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The Effect of Road Proximity on Arthropod Communities in the Yukon, Canada

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APPENDIX 1

TABLE S1. The functional group designation of each Hymenoptera family or subfamily present in our pan trap samples. "1" indicates that the family or subfamily belongs to the corresponding functional group, while "0" indicates that it does not.

Group	Lepidoptera parasitoid	Lepidoptera predator	Ichneumonid parasitoid	Diptera parasitoid	Diptera predator	Coleoptera parasitoid	Hemiptera parasitoid	Egg parasitoid	Diverse parasitoid	Generalist forager	Pollen and nectar
Alysiinae	0	0	0	1	0	0	0	0	0	0	1
Aphelinidae	0	0	0	0	0	0	1	0	0	0	0
Aphidiinae	0	0	0	0	0	0	1	0	0	0	0
Apinae	0	0	0	0	0	0	0	0	0	0	1
Bethylidae	0	0	0	0	0	0	0	0	1	0	0
Campopleginae	0	0	0	0	0	0	0	0	1	0	0
Ceraphronidae	0	0	0	0	0	0	0	0	1	0	0
Cheloninae	1	0	0	0	0	0	0	0	0	0	0
Craboninae	0	0	0	0	1	0	0	0	0	0	0
Ctenopelmatinae	0	0	1	0	0	0	0	0	0	0	0
Diapriidae	0	0	0	1	0	0	0	0	0	0	0
Diplazontinae	0	0	0	1	0	0	0	0	0	0	0
Encyrtidae	0	0	0	0	0	0	0	0	1	0	0
Eucoilinae	0	0	0	1	0	0	0	0	0	0	0
Eulophidae	0	0	0	0	0	0	0	0	1	0	0
Formicinae	0	0	0	0	0	0	0	0	0	1	0
Ichneumoninae	1	0	0	0	0	0	0	0	0	0	0
Megaspilidae	0	0	0	0	0	0	1	0	0	0	0
Mesochorinae	0	0	1	0	0	0	0	0	0	0	0
Metopiinae	1	0	0	0	0	0	0	0	0	0	0
Microgastrinae	1	0	0	0	0	0	0	0	0	0	0
Mymaridae	0	0	0	0	0	0	0	1	0	0	0
Mymarommatoidea	0	0	0	0	0	0	0	1	0	0	0
Myrmicinae	0	0	0	0	0	0	0	0	0	1	0
Opiinae	0	0	0	1	0	0	0	0	0	0	0
Orthocentrinae	0	0	0	1	0	0	0	0	0	0	0
Phygadeuontinae	0	0	0	0	0	0	0	0	1	0	0
Pimplinae	0	0	0	0	0	0	0	0	1	0	0
Platygastridae	0	0	0	1	0	0	0	0	0	0	0
Proctotrupidae	0	0	0	0	0	1	0	0	0	0	0
Pteromalinae	0	0	0	0	0	0	0	0	1	0	0
Scelionidae	0	0	0	0	0	0	0	1	0	0	0
Toryminae	0	0	0	1	0	0	0	0	0	0	0
Vespinae	0	1	0	0	0	0	0	0	0	0	1

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TABLE S2. The coordinates of pan traps set out at 1 m, 10 m, and 100 m from the road along a 56 km segment of the Dempster Highway (Yukon, Canada) in July 2016. Each row represents a single pan trap and shows the abundance of individuals in each arthropod order.

