

SUPPORTING INFORMATION

Parasitism rate, parasitoid community composition and host specificity on exposed and semi-concealed caterpillars from a tropical rainforest

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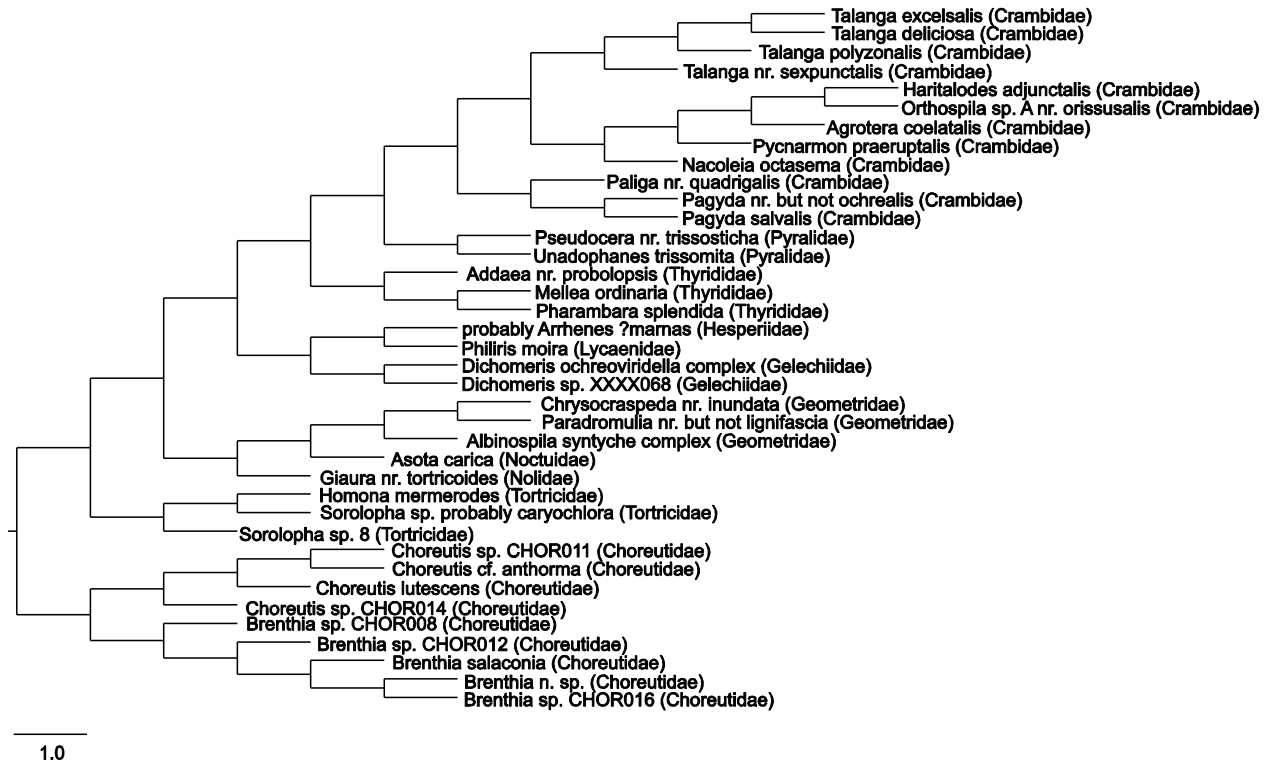


