

# Diversity of flower visiting beetles at higher elevations on the Yulong Snow Mountain (Yunnan, China)

Kai-Qin Li <sup>1,2</sup>, Zong-Xin Ren <sup>3,4,\*</sup> and Qiang Li <sup>1,\*</sup>

<sup>1</sup> College of Plant Protection, Yunnan Agricultural University, Kunming, China;

<sup>2</sup> Kunming Natural History Museum of Zoology, Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming, China;

<sup>3</sup> Key Laboratory for Plant Diversity and Biogeography of East Asia, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, China;

<sup>4</sup> Lijiang Forest Biodiversity National Observation and Research Station, Lijiang, China;

\* Correspondence: renzongxin@mail.kib.ac.cn, and liqiangkm@126.com

**Table S1.** Sample sites, transects, GPS information and sampling date.

Site/Transect	GPS	Elevation	Vegetation	Sampling date (Year/date)
L_YH_M	27°01'41.61"N	2864m	Meadow	2018: 7.19, 8.19, 9.15, 10.15
	100°12'52.27"E			2019: 5.21, 6.22, 7.24,8.24,9.14,10.03
L_YH_F	27°01'41.61"N	2864m	Forest	2018: 7.19, 8.19, 9.15, 10.15
	100°12'52.26"E			2019: 5.21, 6.22,7.24,8.24, 9.14, 10.03
L_YS_M	26°59'58.05"N	2706m	Meadow	2018: 07.19, 8.19,9.15,10.15
	100°11'57.44"E			2019: 5.21, 6.22, 7.24, 8.24, 9.14, 10.03
L_YS_F	26°59'58.06"N	2707m	Forest	2018: 7.19,8.19,9.15, 10.15
	100°11'57.44"E			2019: 5.21, 6.22, 7.24, 8.24, 9.14, 10.03
L_JX_M	26°59'22.13"N	2635m	Meadow	2018: 07.19, 8.19, 9.15, 10.15
	100°11'50.94"E			2019: 5.21, 6.22, 7.24, 8.24, 9.14,10.03
L_JX_F	26°59'22.13"N	2635m	Forest	2018: 07.19, 8.19, 9.15, 10.15
	100°11'50.94"E			2019: 5.21, 6.22, 7.24, 8.24, 9.14,10.03
H_SK_M	27°00'07.20"N	3238m	Meadow	2018: 07.18, 8.18, 9.15, 10.15
	100°10'54.72"E			2019: 5.21, 6.22 (no beetle), 7.22, 8.24, 9.15, 10.04
H_SK_F	27°00'07.20"N	3240m	Forest	2018: 07.18, 8.18, 9.15, 10.15 (no beetle)
	100°10'54.72"E			2019: 5.21, 6.22, 7.22, 8.24, 9.15, 10.04 (no beetle)
H_LX_M	26°59'21.73"N	3233m	Meadow	2018: 7.18, 8.18, 9.15, 10.15 (no beetle)
	100°10'24.13"E			2019: 5.21, 6.22 (no beetle), 7.22, 8.24, 9.15, 10.04 (no beetle)
H_LX_F	26°59'21.73"N	3233m	Forest	2018: 7.18, 8.18, 9.15, 10.15 (no beetle)

	100°10'24.13"E			2019: 5.21, 6.22, 7.22, 8.24, 9.15, 10.04
H_LB_M	26°58'42.65"N	3180m	Meadow	2018: 7.18, 8.18, 9.15, 10.15
	100°10'45.44"E			2019: 5.21, 6.22, 7.22, 8.24, 9.15, 10.04
H_LB_F	26°58'42.65"N	3180m	Forest	2018: 7.18, 8.18, 9.15, 10.15.07.18
	100°10'45.44"E			2019: 5.21, 6.22, 7.22, 8.24, 9.15, 10.04

