

Figure 2: This is a heatmap for density of ramet species with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2018.
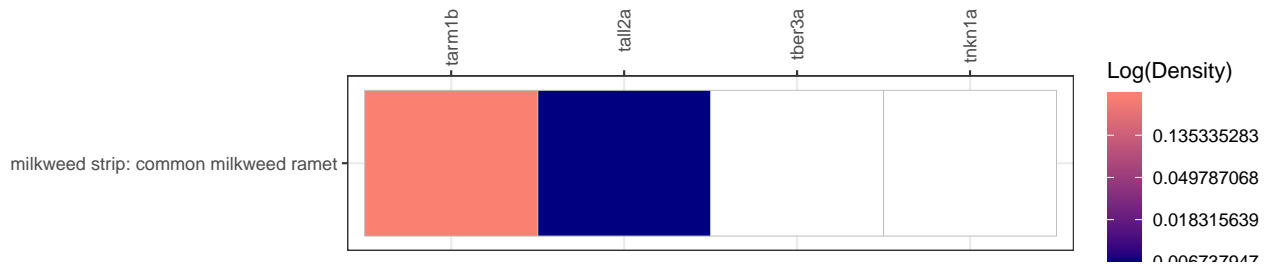

Figure 3: This is a heatmap for density of milkweed species with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2017.
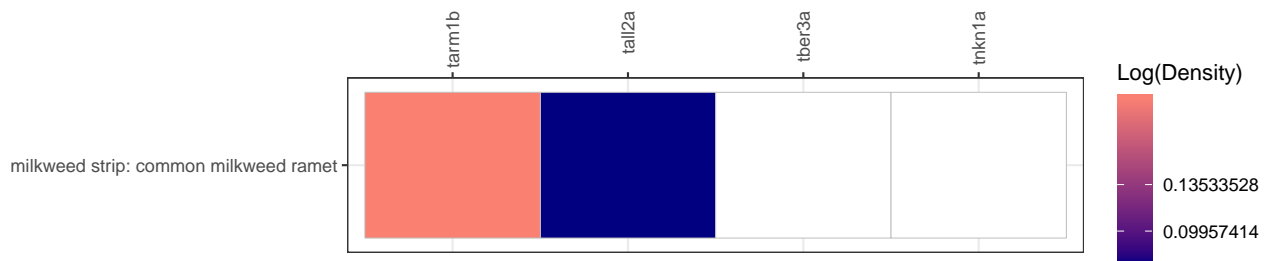

Figure 4: This is a heatmap for density of milkweed species with transects on the columns and species on the rows sorting transects by average density and sorting species by average presence for year 2018.

Table 5: 2017 Nectar plant species density: average density (count / m2) across all rounds

Nectar Plant Species	tall1a	tall2a	tapp1a	tarm1b	tarm2a	tbcr1a	tbcr2a	tber1a	tber3a	tbyd1a	tbyd2a	tcra1a	tcre1a	tdav1a	tdun2a	tdun3a	tgro1a	tgro2a	thar1a	tjon1a	tnie1a	tnkn1a	tnkn2a	tnor1b	tpio1a
butterfly milkweed ramet	-	-	-	-	-	-	-	-	-	0.00	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03
common milkweed ramet	-	-	-	0.03	-	-	-	-	-	0.03	0.02	0.00	-	2.22	-	-	-	0.08	0.13	0.17	0.27	-	-	1.77	0.10
swamp milkweed ramet	-	-	-	0.01	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	0.02

Table 6: 2018 Nectar plant species density: average density (count / m2) across all rounds

Nectar Plant Species	tall1a	tall2a	tapp1a	tarm1b	tarm2a	tbcr1a	tbcr2a	tber1a	tber3a	tbyd1a	tbyd2a	tcra1a	tcre1a	tdav1a	tdun2a	tdun3a	tfis1a	tgro1a	tgro2a	thar1a	tjon1a	tnie1a	tnkn1a	tnkn2a	tnor1b
butterfly milkweed ramet	0.05	-	-	-	-	0.01	-	-	-	0.00	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-
common milkweed ramet	-	-	0.01	-	0.00	0.03	0.01	0.02	0.01	0.02	0.02	0.03	0.00	0.03	-	0.01	-	-	0.08	0.19	0.05	0.32	-	0.00	0.19
swamp milkweed ramet	-	-	0.01	-	-	-	-	-	-	-	0.00	-	-	-	-	-	0.01	0.01	-	-	-	-	-	-	0.03

Table 7: 2017 Nectar plant species density: average density (count / m2) across all rounds

Nectar Plant Species	tall2a	tarm1b	tber3a	tnkn1a
milkweed strip: common milkweed ramet	0.01	0.34	-	-

Table 8: 2018 Nectar plant species density: average density (count / m2) across all rounds

Nectar Plant Species	tall2a	tarm1b	tber3a	tnkn1a
milkweed strip: common milkweed ramet	0.08	0.24	-	-