Fig. S1 Host community phylogeny. Maximum likelihood tree constructed from DNA

barcodes with constrained family monophyly. All branches were transformed to equal length

of one. *Brenthia* sp. CHOR016 for which we did not have a DNA barcode sequence was

substituted by a congener

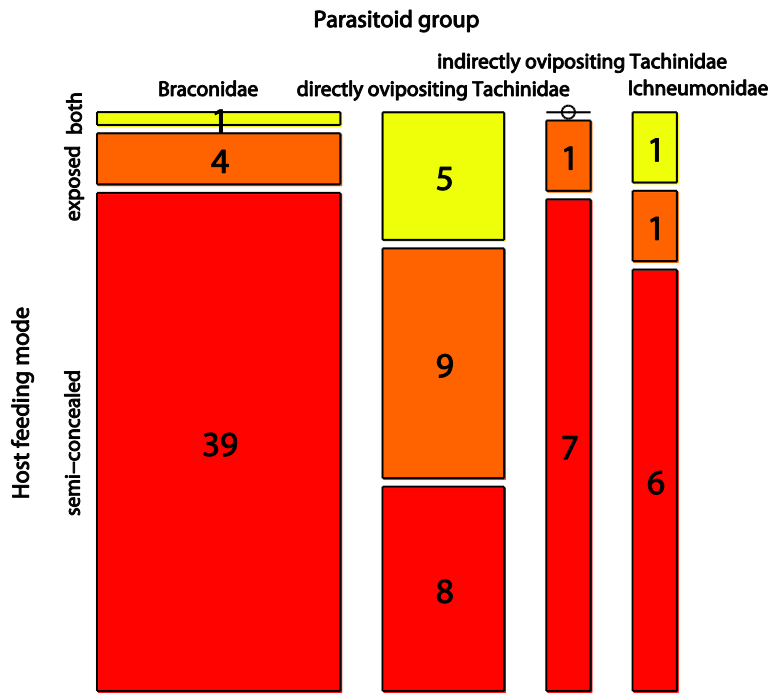


Fig. S2 Parasitoid host specificity to host feeding mode. The width of the columns shows relative number of species in each parasitoid group, and the colour sections within each column show the relative number of parasitoid species attacking either only exposed caterpillars, only semi-concealed, or both. There is significant interaction between parasitoid group and feeding mode of the hosts they attack ($P = 0.001$)

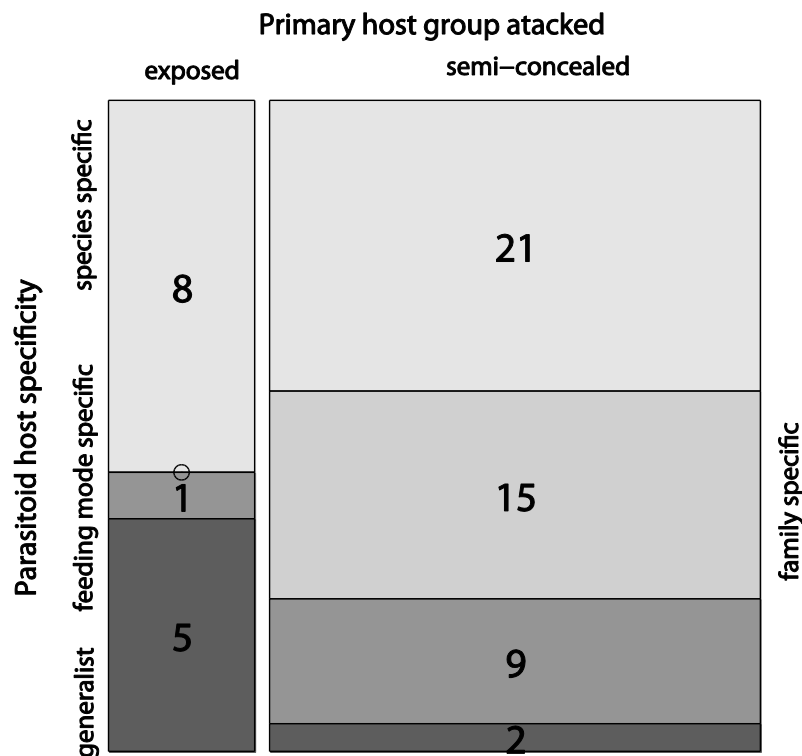


Fig. S3 Host specificity of parasitoids attacking primarily exposed and semi-concealed hosts.

