

Roscoe et al. 2025. Phenology of invasive hemlock woolly adelgid, *Adelges tsugae* Annand (Hemiptera: Adelgidae), and the role of resident natural enemies in its population regulation in Nova Scotia, Canada. The Canadian Entomologist, 157: 2510018.

Table S2. List of insects collected via beat sheeting at sites in Southern Nova Scotia in 2020 and 2021. Site locations (see Table 1 for coordinates) are listed using the following acronyms: K, Kejimikujik National Park and Historic Site; ML, MacKay Lakes; SD, Sissiboo Dam; SF, Sissiboo ‘F’; TML, Ten Mile Lake; WL, Wentworth Lakes. Asterisks (‘*’) denote specimens that were in immature form at time of collection; all other specimens were adults at the time of collection. Insect orders are as follow: Col., Coleoptera; Dip., Diptera; Hemi., Hemiptera; Hym., Hymenoptera; Neur., Neuroptera; Plec., Plecoptera. ‘?’ represents the closest species to which the specimen resembles based on taxonomic identification. The following keys used to identify individuals to species where possible:

McAlpine *et al.* 1981; McAlpine *et al.* 1987; Goulet and Huber 1993; Arnett and Thomas 2000; Arnett *et al.* 2002; Louw *et al.* 2016.

Order	Superfamily	Family	Subfamily	Tribe	Species	Site	Date	n
Hemi.	Lygaeoidea	Lygaeidae	Ischnorhynchinae		<i>Kleidocerys resedae</i> (Panzer)	WL	30 March 2020	1
Plec.		Capniidae			<i>Paracapnia angulata</i> Hanson	WL	30 March 2020	1

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Dip.	Elateroidea	Elateridae	Dendrometrinae	Prosternini	<i>Pseudanostirus triundulatus</i> (Randall)	WL	30 March 2020	2
Col.		Elateridae				WL	9 April 2020	1
Dip.		Thaumaleidae?				SD	13 May 2020	1
Plec.	Nemouroidea?	Nemouridae?				SD	13 May 2020	1
Plec.	Nemouroidea?					SD	13 May 2020	1
Hemi.		Reduviidae	Harpactorinae	Harpactorini	<i>Zelus tetracanthus</i> Stål	SD	13 May 2020	1
Hemi.	Pentatomoidea	Acanthosomatidae			<i>Elasmucha lateralis</i> (Say)	SD	13 May 2020	1
Col.	Scarabaeoidea	Lucanidae	Lucaninae	Platycerini	<i>Platycerus quercus</i> (Weber)	SD	13 May 2020	1
Col.	Scirtoidea	Scirtidae			<i>Contacyphon</i> sp.	WL	13 May 2020	1
Plec.	Nemouroidea?	Nemouridae?				WL	13 May 2020	1
Plec.	Nemouroidea?	Nemouridae?				WL	13 May 2020	1

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Dip.		Simuliidae				WL	13 May 2020	2
Hym.	Chalcidoidea					WL	13 May 2020	1
Col.	Elateroidea	Lampyridae			<i>Ellychnia corrusca</i> (Linnaeus)	WL	13 May 2020	1
Col.	Chrysomeloidea	Chrysomelidae	Chrysomelinae	Chrysomelini	<i>Chrysomela</i> <i>mainensis</i> Bechyné	WL	13 May 2020	1
Hemi.	Pentatomoidea	Acanthosomatidae			<i>E. lateralis</i>	WL	13 May 2020	1
Dip.		Simuliidae				WL	13 May 2020	1
Dip.	Sciaroidea					K	16 June 2020	1
Dip.	Empidoidea	Empididae				K	16 June 2020	1
Dip.	Empidoidea	Empididae	Empidinae		<i>Rhamphomyia</i> sp.?	K	16 June 2020	1
Col.	Coccinelloidea	Coccinelidae				K	16 June 2020	1*
Col.	Tenebrionoidea	Tenebrionidae	Alleculinae		<i>Isomira sericea</i> (Say)	K	16 June 2020	2
Hemi.	Membracoidea	Cicadellidae				K	16 June 2020	2
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.?	K	16 June 2020	1