**Table S2.** Beetle species and their families. The number of specimens for each species was given.

Family	Species	Number of specimens
Attelabidae	<i>Deporaus</i> sp.	1
Brentidae	<i>Piezotrachelus</i> sp.	1
Brentidae	<i>Protopirapion</i> sp.	1
Buprestidae	<i>Meliboeus</i> sp.	1
Cantharidae	<i>Lycocerus</i> sp.1	132
Cantharidae	<i>Silinae</i> sp.	4
Cantharidae	<i>Lycocerus longipilis</i> (Wittmer)	1
Cantharidae	<i>Lycocerus metallicipennis</i> (Fairmaire)	1
Cantharidae	<i>Lycocerus</i> sp2.	1
Cantharidae	<i>Malthodes</i> sp.	1
Cantharidae	<i>Stenothemus grahami</i> Wittmer	1
Cetoniidae	<i>Gametis jucunda</i> (Faldermann)	4
Chrysomelidae	<i>Nonarthra variabilis</i> Baly	706
Chrysomelidae	Galerucinae sp.1	61
Chrysomelidae	<i>Stenoluperus</i> sp.	26
Chrysomelidae	Galerucinae sp.14	22

Chrysomelidae	Galerucinae sp.5	59
Chrysomelidae	<i>Hespera</i> sp.2	10
Chrysomelidae	Galerucinae sp.2	5
Chrysomelidae	<i>Hespera elegans</i> Medvedev	5
Chrysomelidae	<i>Luperomorpha</i> sp.	5
Chrysomelidae	<i>Monolepta</i> sp.2	5
Chrysomelidae	<i>Nonarthra</i> sp.1	4
Chrysomelidae	<i>Chaetocnema cheni</i> Ruan, Konstantinov & Yang	3
Chrysomelidae	Galerucinae sp.13	3
Chrysomelidae	Galerucinae sp.3	3
Chrysomelidae	<i>Nonarthra formosensis</i> Chûjô	3
Chrysomelidae	<i>Nonarthra nigripenne</i> Wang	3
Chrysomelidae	<i>Trichomimastra</i> sp	3
Chrysomelidae	Galerucinae sp.9	2
Chrysomelidae	<i>Hemipyxis</i> sp.1	2
Chrysomelidae	Galerucinae sp.6	2
Chrysomelidae	Galerucinae sp.7	2
Chrysomelidae	Altinae sp.	1
Chrysomelidae	<i>Apophyllia sprecherae</i> Bezděk	1
Chrysomelidae	<i>Batophila impressa</i> Wang	1
Chrysomelidae	Galerucinae sp.10	1
Chrysomelidae	Galerucinae sp.11	1
Chrysomelidae	Galerucinae sp.12	1
Chrysomelidae	Galerucinae sp.15	1

Chrysomelidae	Galerucinae sp.4	1
Chrysomelidae	Galerucinae sp.8	1
Chrysomelidae	<i>Hemipyxis plagioderoides</i> (Motschulsky)	1
Chrysomelidae	<i>Hespera</i> sp.1	1
Chrysomelidae	<i>Hespera</i> sp.3	1
Chrysomelidae	<i>Hespera</i> sp.4	1
Chrysomelidae	<i>Longitarsus cyanipennis</i> Bryant	1
Chrysomelidae	<i>Longitarsus</i> sp.	1
Chrysomelidae	<i>Monolepta</i> sp.1	1
Chrysomelidae	<i>Monolepta</i> sp.3	1
Chrysomelidae	<i>Nonarthra</i> sp.3	1
Chrysomelidae	<i>Orthaltica</i> sp.	1
Chrysomelidae	<i>Trachytetra cyanea</i> (Chen)	1
Chrysomelidae	<i>Chaetocnema concinna</i> (Marsham)	1
Coccinellidae	<i>Coccinella septemunctata</i> Linnaeus	13
Coccinellidae	<i>Hippodamia pofanini</i> (Weise)	4
Coccinellidae	<i>Hippodamia variegata</i> (Goeze)	2
Coccinellidae	<i>Coccinella transversoguttata</i> Faldermann	2
Coccinellidae	<i>Scymnus sinuanodulus</i> Yu and Yao	2
Coccinellidae	<i>Harmonia eucharis</i> (Mulsant)	1
Coccinellidae	<i>Oenopia flavidbruna</i> Jing	1
Coccinellidae	<i>Scymnus kawamuyai</i> (Ohta)	1
Coccinellidae	<i>Scymnus</i> sp.1	1
Coccinellidae	<i>Macronaemia hauseri</i> (Weise)	1
Corylophidae	Corylophidae sp.	1

