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**Appendices to J Poll Ecol 36(5), Yurchak et al.**

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**Appendix I.** Timing of field operations in 2020, and 2021 in Beltsville, MD.

|  |  |  |
| --- | --- | --- |
| **Field Operation** | **Year 1** | **Year 2** |
| Planted cover crops | 5 Sept 2019 | 16 Sept 2020 |
| Terminated annual cover crops | 25 May 2020 | 28 May 2021 |
| Planted + fertilized sweet corn | 25 May 2020 | 1 June 2021 |
| Side dress sweet corn with fertilizer | 24 June 2020 | 1 July 2021 |

**Appendix II.** Timing of sampling activities in 2020, and 2021 in Beltsville, MD.

|  |  |  |
| --- | --- | --- |
| **Sampling Operation** | **Year 1** | **Year 2** |
| Visitation Observations – Red Clover | 22 June 2020 | 6 July 2021 |
|  | 29 June 2020 | 15 July 2021 |
|  | July 7 2020 | 22 July 2021 |
|  | 16 July 2020 | 28 July 2021 |
|  | 22 July 2020 | 3 August 2021 |
| Visitation Observations – Sweet Corn | 16 July 2020 | 28 July 2021 |
|  | 22 July 2020 | 3 August 2021 |
| Pan Trap Sampling – Red Clover | 24 June 2020 | 30 June 2021 |
|  | 9 July 2020 | 14 July 2021 |
|  | 29 July 2020 | 1 August 2021 |
| Pan Trap Sampling – Sweet Corn | 17 July 2020 | 25 July 2021 |
|  | 23 July 2020 | 29 July 2021 |

**Appendix III.** Taxon totals of floral visitors in red clover in 2020 and 2021 in Beltsville, MD.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Observation Group | Observation Year | |
| Order | 2020 | 2021 |
| Lepidoptera | Brushfoot | 140 | 86 |
|  | Gossamer | 13 | 25 |
|  | Monarch | 2 | 15 |
|  | Skipper | 262 | 391 |
|  | Swallowtail | 1 | 7 |
|  | White/Sulfur | 114 | 134 |
| Hymenoptera | Carpenter bee | 8 | 38 |
|  | Bumblebee | 673 | 330 |
|  | Honeybee | 163 | 148 |
|  | Large dark bee | 12 | 14 |
|  | Long horned bee | 4 | 1 |
|  | Metallic bee | 4 | 5 |
|  | Small dark bee | 0 | 0 |

**Appendix IV.** Taxon totals of floral visitors in sweet corn during pollen shed in 2020 and 2021 in Beltsville, MD.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Observation Group | Observation Year | |
| Order | 2020 | 2021 |
| Hymenoptera | Carpenter bee | 0 | 0 |
|  | Bumblebee | 0 | 1 |
|  | Honeybee | 279 | 1210 |
|  | Large dark bee | 16 | 53 |
|  | Long horned bee | 0 | 0 |
|  | Metallic bee | 13 | 134 |
|  | Small dark bee | 0 | 0 |

**Appendix V.** Species totals of bee bowl trap captures in red clover in 2020 in Beltsville, MD.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Genus | Species | Treatment | | | |
| CT | NT | LMFR | LMRye |
| *Andrena* | *imitatrix/morrison* | 0 | 0 | 0 | 1 |
| *Agapostemon* | *splendens* | 1 | 1 | 0 | 3 |
| *Agapostemon* | *texanus* | 0 | 2 | 1 | 1 |
| *Agapostemon* | *virescens* | 4 | 5 | 4 | 5 |
| *Apis* | *mellifera* | 1 | 3 | 1 | 3 |
| *Augochlora* | *pura* | 3 | 2 | 0 | 3 |
| *Augochlorella* | *aurata* | 0 | 0 | 1 | 0 |
| *Eucera* | *bamata* | 26 | 13 | 19 | 9 |
| *Halictus* | *ligatus/poeyi* | 0 | 0 | 5 | 5 |
| *Halictus* | *parallelus* | 1 | 7 | 1 | 4 |
| *Lasioglossum* | *bruneri* | 1 | 1 | 1 | 2 |
| *Lasioglossum* | *callidum* | 0 | 0 | 0 | 1 |
| *Lasioglossum* | *coreopsis* | 0 | 1 | 0 | 1 |
| *Lasioglossum* | *cressonii* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *hitchensi* | 1 | 0 | 0 | 1 |
| *Lasioglossum* | *leucocomus* | 0 | 2 | 0 | 3 |
| *Lasioglossum* | *leucocomus/pilosum* | 0 | 0 | 1 | 2 |
| *Lasioglossum* | *oblongum* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *pilosum* | 7 | 0 | 5 | 5 |
| *Lasioglossum* | *nelumbonis* | 1 | 0 | 0 | 0 |
| *Lasioglossum* | *trigeminum* | 1 | 0 | 2 | 1 |
| *Melissodes* | *bimaculatus* | 8 | 10 | 23 | 45 |
| *Melitoma* | *taurea* | 0 | 0 | 0 | 1 |