Km	ID	Proximity	Latitude	Longitude	Elevation	Trap Set Date	Lepidoptera	Hymenoptera	Collembola	Acarina	Araneae	Coleoptera
118	1A	1	64.84388889	-138.3238889	984	16-07-19	0	20	49	2	5	1
118	1B	10	64.84388889	-138.3238889	984	16-07-19	0	8	30	3	2	0
118	1C	100	64.84388889	-138.3238889	984	16-07-19	0	6	9	1	5	0
122	1G	1	64.88527778	-138.2847222	949	16-07-19	0	3	93	2	0	2
122	1H	10	64.88527778	-138.2847222	949	16-07-19	0	7	24	4	0	0
122	1I	100	64.88527778	-138.2847222	949	16-07-19	0	9	57	9	3	1
130	2A	1	64.95305556	-138.2697222	944	16-07-19	0	16	143	1	0	0
130	2B	10	64.95305556	-138.2697222	944	16-07-19	0	1	20	1	1	0
130	2C	100	64.95305556	-138.2697222	944	16-07-19	2	11	46	7	2	0
134	2G	1	64.97861111	-138.2180556	896	16-07-19	0	14	87	3	2	1
134	2H	10	64.97861111	-138.2180556	896	16-07-19	0	9	98	3	2	3
134	2I	100	64.97861111	-138.2180556	896	16-07-19	0	13	76	1	2	4
146	3A	1	65.06694444	-138.1311111	853	16-07-19	0	9	29	0	2	0
146	3B	10	65.06694444	-138.1311111	853	16-07-19	0	3	59	0	1	0
146	3C	100	65.06694444	-138.1311111	853	16-07-19	0	4	22	2	1	0
160	4A	1	65.09611111	-138.3638889	859	16-07-25	0	50	43	18	10	
34												
160	4B	10	65.09611111	-138.3638889	859	16-07-25	0	41	56	5	1	9
160	4C	100	65.09611111	-138.3638889	859	16-07-25	2	4	9	0	1	1
164	4G	1	65.12861111	-138.3255556	813	16-07-25	0	64	20	7	57	
23												
164	4H	10	65.12861111	-138.3255556	813	16-07-25	2	28	33	5	42	0
164	4I	100	65.12861111	-138.3255556	813	16-07-25	1	15	88	13	63	0
170	5A	1	65.17416667	-138.3602778	754	16-07-25	12	23	3	10	39	7
170	5B	10	65.17416667	-138.3602778	754	16-07-25	1	30	70	7	18	9
170	5C	100	65.17416667	-138.3602778	754	16-07-25	0	26	2946	3	9	0
174	5G	1	65.20555556	-138.3255556	711	16-07-25	0	38	34	6	5	1
174	5H	10	65.20555556	-138.3255556	711	16-07-25	0	11	28	10	10	0
174	5I	100	65.20555556	-138.3255556	711	16-07-25	0	8	150	9	4	3

Km	ID	Proximity	Latitude	Longitude	Elevation	Trap Set Date	Diptera	Hemiptera	Plecoptera	Orthoptera	Thysanoptera	Larvae
118	1A	1	64.84388889	-138.3238889	984	16-07-19	69	21	0	0	0	2
118	1B	10	64.84388889	-138.3238889	984	16-07-19	35	14	0	0	0	1
118	1C	100	64.84388889	-138.3238889	984	16-07-19	23	5	0	0	0	0
122	1G	1	64.88527778	-138.2847222	949	16-07-19	27	0	0	0	0	0
122	1H	10	64.88527778	-138.2847222	949	16-07-19	15	8	0	0	0	0
122	1I	100	64.88527778	-138.2847222	949	16-07-19	20	12	0	1	0	0
130	2A	1	64.95305556	-138.2697222	944	16-07-19	21	19	0	0	0	5
130	2B	10	64.95305556	-138.2697222	944	16-07-19	14	29	4	0	0	1
130	2C	100	64.95305556	-138.2697222	944	16-07-19	26	12	3	0	0	0
134	2G	1	64.97861111	-138.2180556	896	16-07-19	12	1	0	0	0	1
134	2H	10	64.97861111	-138.2180556	896	16-07-19	17	0	0	0	0	0
134	2I	100	64.97861111	-138.2180556	896	16-07-19	19	2	0	0	0	0
146	3A	1	65.06694444	-138.1311111	853	16-07-19	17	1	0	0	0	4
146	3B	10	65.06694444	-138.1311111	853	16-07-19	26	1	0	0	0	1
146	3C	100	65.06694444	-138.1311111	853	16-07-19	3	2	0	0	0	0
160	4A	1	65.09611111	-138.3638889	859	16-07-25	399	13	0	0	0	0
160	4B	10	65.09611111	-138.3638889	859	16-07-25	260	2	0	0	0	0
160	4C	100	65.09611111	-138.3638889	859	16-07-25	46	0	0	0	0	0
164	4G	1	65.12861111	-138.3255556	813	16-07-25	185	6	0	0	1	0
164	4H	10	65.12861111	-138.3255556	813	16-07-25	420	13	0	0	0	0
164	4I	100	65.12861111	-138.3255556	813	16-07-25	70	4	0	0	0	0
170	5A	1	65.17416667	-138.3602778	754	16-07-25	1717	11	0	0	0	1
170	5B	10	65.17416667	-138.3602778	754	16-07-25	155	16	0	0	4	0
170	5C	100	65.17416667	-138.3602778	754	16-07-25	59	49	0	0	0	0
174	5G	1	65.20555556	-138.3255556	711	16-07-25	696	21	0	0	1	0
174	5H	10	65.20555556	-138.3255556	711	16-07-25	18	10	0	0	1	0
174	5I	100	65.20555556	-138.3255556	711	16-07-25	52	17	0	0	0	1