Crioceridae	<i>Bruchidius lautus</i> (Sharp)	168
Crioceridae	<i>Borowiecius</i> sp.	2
Crioceridae	<i>Bruchidius</i> sp.1	1
Crioceridae	<i>Bruchidius</i> sp.2	1
Crioceridae	<i>Donacia</i> sp.	1
Cryptophagidae	<i>Antherophagus</i> sp.	1
Curculionidae	<i>Xenysmoderes</i> sp.	16
Curculionidae	<i>Derelomus</i> sp.	10
Curculionidae	<i>Anthinobaris</i> sp.	6
Curculionidae	<i>Ochyromera</i> sp.	6
Curculionidae	<i>Nespilobaris</i> sp.	2
Curculionidae	<i>Archarius</i> sp.	1
Curculionidae	Ceutorhynchinae sp.	1
Curculionidae	<i>Cyrtepidomus castaneus</i> (Roelofs)	1
Curculionidae	<i>Orchestes</i> sp.	1
Curculionidae	<i>Phyllobius</i> sp.	1
Elateridae	<i>Platynychus nebulosus</i> Motschulsky	51
Elateridae	<i>Agrypnus argillaceus argillaceus</i> (Solsky)	1
Elateridae	<i>Dycronychus</i> sp.	1
Elateridae	<i>Gamepentes kresli</i> Schimmel et Tarnawski	1
Elateridae	<i>Glyphonyx</i> sp.	1
Eumolpidae	Eumolpidinae sp.1	4
Eumolpidae	Eumolpidinae sp.2	1
Eumolpidae	Eumolpidinae sp.3	1
Lycidae	<i>Lycostomus</i> sp.	1

Melolonthidae	<i>Archeohomaloplia</i> sp.2	3
Melolonthidae	<i>Archeohomaloplia</i> sp.1	2
Melyeridae	Malachiinae sp.1	4
Melyeridae	Dasytinae sp.	1
Melyeridae	Malachiinae sp.2	1
Mordellidae	Mordellidae sp.1	60
Mordellidae	Mordellidae sp.3	5
Mordellidae	Mordellidae sp.2	1
Nitidulidae	<i>Lamiogethes</i> sp.1	672
Nitidulidae	Epuracinae sp.1	383
Nitidulidae	Epuracinae sp.5	174
Nitidulidae	Epuracinae sp.8	90
Nitidulidae	Epuracinae sp.6	76
Nitidulidae	Epuracinae sp.2	50
Nitidulidae	Epuracinae sp.7	45
Nitidulidae	<i>Lamiogethes</i> sp.4	17
Nitidulidae	<i>Meligethes auripilis</i> Reitter	17
Nitidulidae	Epuracinae sp.3	15
Nitidulidae	<i>Brassicogethes affinis</i> (Jelínek)	14
Nitidulidae	Epuracinae sp.9	14
Nitidulidae	<i>Lamiogethes</i> sp.2	14
Nitidulidae	<i>Meligethes binotatus</i> Grouvelle	12
Nitidulidae	<i>Lamiogethes</i> sp.5	12
Nitidulidae	Meligethinae sp.5	9
Nitidulidae	Nitidulinae sp.1	7