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Dip.	Lauxanioidea	Lauxaniidae			<i>Minettia lupulina</i> (Fabricius)	K	16 June 2020	1
Col.	Scirtoidea	Scirtidae			<i>Contacyphon</i> sp.	K	16 June 2020	1
Dip.		Culicidae		Culicini	<i>Culex</i> sp.	K	16 June 2020	1
Dip.	Sciaroidea	Sciaridae				K	16 June 2020	2
Dip.		Pediciidae				K	16 June 2020	1
Hym.	Formicoidea	Formicidae	Formicinae?	Lasiini?	<i>Lasius</i> sp.?		13 July 2020	1
Col.	Tenebrionoidea	Melandryidae			<i>Phloiotrya fusca</i> (LeConte)		13 July 2020	1
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.?		13 July 2020	1
Hemi.	Aphidoidea	Aphididae					13 July 2020	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	20 July 2020	1
Hym.	Proctotrupoidea	Proctotrupidae			<i>Exallonyx</i> sp.	WL	20 July 2020	1
Hym.	Ichneumonoidea	Braconidae	Cheloninae		<i>Chelonus</i> sp.	WL	20 July 2020	1
Hemi.		Nabidae	Nabinae	Nabini	<i>Nabis rufusculus</i> Reuter	WL	20 July 2020	2

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Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.	WL	20 July 2020	1
Dip.	Sciaroidea	Mycetophilidae	Mycetophilinae			WL	20 July 2020	1
Neur.		Chrysopidae		Chrysopini		WL	20 July 2020	1*
Neur.		Chrysopidae		Chrysopini		WL	20 July 2020	1
Col.	Curculionoidea	Curculionidae	Entiminae	Brachyderini	<i>Strophosoma melanogrammum</i> (Forster)	WL	20 July 2020	1
Dip.	Sciaroidea	Mycetophilidae				WL	20 July 2020	1
Neur.		Chrysopidae		Chrysopini		WL	20 July 2020	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	20 July 2020	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	20 July 2020	2*
Neur.		Chrysopidae		Chrysopini		WL	20 July 2020	1
Dip.		Rhagionidae			<i>Rhagio gracilis</i> (Johnson)	SD	21 July 2020	1
Neur.		Chrysopidae		Chrysopini		SD	21 July 2020	1*
Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus</i> sp.	SD	21 July 2020	1*

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Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus</i> sp.	SD	21 July 2020	2*
Dip.	Sciaroidea	Mycetophilidae				SD	21 July 2020	2
Dip.	Sciaroidea	Mycetophilidae	Mycetophilinae			SD	21 July 2020	1
Col.	Coccinelloidea	Latridiidae	Corticariinae		<i>Melanophthalma helvola</i> Motschulsky	SD	21 July 2020	1
Dip.	Sciaroidea	Mycetophilidae				SD	21 July 2020	1
Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus</i> sp.	SF	21 July 2020	1*
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	SF	21 July 2020	1
Dip.	Scirtoidea	Scirtidae			<i>Nyholmia collaris</i> (Guérin- Méneville)	SF	21 July 2020	1
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.?	SF	21 July 2020	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	SF	21 July 2020	2
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.?	SF	21 July 2020	1

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Dip.		Bibionidae			<i>Bibio slossonae</i> Cockerel	SD	28 October 2020	1
Dip.		Chaoboridae				SD	28 October 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	SD	28 October 2020	1
Col.	Scirtoidea	Scirtidae			<i>Contacyphon</i> sp.	SD	28 October 2020	1
Hym.	Chalcidoidea					SD	28 October 2020	1
Dip.	Sciaroidea	Mycetophilidae				SD	28 October 2020	1
Dip.	Sciaroidea	Mycetophilidae			<i>Anatella</i> sp.?	SD	28 October 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	SD	28 October 2020	1
Hemi.	Lygaeoidea	Lygaeidae	Ischnorhynchinae		<i>K. resedae</i>	SD	28 October 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	SD	28 October 2020	1
Dip.		Trichoceridae			<i>Trichocera</i> <i>bimaculata</i> Walker	SD	28 October 2020	1
Hemi.	Lygaeoidea	Rhyparochromidae		Drymini	<i>Drymus unus</i> (Say)	SD	28 October 2020	1
Hym.	Icneumonoidea	Ichneumonidae	Pimplinae	Ephialtini	<i>Scambus</i> sp.	SD	28 October 2020	1
Dip.	Sciaroidea	Sciaridae				WL	28 October 2020	1