TABLE S3. The coordinates of pan traps set out at 1 m, 10 m, and 100 m from the road along a 56 km segment of the Dempster Highway (Yukon, Canada) in July 2016. Each row represents a single pan trap and shows the abundance of individuals in each Hymenoptera family or subfamily.

ID	1A	1B	1C	1G	1H	1I	2A	2B	2C
Latitude	64.84388889	64.84388889	64.84388889	64.88527778	64.88527778	64.88527778	64.95305556	64.95305556	64.95305556
Longitude	-138.3238889	-138.3238889	-138.3238889	-138.2847222	-138.2847222	-138.2847222	-138.2697222	-138.2697222	-138.2697222
Elevation	984	984	984	949	949	949	944	944	944
Proximity	1	10	100	1	10	100	1	10	100
Date	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19
Superfamily/Family:									
Ichneumonoidea Ichneumonidae Metopiinae	0	0	0	0	0	0	0	0	1
Ichneumonoidea Ichneumonidae Pimplinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Phygadeuontinae	2	0	0	1	1	1	0	0	0
Ichneumonoidea Ichneumonidae Campopleginae	1	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Orthocentrinae	1	0	0	0	1	0	0	0	0
Ichneumonoidea Ichneumonidae Ctenopelmatinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Diplazontinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Ichneumoninae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Mesochorinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Opiinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Microgastrinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Alysiinae	0	1	1	1	0	1	0	0	2
Ichneumonoidea Braconidae Aphidiinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Cheloninae	0	0	0	0	1	0	0	0	0
Cynipoidea Figitidae Eucoilinae	2	1	0	0	0	0	1	0	0
Proctotrupoidea Proctotrupidae	0	0	0	1	0	0	0	0	0
Formicoidea Formicidae Myrmicinae	0	0	0	0	0	1	0	0	0
Formicoidea Formicidae Formicinae	0	0	0	0	0	0	4	0	0
Chalcidoidea Mymaridae	1	2	0	0	4	1	5	0	0
Chalcidoidea Torymidae Toryminae	0	0	0	0	0	2	0	0	0
Chalcidoidea Aphelinidae	0	0	0	0	0	0	0	0	0
Chalcidoidea Encyrtidae	0	0	0	0	0	0	0	0	0
Chalcidoidea Pteromalidae Pteromalinae	0	0	0	0	0	0	0	1	0
Chalcidoidea Eulophidae	1	0	0	0	0	0	0	0	1
Platygastroidea Platygastridae	4	0	0	0	1	0	0	0	0
Platygastroidea Scelionidae	0	3	0	0	0	0	0	0	0
Ceraphronoidea Megaspilidae	0	0	0	0	0	0	0	0	0
Ceraphronoidea Ceraphronidae	0	0	2	0	0	1	4	0	3
DiaprioideaDiapriidae	8	0	2	0	0	1	1	0	4
Mymarommatoidea	0	0	0	0	0	0	0	0	0
Apoidea Apidae Apinae	0	0	0	0	0	0	0	0	0
Apoidea Crabonidae Craboninae	0	0	0	0	0	0	0	0	0
Vespoidea Vespidae Vespinae	0	0	0	0	0	0	0	0	0
Chrysidoidea Bethylidae	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0