Nitidulidae	Meligethinae	6
Nitidulidae	<i>Lamiogethes pseudoviridiangustus</i>	4
Nitidulidae	<i>Lamiogethes</i> sp.3	4
Nitidulidae	Epuraeinae sp.13	3
Nitidulidae	<i>Meligethinus tschungseni</i> Kirejtshuk	3
Nitidulidae	Niditulidae sp.2	3
Nitidulidae	Epuraeinae sp.	2
Nitidulidae	<i>Meligethes chinensis</i> Kirejtshuk	2
Nitidulidae	<i>Afrogethes bocaki</i> (Audisio, Jelinek et Coote)	1
Nitidulidae	Epuraeinae sp.12	1
Nitidulidae	Epuraeinae sp.15	1
Nitidulidae	Epuraeinae sp.16	1
Nitidulidae	Meligethinae sp.2	1
Nitidulidae	Meligethinae sp.3	1
Nitidulidae	Meligethinae sp.4	1
Nitidulidae	Nitidulidae sp.1	1
Nitidulidae	<i>Lamiogethes chlorocupreus</i> (Audisio, Jelinek et Coote)	1
Omethidae	Omethidae sp.	4
Rutelidae	<i>Popillia cribricollis</i> Ohaus	56
Rutelidae	<i>Popillia</i> sp.2	11
Rutelidae	<i>Popillia pustulata</i> Fairm.	5
Scirtidae	Scirtidae sp.	3
Scirtidae	<i>Scritis</i> sp.	4
Scraptiidae	<i>Anaspis</i> sp.1	1



Scraptiidae	Scraptiidae sp.2	1
Scraptiidae	<i>Anaspis</i> sp.2	31
Staphylinidae	<i>Eusphalerum</i> sp.1	51
Staphylinidae	<i>Eusphalerum</i> sp.2	31
Staphylinidae	Aleocarinae sp.3	19
Staphylinidae	Aleocarinae sp.1	8
Staphylinidae	<i>Eusphalerum</i> sp.3	4
Staphylinidae	Aleocarinae sp.2	1
Staphylinidae	<i>Coproporus</i> sp.	1
Tenebrionidae	<i>Lagria</i> sp.2	7
Tenebrionidae	Cteniopodini sp.	2
Tenebrionidae	Alleculini sp.	1
Tenebrionidae	Alleculini sp.2	1
Tenebrionidae	<i>Lagria</i> sp.1	1

**Table S3.** Plant species and their families. A plant marked as inflorescence refers to a large flower display in a more or less condensed inflorescence with many tiny flowers, including inflorescence type of Apiaceae (Umbel) and Asteraceae (Head).

Family	Species	Inflorescence/flower type
Adoxaceae	<i>Viburnum betulifolium</i>	Inflorescence
Adoxaceae	<i>Viburnum cylindricum</i>	Inflorescence
Apiaceae	<i>Physospermopsis delavayi</i>	Inflorescence (Umbel)
Apiaceae	<i>Pimpinella candolleana</i>	Inflorescence (Umbel)

---

Apiaceae	<i>Pimpinella yunnanensis</i>	Inflorescence (Umbel)
Asteraceae	<i>Ajania quercifolia</i>	Inflorescence (Head)
Asteraceae	<i>Anaphalis aureo-punctata</i>	Inflorescence (Head)
Asteraceae	<i>Anaphalis nepalensis</i>	Inflorescence (Head)
Asteraceae	<i>Aster jeffreyanus</i>	Inflorescence (Head)
Asteraceae	<i>Aster oreophilus</i>	Inflorescence (Head)
Asteraceae	<i>Cirsium henryi</i>	Inflorescence (Head)
Asteraceae	<i>Cirsium lidjiangense</i>	Inflorescence (Head)
Asteraceae	<i>Cirsium shansiense</i>	Inflorescence (Head)
Asteraceae	<i>Crepis napifera</i>	Inflorescence (Head)
Asteraceae	<i>Eupatorium heterophyllum</i>	Inflorescence (Head)
Asteraceae	<i>Eupatorium lindleyanum</i>	Inflorescence (Head)
Asteraceae	<i>Inula helianthus-aquatilis</i>	Inflorescence (Head)
Asteraceae	<i>Leontopodium calocephalum</i>	Inflorescence (Head)
Asteraceae	<i>Leontopodium dedekensii</i>	Inflorescence (Head)
Asteraceae	<i>Leontopodium sinense</i>	Inflorescence (Head)
Asteraceae	<i>Ligularia alatipes</i>	Inflorescence (Head)
Asteraceae	<i>Ligularia lapathifolia</i>	Inflorescence (Head)
Asteraceae	<i>Senecio scandens</i>	Inflorescence (Head)
Asteraceae	<i>Senecio spathiphyllus</i>	Inflorescence (Head)
Asteraceae	<i>Taraxacum mongolicum</i>	Inflorescence (Head)
Asteraceae	<i>Youngia paleacea</i>	Inflorescence (Head)
Boraginaceae	<i>Cynoglossum anabile</i>	Blue flower
Campanulaceae	<i>Adenophora coelestis</i>	Pedant flower
Caprifoliaceae	<i>Dipsacus asper</i>	Inflorescence (Head)

