

Supplementary table S1. The average densities and eating patterns of soil fauna in the four studied litters under different stages.

Species	Soil fauna group		OF	DF	TS	GS	LF	Eating patterns
Birch	Collembola	Isotomidae	1.67	5.00	16.00	17.00	10.00	Pr
		Campodeoidea	0.00	0.00	0.00	0.00	0.33	O
	Prostigmata		0.33	0.33	0.67	5.33	22.33	S
		Scutacaridae	0.00	0.00	0.00	0.00	0.33	S
	Oribatida		0.00	1.33	2.67	4.67	79.67	S
		Macropylina	0.00	0.00	0.00	8.33	0.00	S
	Pseudoscorpioniones	Chernetidae	0.33	0.00	0.00	0.00	0.00	Pr
	Coleoptera	Carabidae	0.00	0.00	0.00	6.67	0.00	Ph
		Staphylinidae	0.00	0.00	0.00	0.00	0.33	S
		Scydmaenidae	0.00	0.00	0.00	0.00	0.33	Pr
	Diptera	Phoridae	0.00	0.00	0.00	0.00	0.33	S
	Isoptera	Kalotermitidae	0.00	0.00	0.00	0.33	0.00	Ph
	Isopoda	Armadillidiidae	0.00	0.00	0.00	0.33	0.00	O
	Symphylla	Scolopendrellidae	0.00	0.00	0.00	0.67	0.00	S
	Diplopoda	Hirudisomatidae	0.00	0.00	0.00	0.33	0.00	Ph
	Lithobiomorpha		0.00	0.00	0.00	0.33	0.33	Pr
	Geophilomorpha		0.00	0.00	0.00	0.00	0.33	Pr
	Nematoda		0.00	0.00	0.00	0.00	0.33	O
Fir	Collembola	Isotomidae	2.00	3.00	2.33	16.67	37.00	Pr
		Poduridae	0.00	0.00	0.00	2.00	0.00	O
	Prostigmata		0.00	0.33	0.67	13.00	25.00	S
	Oribatida		2.00	1.00	1.67	15.00	14.33	S
	Isoptera	Kalotermitidae	0.00	0.00	0.00	0.33	0.00	Ph
	Coleoptera	Carabidae	0.00	0.00	0.00	0.33	0.00	Ph
		Scydmaenidae	0.00	0.00	0.00	0.00	0.67	Pr
		Staphylinidae	0.00	0.00	0.00	0.00	1.00	S
	Diptera	Phoridae	0.00	0.00	0.00	0.00	0.33	S
	Pseudoscorpioniones	Cheliferidae	0.00	0.00	0.00	0.33	0.00	Pr
	Geophilomorpha		0.00	0.00	0.00	0.00	0.67	Pr
	Lithobiomorpha		0.00	0.00	0.00	0.00	1.33	Pr
	Isopoda	Armadillidiidae	0.00	0.00	0.00	0.00	0.67	O
	Nematoda		0.00	0.00	0.00	0.00	0.67	O
	Acerentomata		0.00	0.00	0.00	0.00	1.00	S
Willow	Collembola	Isotomidae	2.67	0.00	4.33	70.00	104.00	Pr
		Poduridae	0.00	0.00	0.00	0.33	0.00	O
		Sminthuridae	0.00	0.00	0.00	0.00	0.33	Ph
	Prostigmata		0.00	0.00	0.33	3.00	20.33	S
		Scutacaridae	0.00	0.00	0.00	3.00	0.00	S
	Oribatida		0.00	0.00	0.00	2.67	4.67	S
		Macropylina	0.00	0.00	0.00	6.67	0.00	S
	Acariformes	Tarsonemidae	0.00	0.00	0.00	0.33	0.00	O

Supplementary table S1 (continued)

Species	Soil fauna group		OF	DF	TS	GS	LF	Eating patterns
Cypress	Diptera	Syrphidae	0.00	0.00	0.00	0.67	0.00	S
	Diptera	Mycetophilidae	0.00	0.00	0.00	1.00	0.00	S
	Coleoptera	Staphylinidae	0.00	0.00	0.00	0.00	1.67	S
	Araneae	Theraphosidae	0.33	0.00	0.00	0.00	0.00	Pr
	Symphyla	Scolopendrellidae	0.00	0.00	0.00	0.33	0.00	S
	Diplopoda	Hirudisomatidae	0.00	0.00	0.00	0.33	0.00	Ph
	Collembola	Isotomidae	0.00	2.00	1.00	2.67	28.33	Pr
		Entomobryidae	0.00	0.00	0.00	0.00	1.00	Ph
		Poduridae	0.00	0.00	0.00	0.33	0.00	O
	Oribatida		4.67	0.00	2.33	17.67	2.33	S
		Macropylina	0.00	0.00	0.00	12.67	0.00	S
	Prostigmata		1.67	0.00	2.00	4.33	23.00	S
	Mesostigmata		0.00	0.33	0.00	0.00	0.00	S
	Coleoptera	Carabidae	0.00	0.00	0.00	1.00	0.00	Ph
	Diptera	Phoridae	0.00	0.00	0.00	0.00	1.33	S
		Mycetophilidae	0.00	0.00	0.00	0.00	0.33	S
Symphyla	Scolopendrellidae	0.00	0.00	0.00	0.33	0.00	S	
Diplopoda	Hirudisomatidae	0.00	0.00	0.00	0.33	0.00	Ph	
Nematoda		0.00	0.00	0.00	0.00	1.33	O	

OF: onset of freezing stage, DF: deep freezing stage, TS: thawing stage, GS: growing season, LF: leaf falling stage; S: Saprophagy; Pr: Predatism; Ph: Phytophagy; O: Omnivory.