The width of the columns shows relative number of species in each parasitoid group, and the colour sections within each column show the relative number of species from each host specificity category. Darker colour means wider host range. Host groups attacked significantly differ in host specificity ($P = 0.0006$, multinomial regression). Only species with two or more parasitoid rearings are included

Table S1 List of tree species with sampling effort and sampling period

Family	Genus, Species, Author	Leaf area sampled in multiples of 1500m ²	Sampling period
Agavaceae	<i>Cordyline terminalis</i> P. Beauv.	1	Oct 02 - Mar 04
Euphorbiaceae	<i>Macaranga aleuritoides</i> F. Muell.	2	Apr 04 - Nov 04
Euphorbiaceae	<i>Macaranga</i> cf. <i>brachytricha</i> A. Shaw	2	Jan 04 - Dec 04
Euphorbiaceae	<i>Macaranga clavata</i> Warb.	2	Jan 04 - Dec 04
Euphorbiaceae	<i>Macaranga ducis</i> Whitmore	2	Aug 04 - Dec 04
Euphorbiaceae	<i>Macaranga fallacina</i> Pax & Hoffm.	2	Jan 04 - Dec 04
Euphorbiaceae	<i>Macaranga novoguineensis</i> J. J. Smith	2	Jan 04 - Dec 04
Euphorbiaceae	<i>Macaranga quadriglandulosa</i> Warb.	2	Jan 04 - Dec 04
Heliconiaceae	<i>Heliconia papuana</i> W.J. Kress	1	Jul 02 - Mar 04
Lamiaceae	<i>Teijsmanniodendron</i> sp.	1	May 02 - Sep 02
Lauraceae	<i>Litsea timoriana</i> Span.	1	Jan 04 - May 04
Lecythidaceae	<i>Barringtonia</i> sp.	1	Jul 02 - Mar 04
Malvaceae	<i>Hibiscus tiliaceus</i> L.	1	May 02 - Sep 02
Malvaceae	<i>Kleinhovia hospita</i> L.	1	May 02 - Sep 02
Malvaceae	<i>Trichospermum pleiostigma</i> (F. Muell.) Kostermans	1	May 02 - Sep 02
Moraceae	<i>Ficus bernaysii</i> King	2	Mar 04 - Nov 04
Moraceae	<i>Ficus</i> cf. <i>erythrosperma</i> Miq.	1	Jan 02 - Dec 02
Moraceae	<i>Ficus</i> cf. <i>ternatana</i> Miq.	1	Jan 02 - Dec 02
Moraceae	<i>Ficus conocephalifolia</i> Ridley	2	Jan 04 - Nov 04
Moraceae	<i>Ficus copiosa</i> Steud.	2	Jan 04 - Nov 04
Moraceae	<i>Ficus dammaropsis</i> Diels	2	Jan 04 - Nov 04
Moraceae	<i>Ficus gul</i> K. Schum. & Laut.	1	Jan 02 - Dec 02
Moraceae	<i>Ficus hispidioides</i> S. Moore	2	Jan 04 - Nov 04
Moraceae	<i>Ficus mollior</i> F. Muell. ex Benth.	1	Jan 02 - Dec 02
Moraceae	<i>Ficus pachyrrhachis</i> K. Schum. & Laut.	3	Jan 02 - Dec 02, Jan 04 - Dec 04
Moraceae	<i>Ficus phaeosyce</i> Laut. & K. Schum.	2	May 04 - Nov 04
Moraceae	<i>Ficus pungens</i> Reinw. ex Blume	2	Jan 04 - Nov 04
Moraceae	<i>Ficus subtrinervia</i> Laut. et K. Schum.	1	Jan 02 - Dec 02
Myrtaceae	<i>Syzygium longipes</i> (Warb.) Merrill & Perry	2	May 04 - Nov 04
Myrtaceae	<i>Syzygium</i> sp. 2	2	May 04 - Nov 04
Myrtaceae	<i>Syzygium</i> sp. 3	2	Jan 04 - Nov 04
Rubiaceae	<i>Psychotria micrococca</i> (Laut. & Schum.) Val.	2	May 04 - Nov 04
Rubiaceae	<i>Psychotria ramuensis</i> Sohmer	2	May 04 - Nov 04
Rutaceae	<i>Lunasia amara</i> Blanco	1	Jul 02 - Mar 04
Sapotaceae	<i>Pouteria</i> sp.	1	Jul 02 - Mar 04
Verbenaceae	<i>Geunsia farinosa</i> Blume	1	May 02 - Sep 02
Vitaceae	<i>Leea indica</i> Merrill	1	Jul 02 - Mar 04
Zingiberaceae	<i>Hornstedtia scottiana</i> (F. Muell.) K. Schum.	1	Oct 02 - Feb 04