---

---

Celastraceae	<i>Parnassia wightiana</i>	Single white flower
Commelinaceae	<i>Commelina maculata</i>	Blue flower
Daphnaceae	<i>Stellera chamaejasme</i>	Inflorescence (Umbel)
Dianthaceae	<i>Silene asclepiadea</i>	Pink flower
Ericaceae	<i>Rhododendron decorum</i>	Big white flower
Ericaceae	<i>Rhododendron yunnanense</i>	Big white-pink flower
Eriocaulaceae	<i>Eriocaulon henryanum</i>	Inflorescence (Head)
Fabaceae	<i>Astragalus camptodontus</i>	Papilionaceous corolla
Fabaceae	<i>Astragalus pullus</i>	Papilionaceous corolla
Fabaceae	<i>Desmodium yunnanense</i>	Papilionaceous corolla
Fabaceae	<i>Indigofera balfouriana</i>	Papilionaceous corolla
Fabaceae	<i>Indigofera lenticellata</i>	Papilionaceous corolla
Fabaceae	<i>Indigofera pendula</i>	Papilionaceous corolla
Fabaceae	<i>Lespedeza formosa</i>	Papilionaceous corolla
Fabaceae	<i>Lotus corniculatus japonicus</i>	Papilionaceous corolla
Fabaceae	<i>Trifolium repens</i>	Papilionaceous corolla
Geraniaceae	<i>Geranium nepalense</i>	Single flower
Geraniaceae	<i>Geranium pylzowianum</i>	Single flower
Geraniaceae	<i>Geranium strictipes</i>	Single flower
Gentianaceae	<i>Gentiana souliei</i>	Single flower
Gentianaceae	<i>Halenia elliptica</i>	Purple flower
Gentianaceae	<i>Lomatogonium lijiangense</i>	Purple flower
Hypericaceae	<i>Hypericum bellum</i>	Big yellow flower with many androdecium
Hypericaceae	<i>Hypericum chosiyanum</i>	Big yellow flower with many androdecium
Hydrangeaceae	<i>Philadelphus calvescens</i>	Inflorescence

---

---

Juncaceae	<i>Juncus allioides</i>	Inflorescence (Head)
Lamiaceae	<i>Clinopodium repens</i>	Pink flower
Lamiaceae	<i>Elsholtzia fruticosa</i>	Inflorescence (Head)
Lamiaceae	<i>Isodon angustifolius</i>	White flower
Lamiaceae	<i>Skapanthus oreophilus</i>	Purple flower
Nartheciaceae	<i>Aletris pauciflora</i>	Inflorescence
Nartheciaceae	<i>Aletris pauciflora khasiana</i>	Inflorescence
Oleaceae	<i>Jasminum officinale</i>	White flower
Oleaceae	<i>Ligustrum quihoui</i>	Inflorescence
Orobanchaceae	<i>Pedicularis cephalantha</i>	Pink flower (pollen reward only)
Orobanchaceae	<i>Pedicularis densispica</i>	Pink flower
Orchidaceae	<i>Spiranthes sinensis</i>	Inflorescence
Polygonaceae	<i>Fagopyrum dibotrys</i>	Inflorescence
Polygonaceae	<i>Polygonum paleaceum</i>	Inflorescence (Head)
Polygonaceae	<i>Polygonum viviparum</i>	Inflorescence (Head)
Polygonaceae	<i>Polygonum runcinatum</i>	Inflorescence (Head)
Primulaceae	<i>Primula poissonii</i>	Purple flower
Ranunculaceae	<i>Anemone demissa yunnanensis</i>	White flower
Ranunculaceae	<i>Anemone exigua</i>	White flower
Ranunculaceae	<i>Anemone rivularis</i>	White flower
Ranunculaceae	<i>Anemone rupestris</i>	White flower
Ranunculaceae	<i>Caltha pathustris</i>	Big yellow flower
Ranunculaceae	<i>Ranunculus japonicus</i>	Yellow flower
Ranunculaceae	<i>Ranunculus nephelogenes</i>	Yellow flower
Ranunculaceae	<i>Thalictrum delavayi</i>	Inflorescence