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Dip.		Trichoceridae			<i>T. bimaculata</i>	WL	28 October 2020	2
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	28 October 2020	3
Dip.	Sciaroidea	Mycetophilidae?				WL	28 October 2020	1
Dip.	Sciaroidea	Mycetophilidae	Gnoristinae		<i>Boletina</i> sp.?	WL	28 October 2020	2
Hemi.	Lygaeoidea	Lygaeidae	Ischnorhynchinae		<i>K. resedae</i>	WL	28 October 2020	3
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	28 October 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	WL	28 October 2020	1
Hemi.		Reduviidae	Harpactorinae	Harpactorini	<i>Z. tetracanthus</i>	WL	28 October 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	WL	28 October 2020	1
Dip.	Sciaroidea	Sciaridae				WL	28 October 2020	1
Dip.		Chironomidae	Chironominae	Chironomini	<i>Chironomus</i> sp.	WL	28 October 2020	1
Hemi.						WL	28 October 2020	1*
Hym.	Ichneumonoidea	Ichneumonidae	Phygadeuontinae	Phygadeuontini	<i>Gelis</i> sp.?	WL	28 October 2020	1
Dip.		Bibionidae			<i>Bibio longipes</i> Loew	WL	28 October 2020	1
Dip.	Sciaroidea	Mycetophilidae				WL	28 October 2020	2

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Hemi.		Nabidae	Nabinae	Nabini	<i>Nabis</i> sp.	WL	28 October 2020	1*
Dip.		Bibionidae			<i>B. slossonae</i>	WL	28 October 2020	2
Dip.		Bibionidae			<i>B. slossonae</i>	WL	28 October 2020	1
Dip.	Sciaroidea	Sciaridae				WL	28 October 2020	1
Dip.	Sciaroidea	Mycetophilidae			<i>Mycomya</i> sp.?	WL	28 October 2020	1
Dip.	Ephydroidea	Drosophilidae	Drosophilinae		<i>Drosophila suzukii</i> Matsumura	WL	28 October 2020	1
Dip.	Sciaroidea					WL	28 October 2020	1
Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus</i> <i>serieventris</i> Uhler	WL	28 October 2020	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	28 October 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	WL	28 October 2020	3
Dip.	Ephydroidea	Drosophilidae	Drosophilinae		<i>Drosophila melanogaster</i> Meigen	WL	28 October 2020	2
Dip.		Chironomidae				WL	28 October 2020	1

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Dip.		Bibionidae			<i>B. slossonae</i>	SF	5 November 2020	1
Col.	Coccinelloidea	Latridiidae	Corticariinae		<i>M. helvola</i>	SF	5 November 2020	1
Dip.	Sciaroidea	Sciaridae				SF	5 November 2020	1
Col.	Coccinelloidea	Latridiidae	Corticariinae		<i>M. helvola</i>	SF	5 November 2020	1
Hym.	Ichneumonoidea	Ichneumonidae				SF	5 November 2020	1
Hemi.		Nabidae	Nabinae	Nabini	<i>Nabis</i> sp.	SF	5 November 2020	1
Col.	Coccinelloidea	Coccinellidae	Coccinellinae		<i>Psyllobora vigintimaculata (Say)</i>	SF	5 November 2020	1
Hemi.		Nabidae	Nabinae	Nabini		SF	5 November 2020	1
Dip.	Sciaroidea	Sciaridae				SF	5 November 2020	1
Hym.	Diaprioidea	Diapriidae	Belytinae	Belytini	<i>Pantoclis</i> sp.	SF	5 November 2020	1
Hym.	Ichneumonoidea	Ichneumonidae				SD	6 November 2020	1
Hemi.		Nabidae	Nabinae	Nabini	<i>Nabis</i> sp.	ML	6 November 2020	1
Dip.	Sciaroidea	Mycetophilidae	Gnoristinae		<i>boletina</i> sp.	ML	6 November 2020	2
Dip.	Platypezoidea	Phoridae				ML	6 November 2020	1

