

Diet of three sympatric insectivorous bat species on Ishigaki Island, Japan

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Appendix 1. Seasonal change of insect abundance and wet mass captured by Malaise traps at forest (n = 6) and grassland (n = 3) habitats. Data for all traps in each survey period and habitat are pooled

	Month	<i>Anomala albopilosa</i>	Other Coleoptera	Dictyoptera	Chironomidae	Other Diptera	Hemiptera	Hymenoptera	Lepidoptera	Orthoptera	Others
Forest (number)	May	0	10	5	0	93	20	0	127	0	2
	Jun	0	18	3	0	9	15	2	53	3	1
	Jul	0	33	4	6	180	31	9	166	0	0
	Sep	0	42	8	2	42	22	101	255	1	0
	Nov	0	13	0	235	289	56	27	150	2	26
	Jan	0	7	0	54	316	17	8	46	0	5
	Total	0	123	20	297	929	161	147	797	6	34
Grassland (number)	May	0	9	0	1	15	2	0	92	0	0
	Jun	0	28	14	0	14	14	1	37	1	2
	Jul	0	14	4	0	5	20	1	121	0	0
	Sep	0	18	26	12	7	15	75	73	0	1
	Nov	0	0	0	2	3	9	2	10	1	3
	Jan	0	3	0	0	12	4	3	12	0	1
	Total	0	72	44	15	56	64	82	345	2	7
Forest (volume: mg)	May	0.0	308.5	1433.3	0.0	33.0	613.0	0.0	4992.0	0.0	1.8
	Jun	0.0	1409.2	399.6	0.0	93.0	272.1	97.4	588.0	68.6	0.0
	Jul	0.0	489.2	503.3	1.7	50.8	603.9	35.5	3971.0	0.0	0.0
	Sep	0.0	902.2	691.4	0.7	99.0	159.3	95.4	10199.2	0.7	0.0
	Nov	0.0	90.8	0.0	27.6	56.2	98.2	12.7	4225.4	979.2	13.8
	Jan	0.0	30.3	0.0	22.1	123.5	7.8	0.7	1848.9	0.0	19.7
	Total	0.0	3230.1	3027.7	52.1	455.5	1754.1	241.7	25824.5	1048.5	35.2
Grassland (volume: mg)	May	0.0	422.1	0.0	1.3	105.6	1.2	0.0	1568.6	0.0	0.0
	Jun	0.0	234.9	2130.8	0.0	25.6	108.5	1.5	597.0	332.3	4.9
	Jul	0.0	309.9	408.0	0.0	35.7	17.9	3.3	2007.9	0.0	0.0
	Sep	0.0	313.9	2291.9	9.0	299.0	80.9	69.3	4335.9	0.0	5.0
	Nov	0.0	0.0	0.0	2.5	11.8	8.1	20.0	1334.6	7.2	0.7
	Jan	0.0	1.6	0.0	0.0	7.1	0.9	0.1	1241.2	0.0	5.3
	Total	0.0	1282.4	4830.7	12.8	484.7	217.6	94.1	11085.3	339.4	15.8

Appendix 2. *Rhinolophus perditus*. Seasonal variation in diet from May 2001 to January 2003 presented as relative percentage occurrence

Taxon	2001					2002					2003	Total
	May	Jun	Jul	Aug	Oct	May	Jun	Jul	Sep	Nov	Jan	
Coleoptera	55.2	17.7	18.8	31.2	45.8	28.9	19.4	24.1	14.3	17.3	7.4	25.5
Chironomidae	0.0	22.9	30.2	32.3	0.0	0.0	0.0	2.3	1.3	12.3	29.6	11.9
Other Diptera	2.1	4.2	3.1	5.2	24.0	2.2	29.9	26.4	23.4	16.0	11.1	13.4
Hemiptera	1.0	4.2	5.2	7.3	1.0	2.2	1.5	2.3	0.0	0.0	0.0	2.2
Lepidoptera	20.6	27.0	32.3	11.5	2.1	53.3	16.4	28.7	31.2	24.7	37.0	25.9
Hymenoptera	4.0	8.5	7.3	12.5	22.9	2.2	9.0	16.1	29.9	29.6	14.8	14.3
Orthoptera	6.3	0.0	3.1	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Neuroptera	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.2
Trichoptera	10.8	15.5	0.0	0.0	0.0	8.9	19.4	0.0	0.0	0.0	0.0	5.0
Araneae	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.4

Appendix 3. *Hipposideros turpis*. Seasonal variation in diet from May 2001 to November 2002 presented as relative percentage occurrence

Taxon	2001						2002					Total
	May	Jun	Jul	Aug	Oct	Nov	May	Jun	Jul	Sep	Nov	
<i>Anomala albopilosa</i>	62.6	46.9	80.2	47.9	70.8	0.0	66.7	82.8	30.0	0.0	0.0	44.3
Other Coleoptera	23.0	29.1	3.1	27.1	0.0	24.0	6.1	3.4	11.7	36.8	9.6	15.8
Diptera	5.0	4.2	3.2	2.0	7.5	10.4	9.1	6.9	11.7	4.4	5.5	6.4
Hemiptera	0.0	0.0	5.0	1.0	0.5	4.5	0.0	0.0	13.3	1.5	11.0	3.3
Lepidoptera	5.2	0.0	2.1	5.2	0.0	2.1	3.0	0.0	0.0	23.5	9.6	4.6
Hymenoptera	0.0	2.1	0.0	0.0	3.6	0.0	6.1	6.9	3.3	5.9	1.4	2.7
Orthoptera	2.1	8.3	3.1	5.2	15.6	26.0	0.0	0.0	0.0	2.9	20.5	7.6
Neuroptera	1.1	0.0	0.0	0.0	0.0	0.0	3.0	0.0	1.7	8.8	1.4	1.5
Trichoptera	1.0	3.1	3.3	8.5	2.0	26.3	6.1	0.0	18.3	11.8	26.0	9.7
Araneae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1
Odonata	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	8.3	4.4	5.5	2.0
Lepidoptera (larvae)	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	1.7	0.0	8.2	1.1
Blattaria	0.0	6.3	0.0	3.1	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.9

Appendix 4. *Miniopterus fuscus*. Seasonal variation in diet from October 2001 to November 2002 presented as relative percentage occurrence

Taxon	2001	2002					Total
	Oct	May	Jun	Jul	Sep	Nov	
Coleoptera	0.0	8.7	9.4	13.6	3.9	1.6	6.2
Chironomidae	0.0	0.0	0.0	0.0	0.0	16.4	2.7
Other Diptera	11.2	17.4	17.0	20.3	11.8	23.0	16.8
Hemiptera	0.0	0.0	0.0	1.7	0.0	1.6	0.6
Lepidoptera	61.4	54.4	47.2	42.4	49.0	34.4	48.1
Hymenoptera	10.7	19.6	26.4	22.0	33.3	21.3	22.2
Orthoptera	16.7	0.0	0.0	0.0	0.0	0.0	2.8
Neuroptera	0.0	0.0	0.0	0.0	2.0	0.0	0.3
Psocodea	0.0	0.0	0.0	0.0	0.0	1.6	0.3