---

Ranunculaceae	<i>Thalictrum javanicum</i>	Inflorescence
Rosaceae	<i>Geum aleppicum</i>	Inflorescence (Head)
Rosaceae	<i>Potentilla fulgens</i>	Big yellow flower
Rosaceae	<i>Pyracantha fortuneana</i>	Inflorescence
Rosaceae	<i>Rosa omeiensis</i>	Big white flower
Rosaceae	<i>Saguisorba filiformis</i>	Inflorescence (Umbel)
Rutaceae	<i>Boenninghausenia albiflora</i>	Small white flower
Rutaceae	<i>Boenninghausenia sessilicarpa</i>	Small white flower
Saxifragaceae	<i>Saxifraga diversifolia</i>	Yellow flower
Saxifragaceae	<i>Saxifraga strigosa</i>	White flower
Scrophulariaceae	<i>Verbascum thapsus</i>	Yellow flower

**Table S4.** Sampling completeness estimations for different elevation and habitats using the iNEXT method.

	Observed	Estimator	Est_s.e.	95% Lower	95% Upper
<b>High elevation meadows (n = 3)</b>					
Species Richness	40	183.804	118.026	75.231	626.969
Shannon diversity	3.206	3.482	0.281	3.206	4.033
Simpson diversity	1.626	1.627	0.061	1.626	1.746
<b>High elevation forests (n = 3)</b>					
Species Richness	49	79.03	19.24	58.514	143.788
Shannon diversity	14.632	15.741	0.963	14.632	17.63
Simpson diversity	7.768	7.862	0.592	7.768	9.022
<b>Low elevation meadows (n = 3)</b>					

Species Richness	50	76.844	15.425	59.423	126.473
Shannon diversity	13.026	13.976	0.893	13.026	15.727
Simpson diversity	7.751	7.84	0.391	7.751	8.606
<b>Low elevation forests (n = 3)</b>					
Species Richness	80	177.935	45.575	121.121	313.242
Shannon diversity	8.996	9.525	0.453	8.996	10.413
Simpson diversity	4.389	4.399	0.146	4.389	4.686

**Table S5.** Network turnover among different transects (n =12). H and L refer to high elevation and low elevation, F and M refer to forest and meadow.

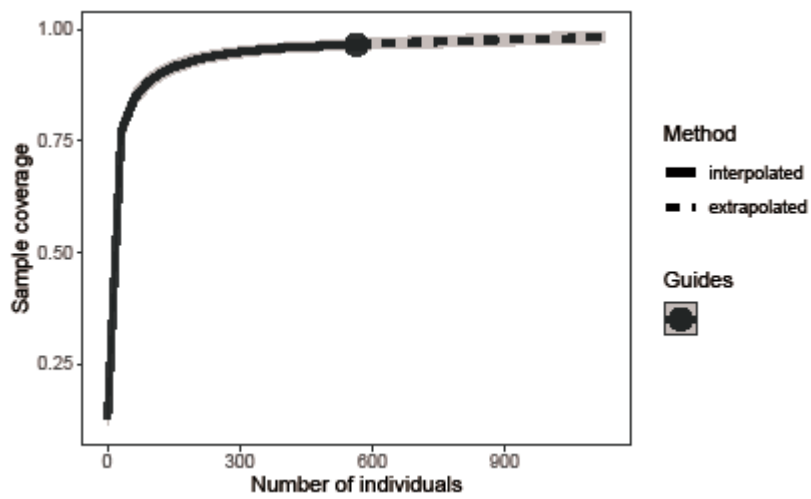
Network_1	Network_2	Binary	$\beta_s$	$\beta_{os}$	$\beta_{WN}$	$\beta_{ST}$
H_LB_F	H_LB_M	TRUE	0.9493033	0.02173913	1	0.9782609
H_LB_F	H_LX_F	TRUE	0.3769594	0.26906577	0.5215325	0.2524668
H_LB_F	H_LX_M	TRUE	0.9769055	0.17303017	0.994709	0.8216788
H_LB_F	H_SK_F	TRUE	0.3483221	0.34479997	0.5640557	0.2192557
H_LB_F	H_SK_M	TRUE	0.9805825	0	1	1
H_LB_F	L_JX_F	TRUE	0.9767424	0.00296443	1	0.9970356
H_LB_F	L_JX_M	TRUE	0.9590781	0.00617284	1	0.9938272
H_LB_F	L_YH_F	TRUE	0.8691288	0.19457774	0.9344948	0.7399171
H_LB_F	L_YH_M	TRUE	0.9735445	0.01644737	1	0.9835526
H_LB_F	L_YS_F	TRUE	0.9742847	0	1	1
H_LB_F	L_YS_M	TRUE	0.9820307	0.01515152	1	0.9848485
H_LB_M	H_LX_F	TRUE	0.9483463	0.04970271	1	0.9502973