Table S2 List of Lepidoptera host species. N denotes number of reared Lepidoptera individuals, and S denotes if the species was included in species level parasitism rate analysis

Feeding Mode	Family	Genus	Species	Author(s)	N	S
exposed	Geometridae	Albinospila	syntyche complex	(Prout)	173	Y
exposed	Geometridae	Chrysocraspeda	sp. nr. inundata	Warren	252	Y
exposed	Geometridae	Paradromulia	nr. but not lignifascia	Warren	241	Y
exposed	Lycaenidae	Philiris	moira		50	Y
exposed	Noctuidae	Asota	carica	(Fabricius)	183	Y
exposed	Nolidae	Giaura	nr. tortricoides		72	Y
semi-concealed	Choreutidae	Brenthia	n. sp.		458	Y
semi-concealed	Choreutidae	Brenthia	salaconia	Meyrick	724	Y
semi-concealed	Choreutidae	Brenthia	sp. CHOR008		221	Y
semi-concealed	Choreutidae	Brenthia	sp. CHOR012		82	Y
semi-concealed	Choreutidae	Brenthia	sp. CHOR016		635	Y
semi-concealed	Choreutidae	Choreutis	cf. anthorma		462	Y
semi-concealed	Choreutidae	Choreutis	lutescens	(Felder & Rogenhofer)	151	Y
semi-concealed	Choreutidae	Choreutis	sp. CHOR011		78	Y
semi-concealed	Choreutidae	Choreutis	sp. CHOR014		192	Y
semi-concealed	Crambidae	Agrotera	coelatalis	Walker	185	Y
semi-concealed	Crambidae	Haritalodes	adjunctalis	Leraut	134	Y
semi-concealed	Crambidae	Nacoleia	octasema	(Meyrick)	101	Y
semi-concealed	Crambidae	Orthospila	sp. A nr. orissusalis	(Walker)	121	Y
semi-concealed	Crambidae	Pagyda	nr. but not ochrealis	Whalley	29	Y
semi-concealed	Crambidae	Pagyda	salvalis	Walker	53	Y
semi-concealed	Crambidae	Paliga	nr. quadrigalis	(Hering)	114	Y
semi-concealed	Crambidae	Pycnarmon	praeruptalis	(Lederer)	202	Y
semi-concealed	Crambidae	Talanga	deliciosa	(Butler)	145	Y
semi-concealed	Crambidae	Talanga	excelsalis moresbyensis	(Strand)	171	Y
semi-concealed	Crambidae	Talanga	nr. sexpunctalis	(Moore)	206	Y
semi-concealed	Crambidae	Talanga	polyzonalis	(Hampson)	88	Y
semi-concealed	Gelechiidae	Dichomeris	ochreoviridella complex	(Pagenstecher)	281	Y
semi-concealed	Gelechiidae	Dichomeris	sp. XXXX068		698	Y
semi-concealed	Hesperiidae	probably Arrhenes	? marnas		89	Y
semi-concealed	Pyralidae	Pseudocera	nr. trissosticha		23	Y
semi-concealed	Pyralidae	Unadophanes	trissomita	(Turner)	349	Y
semi-concealed	Thyrididae	Addaea	sp. near probolopsis	Meyrick	97	Y
semi-concealed	Thyrididae	Mellea	ordinaria	(Warren)	78	Y
semi-concealed	Thyrididae	Pharambara	splendida	(Butler)	345	Y
semi-concealed	Tortricidae	Homona	mermerodes	Meyrick	136	Y
semi-concealed	Tortricidae	Sorolopha	sp. 8		39	Y
semi-concealed	Tortricidae	Sorolopha	sp., probably caryochlora	Diakonoff	149	Y
exposed	Arctiidae	Asura	pallida?	Rotschild	2	
exposed	Arctiidae	Chamaita	metamelaena	Hampson	12	
exposed	Arctiidae	Chamaita	sp.		6	
exposed	Arctiidae	Darantasia	caerulescens	Druce	6	
exposed	Arctiidae	Eugoa	sp. near perfasciata	Rothchild	1	
exposed	Arctiidae	Lithosiinae	sp.		1	
exposed	Arctiidae	Spilosoma	niceta	Stoll	12	
exposed	Arctiidae	Trichalis	sp. near aereoplagiata	Rothchild	2	