TABLE S3. The coordinates of pan traps set out at 1 m, 10 m, and 100 m from the road along a 56 km segment of the Dempster Highway (Yukon, Canada) in July 2016. Each row represents a single pan trap and shows the abundance of individuals in each Hymenoptera family or subfamily – *continued*:

ID	2G	2H	2I	3A	3B	3C	4A	4B	4C
Latitude	64.97861111	64.97861111	64.97861111	65.06694444	65.06694444	65.06694444	65.09611111	65.09611111	65.09611111
Longitude	-138.2180556	-138.2180556	-138.2180556	-138.1311111	-138.1311111	-138.1311111	-138.3638889	-138.3638889	-138.3638889
Elevation	896	896	896	853	853	853	859	859	859
Proximity	1	10	100	1	10	100	1	10	100
Date	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19	16-07-19	16-07-25	16-07-25	16-07-25
Superfamily/Family:									
Ichneumonoidea Ichneumonidae Metopiinae	0	0	0	0	0	0	0	1	1
Ichneumonoidea Ichneumonidae Pimplinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Phygadeuontinae	1	4	1	2	0	0	9	4	0
Ichneumonoidea Ichneumonidae Campopleginae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Orthocentrinae	1	1	1	0	1	0	0	2	0
Ichneumonoidea Ichneumonidae Ctenopelmatinae	0	0	0	0	0	1	0	0	0
Ichneumonoidea Ichneumonidae Diplazontinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Ichneumoninae	0	0	0	0	0	0	1	7	0
Ichneumonoidea Ichneumonidae Mesochorinae	0	0	0	0	0	0	1	0	0
Ichneumonoidea Braconidae Opiinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Microgastrinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Alysiinae	2	0	0	0	0	1	3	1	0
Ichneumonoidea Braconidae Aphidiinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Cheloninae	0	0	0	0	0	0	0	0	0
Cynipoidea Figitidae Eucoilinae	0	0	0	0	0	0	1	0	0
Proctotrupoidea Proctotrupidae	0	0	0	0	0	0	1	1	1
Formicoidea Formicidae Myrmicinae	0	0	0	0	0	0	0	0	0
Formicoidea Formicidae Formicinae	0	0	0	0	0	0	0	0	0
Chalcidoidea Mymaridae	1	0	0	0	1	0	2	4	0
Chalcidoidea Torymidae Toryminae	0	0	0	0	0	0	0	0	0
Chalcidoidea Aphelinidae	0	0	0	0	0	0	0	0	0
Chalcidoidea Encyrtidae	0	0	0	0	0	0	0	0	0
Chalcidoidea Pteromalidae Pteromalinae	0	0	0	0	0	0	1	0	0
Chalcidoidea Eulophidae	0	0	0	0	0	0	4	0	1
Platygastroidea Platygastridae	1	0	0	4	0	0	12	5	0
Platygastroidea Scelionidae	0	0	1	1	0	1	0	2	1
Ceraphronoidea Megaspilidae	1	0	0	0	0	0	1	0	0
Ceraphronoidea Ceraphronidae	3	0	0	0	0	0	5	1	0
DiaprioideaDiapriidae	3	3	9	0	0	1	7	14	0
Mymarommatoidea	0	0	0	0	0	0	0	0	0
Apoidea Apidae Apinae	0	0	0	1	0	0	0	0	0
Apoidea Crabonidae Craboninae	0	0	0	1	0	0	0	0	0
Vespoidea Vespidae Vespinae	0	1	0	0	1	0	0	0	0
Chrysidoidea Bethylidae	0	0	1	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0

