

1 **APPENDICES**

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3 **Additional supporting information may be found in the online version of this**
4 **article:**

5 1. Appendix Figure I shows the set-up of the cameras in the field.

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7 2. Appendix Table I provides a list of the flower species we have filmed grouped
8 by flower or inflorescence shape.

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10 3. Appendix Table II provides the estimated camera detection rate for 21
11 insect taxa at three capture intervals (1, 2 or 3 s).

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13 4. Appendix Video I (Cornus5MinRealTime.mp4) is a sample video of insect
14 visitors to *Cornus canadensis* at Site B filmed with a 3s capture interval from
15 12:04:34 to 12:08:31 hours on 2 July 2013. The first visitor is a muscid fly
16 (*Phaonia* sp.) and the second is a beetle (*Evodinus monticola*).

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Appendix Figure I. Time-lapse camera set-ups: A. the Brinno 200 Pro HDR on a tripod filming a patch of *Cornus canadensis* (Cornaceae), B. the Brinno 200 Pro HDR on a GorillaPod (Joby, San Francisco, California) filming the bell shaped pink flowers of *Streptopus lanceolatus* (Convallariaceae), and c. the Brinno 200 Pro HDR on a tripod filming *Rubus parviflorus* (Rosaceae) Tripods were left in the field for the duration of the filming period and the cameras set out from 0900 to 2100 hours. This ensured that the same flowers were filmed each day.

26 Appendix Table I: Flowers filmed for flower visitors using the Brinno time-lapse
27 camera. Flowers are organized by flower or inflorescence types. The Latin name
28 (common name), and location of the filming are given. IRNP = Isle Royale National
29 Park, MI, USA.

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31 **Zygomorphic Flowers**

32 *Corydalis sempervirens* (pale corydalis), IRNP

33 *Polygala paucifolia* (gay wings), IRNP

34 *Corallorhiza striata* (striped coral-root), IRNP

35 *Mimulus* sp. (monkey flower), Sierras, CA, USA

36 *Aconitum* sp. (Monkshood), Sierras, CA, USA

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38 **Hanging bell shaped flowers**

39 *Vaccinium angustifolium* (blueberry), IRNP

40 *Arctostaphylos uva-ursi* (bearberry), IRNP

41 *Andromeda glaucophylla* (bog rosemary), IRNP

42 *Ribes oxycanthoides* (gooseberry), IRNP

43 *Pyrola secunda* (one sided pyrola), IRNP

44 *Linnaea borealis* (twin flower), IRNP

45 *Clintonia borealis* (bead lily), IRNP

46 *Streptopus roseus* (rose twisted stalk), IRNP

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48 **Actinomorphic flowers**

49 *Caltha palustris*, IRNP

50 *Coptis trifolia* (golden thread), IRNP

51 *Amelanchier sanguinea*, IRNP

52 *Amelanchier bartramiana*,

53 *Prunus* sp. (IRNP)

54 *Rubus parviflorus* (thimbleberry), IRNP

55 *Physocarpus opulifolius* (ninebark), IRNP

56 *Primula mistassinica* (birdseye primrose), IRNP

57 *Sagina nodosa* (knotted pearlwort), IRNP

58 *Parnassia* sp. (grass of parnassus), Sierras, CA, USA

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60 **Flat-topped inflorescences**

61 *Symphotrichum novae-angliae* (New England aster), Williamstown, MA, USA

62 *Cornus canadensis* (bunchberry dogwood), IRNP

63 *Rhododendron groenlandicum* (Labrador tea), IRNP

64 *Viburnum edule* (high bush cranberry), IRNP

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66 **Vertical Inflorescences (e.g. in a raceme)**

67 *Ribes glandulosum* (skunk currant), IRNP

68 *Maianthemum canadense* (wild lily of the valley), IRNP

69 *Solidago* sp. (goldenrod), Williamstown, MA, USA

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72 Appendix Table II: Using Equation 2 we used direct measurements of durations of an
 73 individual visit (v), to estimate the detection probability, $P(d_s)$ (from Equation 1), for
 74 each species at three different camera capture rates ($1s$, $2s$, and $3s$).
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Species or Taxa	$P(d_s)$ 1 s capture rate	$P(d_s)$ 2 s capture rate	$P(d_s)$ 3 s capture rate	n_s (sample size)
Hymenoptera				
Ant	0.96	0.96	0.95	21
Megachilidae	1.00	0.75	0.57	14
Coleoptera				
<i>Evodinus monticola</i>	1.00	1.00	1.00	52
Diptera - Anthomyiidae				
Anthomyiidae (Large)	1.00	1.00	1.00	13
Anthomyiidae (Small)	1.00	1.00	1.00	22
Diptera – Calliphoridae	1.00	0.98	0.95	138
Diptera - Muscidae				
<i>Musca domestica</i>	1.00	1.00	1.00	10
<i>Phaonia</i> spp.	0.99	0.97	0.95	111
Diptera - Syrphidae				
<i>Chrysotoxum flavifrons</i>	1.00	1.00	1.00	2
<i>Dasysyrphus venustus</i>	1.00	1.00	0.98	11
<i>Eristalis dimidiata</i>	1.00	0.98	0.93	314
<i>Eristalis transversa</i>	0.99	0.95	0.90	92
<i>Helophilus fasciatus</i>	0.95	0.88	0.81	33
<i>Sericomyia lata</i>	1.00	0.99	0.97	57
<i>Sericomyia militaris</i>	1.00	0.93	0.86	72
<i>Sericomyia transversa</i>	0.99	0.95	0.92	18
<i>Sphaerophoria philanthus</i>	1.00	0.90	0.87	31
<i>Toxomerus</i> spp.	1.00	0.98	0.96	87
Diptera - Sarcophagidae	1.00	0.98	0.97	21
Diptera - Tachinidae	0.95	0.88	0.81	347
Lepidoptera				
<i>Vanessa atalanta</i>	1.00	0.88	0.67	4