exposed	Arctiidae	Eilema	plana	(Boisduval)	1
exposed	Arctiidae	unknown genus	sp. XXXX149		1
exposed	Drepanidae	unknown genus	sp. GEOM161		1
exposed	Geometridae	Hypomecis	infaustaria	Walker	1
exposed	Geometridae	Agathiopsis	maculata	Warren	6
exposed	Geometridae	Catoria	delectaria	(Walker)	1
exposed	Geometridae	Cleora	repetita	Butler	2
exposed	Geometridae	Cyclophora	glomerata	Warren	5
exposed	Geometridae	Derambila	stigicosta	Warren	44
exposed	Geometridae	Ectropis	bhurmitra	(Walker)	4
exposed	Geometridae	Hyposidra	talaca	Walker	9
exposed	Geometridae	Hyposidra	sp.		3
exposed	Geometridae	Oenospila	sp. nr. flavilinea	Warren	31
exposed	Geometridae	Pingasa	chlora	Stoll	23
exposed	Geometridae	Pingasa	lariaria or nr.	(Walker)	1
exposed	Geometridae	Scopula	amala	Meyrick	2
exposed	Geometridae	Symmacra	solidaria ochrea	Warren	14
exposed	Geometridae	"Jodis"	albifusa	(Warren)	90
exposed	Geometridae	Zeugma	recusataria	Walker	100
exposed	Geometridae	unknown genus	sp. GEOM109		1
exposed	Geometridae	unknown genus	sp. GEOM133		1
exposed	Geometridae	unknown genus	sp. GEOM138		1
exposed	Geometridae	unknown genus	sp. GEOM145		12
exposed	Geometridae	unknown genus	sp. GEOM146		1
exposed	Immidae	Imma	monastica	Meyrick	2
exposed	Immidae	Imma	sp. TORT158		1
exposed	Immidae	Imma	sp. TORT122		2
exposed	Immidae	Moca	ancistrota	(Meyrick)	1
exposed	Immidae	Moca	congrualis	(Walsingham)	15
exposed	Lacturidae	Lactura	sp.		8
exposed	Lacturidae	Lactura	sp. nr. rhodographa	Meyrick	3
exposed	Limacodidae	Mambara	robigonosa?	Hering	2
exposed	Lycaenidae	Philiris	helena	(Snellen)	11
exposed	Lymantriidae	Arctornis	sp. nr. intacta	Walker	13
exposed	Lymantriidae	Artaxa	sp.	Walker	1
exposed	Lymantriidae	Euproctis	sp.		1
exposed	Lymantriidae	Lymantria	sp.		2
exposed	Lymantriidae	Nygmiini	sp. 2		7
exposed	Lymantriidae	Olene	nr. mendosa	Huebner	21
exposed	Lymantriidae	Somena	alba	(Bethune-Baker)	26
exposed	Lymantriidae	"Euproctis"	sp. LYMA075		1
exposed	Lymantriidae	"Euproctis"	sp. LYMA076		2
exposed	Noctuidae	Achaea	janata	Linnaeus	1
exposed	Noctuidae	Anomis	flava	(Fabricius)	7
exposed	Noctuidae	Anomis (s.l.)	sp.		3
exposed	Noctuidae	Asota	eusemioides	(Felder)	37
exposed	Noctuidae	Asota	heliconia	(Linnaeus)	4
exposed	Noctuidae	Asota	plana	Walker	40
exposed	Noctuidae	Chasmina	tibiopunctata	Bethune-Baker	2
exposed	Noctuidae	Chasmina	sp.		4
exposed	Noctuidae	Gonitis	involuta or near		1
					6