H_LB_M	H_LX_M	TRUE	0.902749	0.09270761	0.9438693	0.8511617
H_LB_M	H_SK_F	TRUE	0.9543247	0	1	1
H_LB_M	H_SK_M	TRUE	0.9202195	0.17225974	0.9805825	0.8083228
H_LB_M	L_JX_F	TRUE	0.8922925	0.23715415	1	0.7628458
H_LB_M	L_JX_M	TRUE	0.8818662	0.11486849	0.9958848	0.8810163
H_LB_M	L_YH_F	TRUE	0.907619	0.11197508	0.9791271	0.8671521
H_LB_M	L_YH_M	TRUE	0.9048913	0.03918764	1	0.9608124
H_LB_M	L_YS_F	TRUE	0.9046823	0.22403382	1	0.7759662
H_LB_M	L_YS_M	TRUE	0.934563	0.06774264	0.9949495	0.9272069
H_LX_F	H_LX_M	TRUE	0.9801587	0.21957672	0.994709	0.7751323
H_LX_F	H_SK_F	TRUE	0.3925486	0.22990544	0.4962266	0.2663211
H_LX_F	H_SK_M	TRUE	0.9854369	0	1	1
H_LX_F	L_JX_F	TRUE	0.9776443	0.0042735	1	0.9957265
H_LX_F	L_JX_M	TRUE	0.9811649	0.00854701	1	0.991453
H_LX_F	L_YH_F	TRUE	0.8780632	0.2469307	0.9364245	0.6894938
H_LX_F	L_YH_M	TRUE	0.9891475	0	1	1
H_LX_F	L_YS_F	TRUE	0.9700855	0.0042735	0.9978632	0.9935897
H_LX_F	L_YS_M	TRUE	0.982129	0.000777	0.991453	0.990676
H_LX_M	H_SK_F	TRUE	0.9496229	0.32445401	0.994709	0.670255
H_LX_M	H_SK_M	TRUE	0.3399342	0.23882725	0.6813582	0.4425309
H_LX_M	L_JX_F	TRUE	0.9947247	0	1	1
H_LX_M	L_JX_M	TRUE	0.7039976	0.28248089	0.8559671	0.5734862
H_LX_M	L_YH_F	TRUE	0.978206	0.1724421	1	0.8275579
H_LX_M	L_YH_M	TRUE	0.7235798	0.39149958	0.8840852	0.4925856
H_LX_M	L_YS_F	TRUE	0.9933354	0	1	1