TABLE S3. The coordinates of pan traps set out at 1 m, 10 m, and 100 m from the road along a 56 km segment of the Dempster Highway (Yukon, Canada) in July 2016. Each row represents a single pan trap and shows the abundance of individuals in each Hymenoptera family or subfamily – *continued*:

ID	4G	4H	4I	5A	5B	5C	5G	5H	5I
Latitude	65.12861111	65.12861111	65.12861111	65.17416667	65.17416667	65.17416667	65.20555556	65.20555556	65.20555556
Longitude	-138.3255556	-138.3255556	-138.3255556	-138.3602778	-138.3602778	-138.3602778	-138.3255556	-138.3255556	-138.3255556
Elevation	813	813	813	754	754	754	711	711	711
Proximity	1	10	100	1	10	100	1	10	100
Date	16-07-25	16-07-25	16-07-25	16-07-25	16-07-25	16-07-25	16-07-25	16-07-25	16-07-25
Superfamily/Family:									
Ichneumonoidea Ichneumonidae Metopiinae	1	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Pimplinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Phygadeuontinae	1	0	0	0	0	1	2	1	0
Ichneumonoidea Ichneumonidae Campopleginae	0	0	0	0	0	1	0	0	0
Ichneumonoidea Ichneumonidae Orthocentrinae	2	0	0	4	0	0	0	0	2
Ichneumonoidea Ichneumonidae Ctenopelmatinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Ichneumonidae Diplazontinae	0	0	0	1	0	0	0	0	0
Ichneumonoidea Ichneumonidae Ichneumoninae	0	0	0	1	0	0	0	0	0
Ichneumonoidea Ichneumonidae Mesochorinae	0	0	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Opiinae	0	0	0	0	0	0	1	0	0
Ichneumonoidea Braconidae Microgastrinae	0	1	0	0	0	0	0	0	0
Ichneumonoidea Braconidae Alysiinae	1	1	2	1	1	0	1	0	1
Ichneumonoidea Braconidae Aphidiinae	0	0	0	2	0	0	0	0	0
Ichneumonoidea Braconidae Cheloninae	0	0	0	0	0	0	0	0	0
Cynipoidea Figitidae Eucoilinae	2	0	0	0	0	0	3	0	0
Proctotrupoidea Proctotrupidae	0	0	0	0	0	0	0	0	0
Formicoidea Formicidae Myrmicinae	11	9	1	0	0	0	2	3	1
Formicoidea Formicidae Formicinae	6	3	1	0	2	1	0	0	0
Chalcidoidea Mymaridae	3	0	2	0	2	10	0	3	0
Chalcidoidea Torymidae Toryminae	0	0	0	0	0	0	0	0	0
Chalcidoidea Aphelinidae	0	0	0	0	0	1	0	0	0
Chalcidoidea Encyrtidae	0	0	0	0	0	1	0	0	0
Chalcidoidea Pteromalidae Pteromalinae	0	0	0	0	0	0	0	0	0
Chalcidoidea Eulophidae	0	1	0	1	0	0	0	0	0
Platygastroidea Platygastridae	10	7	0	6	10	0	14	2	1
Platygastroidea Scelionidae	1	0	1	2	5	4	0	1	
Ceraphronoidea Megaspilidae	1	0	1	0	0	0	1	0	0
Ceraphronoidea Ceraphronidae	4	0	0	6	2	0	2	1	0
DiaprioideaDiapriidae	20	1	5	0	4	3	3	0	1
Mymarommatoidea	0	0	0	0	1	0	0	0	0
Apoidea Apidae Apinae	1	4	3	0	0	0	0	0	0
Apoidea Crabonidae Craboninae	0	0	0	0	0	0	0	0	0
Vespoidea Vespidae Vespinae	0	0	0	0	0	0	0	0	0
Chrysidoidea Bethylidae	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	3	3	1	1