exposed	Noctuidae	Homodes	iomolybda	Meyrick	2
exposed	Noctuidae	Mecistoptera	franzwagneri	Lodl	1
exposed	Noctuidae	Mecistoptera	n. sp.		3
exposed	Noctuidae	Mocis	trifasciata	(Stephens)	2
exposed	Noctuidae	near Metaphoenia	sp.		2
exposed	Noctuidae	Ophiusa	near disjugens	Walker	1
exposed	Noctuidae	Ophyx	bilinea	Holloway	1
exposed	Noctuidae	Ophyx	crinipes	Felder	3
exposed	Noctuidae	Piratisca	minax	Meyrick	2
exposed	Noctuidae	Rusicada	nigritarsus xanthochroa	(Butler)	56
exposed	Noctuidae	Sarobides	inconclusa	(Walker)	2
exposed	Noctuidae	Savara	pallidapex	Holloway	6
exposed	Noctuidae	Stictoptera	sp.		1
exposed	Noctuidae	Tamba	plumipes	Hampson	3
exposed	Noctuidae	Tamba	nr. subrosea	Pagenstecher	5
exposed	Noctuidae	Targalla	palliatrix	(Guenee)	2
exposed	Noctuidae	Targalla	suffundens	(Walker)	1
exposed	Noctuidae	Tipasa	subrosea	Pagenstecher	3
exposed	Noctuidae	Tiruvaca	subcostalis	(Walker)	3
exposed	Noctuidae	Xanthodes	transversa	Guenee	9
exposed	Noctuidae	unknown genus	sp. GEOM155		1
exposed	Noctuidae	unknown genus	sp. NOCT078		1
exposed	Noctuidae	unknown genus	sp. NOCT084		1
exposed	Noctuidae	unknown genus	sp. NOCT121		1
exposed	Noctuidae	unknown genus	sp. NOCT122		1
exposed	Noctuidae	unknown genus	sp. NOCT123		1
exposed	Noctuidae	unknown genus	sp. NOTO005		7
exposed	Nolidae	Beara	falcata	Barlow	5
exposed	Nolidae	Chora	huntei	Warren	7
exposed	Nolidae	Earias	uniplaga	Bethune-Baker	16
exposed	Nolidae	Nycteola	indicatana	(Walker)	21
exposed	Nolidae	Nycteola	sp.		2
exposed	Nolidae	unknown genus	sp. XXXX147		1
exposed	Notodontidae	Chadisra	striata	Rothschild	10
exposed	Notodontidae	near Archigargetta	sp.		1
exposed	Notodontidae	Ortholomia	moluccana	Felder	1
exposed	Nymphalidae	Cyrestis	acilia	Godart	11
exposed	Nymphalidae	Euploea	leucostictos	Gmelin	3
exposed	Nymphalidae	Mycalesis	duponchellii		5
exposed	Nymphalidae	Taenaris	sp. probably myops	C&R Felder	16
exposed	Pterophoridae	Ochyrotica	sp.		1
exposed	Pterophoridae	unknown genus	sp. PTER005		4
exposed	Pterophoridae	unknown genus	sp. PTER006		1
exposed	Sphingidae	Macroglossum	inspida papuanum	Rothschild & Jordan	1
exposed	Sphingidae	Macroglossum	melas pullius	Rothschild & Jordan	29
exposed	Uraniidae	Dysrhombia	sp. nr. alabastraria	Warren	1
exposed	Uraniidae	unknown genus	sp. URAN014		1
exposed	Zygaenidae	Homophylotis	sp., near aenea	Jordan	28
semi-concealed	Choreutidae	Choreutis	basalis	(Felder & Rogenhofer)	37