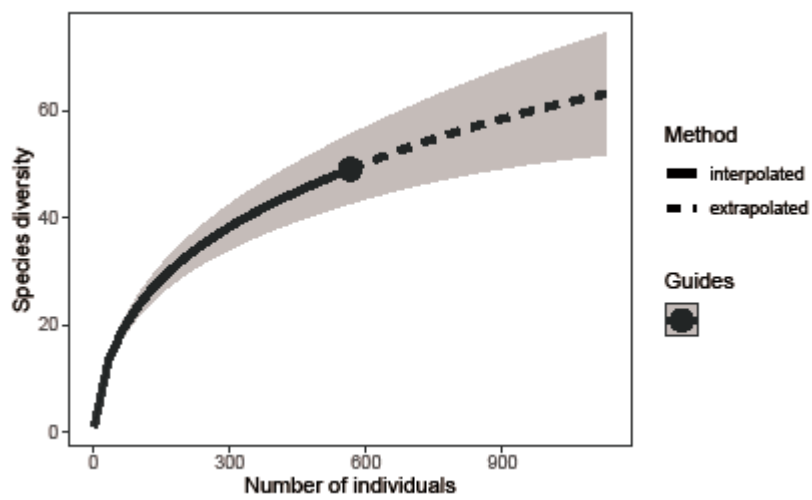
H_LX_M	L_YS_M	TRUE	0.6813372	0.31673882	0.9191919	0.6024531
H_SK_F	H_SK_M	TRUE	0.9635836	0.00265957	1	0.9973404
H_SK_F	L_JX_F	TRUE	0.9072933	0	1	1
H_SK_F	L_JX_M	TRUE	0.946907	0.01440329	1	0.9855967
H_SK_F	L_YH_F	TRUE	0.8242763	0.25171081	0.9305382	0.6788274
H_SK_F	L_YH_M	TRUE	0.9582167	0.00328947	1	0.9967105
H_SK_F	L_YS_F	TRUE	0.9084834	0.00265957	1	0.9973404
H_SK_F	L_YS_M	TRUE	0.9656942	0	1	1
H_SK_M	L_JX_F	TRUE	0.9950593	0	1	1
H_SK_M	L_JX_M	TRUE	0.7918814	0.1987095	0.9926485	0.793939
H_SK_M	L_YH_F	TRUE	0.9773985	0.22006472	1	0.7799353
H_SK_M	L_YH_M	TRUE	0.7719937	0.35715807	0.9188809	0.5617229
H_SK_M	L_YS_F	TRUE	0.9924902	0	1	1
H_SK_M	L_YS_M	TRUE	0.7801804	0.23347553	0.976954	0.7434785
L_JX_F	L_JX_M	TRUE	0.8381561	0.28955822	0.9659152	0.676357
L_JX_F	L_YH_F	TRUE	0.8249263	0.32622758	0.9350976	0.60887
L_JX_F	L_YH_M	TRUE	0.8952959	0.10826659	0.9894685	0.8812019
L_JX_F	L_YS_F	TRUE	0.5431404	0.35707409	0.7039627	0.3468886
L_JX_F	L_YS_M	TRUE	0.9476285	0.00702679	1	0.9929732
L_JX_M	L_YH_F	TRUE	0.8971545	0.13792646	0.9822819	0.8443554
L_JX_M	L_YH_M	TRUE	0.5792181	0.26654213	0.7860895	0.5195473
L_JX_M	L_YS_F	TRUE	0.9291706	0.01396803	0.9917695	0.9778015
L_JX_M	L_YS_M	TRUE	0.6283202	0.34670782	0.7947999	0.448092
L_YH_F	L_YH_M	TRUE	0.7279911	0.23474483	0.9649581	0.7302132
L_YH_F	L_YS_F	TRUE	0.6368332	0.27489093	0.9805462	0.7056553



L_YH_F	L_YS_M	TRUE	0.9346357	0.13888889	0.9943074	0.8554185
L_YH_M	L_YS_F	TRUE	0.852058	0.00106838	1	0.9989316
L_YH_M	L_YS_M	TRUE	0.648126	0.33213716	0.7785752	0.4464381
L_YS_F	L_YS_M	TRUE	0.923174	0.01845377	0.9893162	0.9708625



**Figure S1.** An example of sampling completeness (species coverage) for three forest transects at the high elevation.



**Figure S2.** An example of sampling completeness (species diversity) for three forest transects at the high elevation.