**Appendix VI.** Species totals of bee bowl trap captures in red clover in 2021 in Beltsville, MD.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Genus | Species | Treatment | | | |
| CT | NT | LMFR | LMRye |
| *Agapostemon* | *splendens* | 1 | 1 | 3 | 1 |
| *Agapostemon* | *texanus* | 1 | 2 | 6 | 4 |
| *Agapostemon* | *virescens* | 2 | 2 | 1 | 4 |
| *Apis* | *mellifera* | 9 | 6 | 3 | 6 |
| *Augochlora* | *pura* | 3 | 2 | 3 | 2 |
| *Augochlorella* | *aurata* | 1 | 2 | 1 | 1 |
| *Eucera* | *bamata* | 2 | 0 | 0 | 0 |
| *Halictus* | *ligatus/poeyi* | 3 | 3 | 3 | 1 |
| *Halictus* | *parallelus* | 2 | 0 | 6 | 2 |
| *Lasioglossum* | *bruneri* | 8 | 1 | 1 | 1 |
| *Lasioglossum* | *callidum* | 0 | 2 | 1 | 0 |
| *Lasioglossum* | *coreopsis* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *hitchensi* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *leucocomus* | 3 | 2 | 0 | 1 |
| *Lasioglossum* | *leucocomus/pilosum* | 0 | 0 | 1 | 1 |
| *Lasioglossum* | *nelumbonis* | 1 | 0 | 0 | 1 |
| *Lasioglossum* | *oblongum* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *pilosum* | 6 | 7 | 9 | 4 |
| *Lasioglossum* | *trigeminum* | 2 | 1 | 1 | 2 |
| *Melissodes* | *bimaculatus* | 29 | 19 | 29 | 18 |

**Appendix VII.** Species totals of bee bowl trap captures located adjacent to sweet corn plants during the pollen shed period in 2020 in Beltsville, MD.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Genus | Species | Treatment | | | |
| CT | NT | LMFR | LMRye |
| *Agapostemon* | *splendens* | 0 | 1 | 0 | 1 |
| *Agapostemon* | *texanus* | 3 | 1 | 9 | 0 |
| *Agapostemon* | *virescens* | 9 | 1 | 7 | 8 |
| *Andrena* | *denticulata* | 0 | 0 | 0 | 1 |
| *Apis* | *mellifera* | 1 | 0 | 1 | 0 |
| *Augochlora* | *pura* | 1 | 3 | 5 | 2 |
| *Augochlorella* | *aurata* | 2 | 1 | 0 | 0 |
| *Halictus* | *ligatus/poeyi* | 2 | 1 | 2 | 0 |
| *Halictus* | *parallelus* | 0 | 1 | 2 | 0 |
| *Hylaeus* | *modestus* | 2 | 0 | 0 | 0 |
| *Lasioglossum* | *bruneri* | 0 | 0 | 3 | 2 |
| *Lasioglossum* | *callidum* | 2 | 1 | 2 | 0 |
| *Lasioglossum* | *confusus* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *continuus* | 1 | 0 | 0 | 0 |
| *Lasioglossum* | *coreopsis* | 0 | 2 | 1 | 0 |
| *Lasioglossum* | *hitchensi* | 1 | 0 | 0 | 0 |
| *Lasioglossum* | *leucocomus* | 3 | 2 | 6 | 2 |
| *Lasioglossum* | *leucocomus/pilosum* | 0 | 0 | 1 | 0 |
| *Lasioglossum* | *pilosum* | 5 | 11 | 15 | 15 |
| *Lasioglossum* | *puteulanum* | 0 | 1 | 0 | 0 |
| *Lasioglossum* | *trigeminum* | 0 | 2 | 1 | 0 |
| *Melissodes* | *bimaculatus* | 37 | 28 | 23 | 23 |

**Appendix VIII.** Species totals of bee bowl trap captures located adjacent to sweet corn plants during the pollen shed period in 2021 in Beltsville, MD.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Genus | Species | Treatment | | | |
| CT | NT | LMFR | LMRye |
| *Agapostemon* | *splendens* | 4 | 7 | 5 | 1 |
| *Agapostemon* | *texanus* | 2 | 3 | 2 | 3 |
| *Agapostemon* | *virescens* | 17 | 12 | 9 | 6 |
| *Apis* | *mellifera* | 7 | 5 | 6 | 6 |
| *Augochlora* | *pura* | 1 | 0 | 0 | 1 |
| *Augochlorella* | *aurata* | 1 | 0 | 0 | 1 |
| *Eucera* | *bamata* | 1 | 0 | 1 | 0 |
| *Halictus* | *ligatus/poeyi* | 2 | 0 | 1 | 0 |
| *Halictus* | *parallelus* | 1 | 2 | 0 | 1 |
| *Hylaeus* | *modestus* | 2 | 0 | 0 | 0 |
| *Lasioglossum* | *bruneri* | 2 | 0 | 1 | 0 |
| *Lasioglossum* | *confusus* | 1 | 0 | 0 | 0 |
| *Lasioglossum* | *hitchensi* | 1 | 0 | 0 | 0 |
| *Lasioglossum* | *leucocomus* | 0 | 0 | 1 | 1 |
| *Lasioglossum* | *leucocomus/pilosum* | 0 | 0 | 0 | 0 |
| *Lasioglossum* | *pilosum* | 10 | 6 | 8 | 0 |
| *Lasioglossum* | *puteulanum* | 1 | 0 | 0 | 0 |
| *Lasioglossum* | *trigeminum* | 0 | 1 | 1 | 0 |
| *Melissodes* | *bimaculatus* | 56 | 34 | 35 | 18 |