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Hemi.	Miroidea	Tingidae	Tinginae	Tingini	<i>Physatocheila variegata</i> Parshley	ML	6 November 2020	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	ML	6 November 2020	1
Dip.		Bibionidae			<i>B. slossonae</i>	ML	6 November 2020	1
Hemi.		Nabidae	Nabinae	Nabini	<i>Nabis</i> sp.	TML	6 November 2020	1
Dip.	Sciaroidea	Mycetophilidae				TML	6 November 2020	1
Hemi.	Lygaeoidea	Lygaeidae	Ischnorhynchinae		<i>K. resedae</i>	WL	30 March 2021	1
Plec.		Capniidae			<i>P. angulata</i>	WL	30 March 2021	1
Dip.	Elateroidea	Elateridae	Dendrometrinae	Prosternini	<i>P. triundulatus</i>	WL	30 March 2021	2
Col.		Elateridae				WL	9 April 2021	1
Col.	Scarabaeoidea	Lucanidae	Lucaninae	Platycerini	<i>P. quercus</i>	SD	13 May 2021	1
Dip.		Thaumaleidae?				SD	13 May 2021	1
Plec.	Nemouroidea?	Nemouridae?				SD	13 May 2021	1
Plec.	Nemouroidea?					SD	13 May 2021	1
Hemi.		Reduviidae	Harpactorinae	Harpactorini	<i>Z. tetracanthus</i>	SD	13 May 2021	1
Hemi.	Pentatomoidea	Acanthosomatidae			<i>E. lateralis</i>	SD	13 May 2021	1

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Col.	Scirtoidea	Scirtidae			<i>Contacyphon</i> sp.	WL	13 May 2021	1
Plec.	Nemouroidea?	Nemouridae?				WL	13 May 2021	1
Plec.	Nemouroidea?	Nemouridae?				WL	13 May 2021	1
Dip.		Simuliidae				WL	13 May 2021	2
Hym.	Chalcidoidea					WL	13 May 2021	1
Col.	Elateroidea	Lampyridae			<i>E. corrusca</i>	WL	13 May 2021	1
Col.	Chrysomeloidea	Chrysomelidae	Chrysomelinae	Chrysomelini	<i>C. mainensis</i>	WL	13 May 2021	1
Hemi.	Pentatomoidea	Acanthosomatidae			<i>E. lateralis</i>	WL	13 May 2021	1
Dip.		Simuliidae				WL	13 May 2021	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	20 July 2021	1
Hym.	Proctotrupoidea	Proctotrupidae			<i>Exallonyx</i> sp.	WL	20 July 2021	1
Hym.	Ichneumonoidea	Braconidae	Cheloninae		<i>Chelonus</i> sp.	WL	20 July 2021	1
Hemi.		Nabidae	Nabinae	Nabini	<i>Nabis</i> sp.	WL	20 July 2021	2
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i>	WL	20 July 2021	1
Dip.	Sciaroidea	Mycetophilidae	Mycetophilinae			WL	20 July 2021	1
Neur.		Chrysopidae		Chrysopini		WL	20 July 2021	1*

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Neur.		Chrysopidae		Chrysopini		WL	20 July 2021	1
Col.	Curculionoidea	Curculionidae	Entiminae	Brachyderini	<i>S. melanogrammum</i>	WL	20 July 2021	1
Dip.	Sciaroidea	Mycetophilidae				WL	20 July 2021	1
Neur.		Chrysopidae		Chrysopini		WL	20 July 2021	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	20 July 2021	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	WL	20 July 2021	2*
Neur.		Chrysopidae		Chrysopini		WL	20 July 2021	1
Dip.		Rhagionidae			<i>R. gracilis</i>	SD	21 July 2021	1
Neur.		Chrysopidae		Chrysopini		SD	21 July 2021	1*
Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus sp.</i>	SD	21 July 2021	1*
Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus sp.</i>	SD	21 July 2021	2*
Dip.	Sciaroidea	Mycetophilidae				SD	21 July 2021	2
Dip.	Sciaroidea	Mycetophilidae	Mycetophilinae			SD	21 July 2021	1
Col.	Coccinelloidea	Latridiidae	Corticariinae		<i>M. helvola</i>	SD	21 July 2021	1
Dip.	Sciaroidea	Mycetophilidae				SD	21 July 2021	1

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Hemi.	Pentatomoidea	Pentatomidae	Asopinae		<i>Podisus</i> sp.	SF	21 July 2021	1*
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	SF	21 July 2021	1
Dip.	Scirtoidea	Scirtidae			<i>N. collaris</i>	SF	21 July 2021	1
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.?	SF	21 July 2021	1
Col.	Coccinelloidea	Coccinelidae			<i>H. axyridis</i>	SF	21 July 2021	2
Hemi.	Miroidea	Miridae	Mirinae	Mirini	<i>Phytocoris</i> sp.?	SF	21 July 2021	1