semi-concealed	Choreutidae	Saptha	sp. cf exanthista & divitiosa	(Meyrick) / Walker	20
semi-concealed	Choreutidae	Saptha	libanota	(Meyrick)	3
semi-concealed	Choreutidae	Brenthia	sp. CHOR013		7
semi-concealed	Crambidae	Agrotera	ignepictoides	Rothschild	15
semi-concealed	Crambidae	Agrotera	sp. 1 nr.basinotata		2
semi-concealed	Crambidae	Agrotera	sp. nr. but not effertalis	Walker	24
semi-concealed	Crambidae	Chalcidoptera	emissalis	(Walker)	2
semi-concealed	Crambidae	Coelorhycidia	nitidalis	Hampson	56
semi-concealed	Crambidae	Cydalima	marginalis	(Kenrick)	1
semi-concealed	Crambidae	Glyphodes	doleschalii	Lederer	10
semi-concealed	Crambidae	Glyphodes	eurygania	Druce	30
semi-concealed	Crambidae	Glyphodes	margaritaria	(Clerck)	57
semi-concealed	Crambidae	Glyphodes	sp. cf. stolalis	Guenee	3
semi-concealed	Crambidae	Herpetogramma	bractealis	(Kenrick)	11
semi-concealed	Crambidae	Herpetogramma (s.l.)	sp.		1
semi-concealed	Crambidae	Hyalobathra	miniosalis	(Guenee)	2
semi-concealed	Crambidae	Meekiaria	purpurea	Hampson	1
semi-concealed	Crambidae	Meekiaria	sp. CRAM151		2
semi-concealed	Crambidae	Meekiaria	sp. CRAM041		663
semi-concealed	Crambidae	Meekiaria	sp. CRAM044		473
semi-concealed	Crambidae	Musotima	sp. CRAM077		9
semi-concealed	Crambidae	Orthospila	sp. B, near orissusalis	(Walker)	1
semi-concealed	Crambidae	Orthospila	sp. C, near orissusalis	(Walker)	71
semi-concealed	Crambidae	Parotis	sp. nr. marginata	(Hampson)	21
semi-concealed	Crambidae	Parotis	suralis	(Lederer)	1
semi-concealed	Crambidae	Parotis	tricoloralis	(Pagenstecher)	1
semi-concealed	Crambidae	Pleuroptya	sabinusalis	(Walker)	1
semi-concealed	Crambidae	Pleuroptya	sellalis	(Guenee)	4
semi-concealed	Crambidae	Pleuroptya	sp. balteata complex		1
semi-concealed	Crambidae	Pycnarmon	argenticincta	Hampson	4
semi-concealed	Crambidae	Pycnarmon	glaucias	(Meyrick)	12
semi-concealed	Crambidae	Pycnarmon	jaguaralis papualis	Munroe	1
semi-concealed	Crambidae	Pycnarmon	sp. nr. dryocentra	Meyrick	1
semi-concealed	Crambidae	Syllepte	sp. A, near crotonalis	Walker	258
semi-concealed	Crambidae	Syllepte	sp. B, near crotonalis	Walker	26
semi-concealed	Crambidae	Syllepte	ochrisalis	Hampson	1
semi-concealed	Crambidae	Tabidia	insanalis	Snellen	4
semi-concealed	Crambidae	"Syllepte"	iopascalis	Walker	1
semi-concealed	Crambidae	unknown genus	sp. CRAM075		1
semi-concealed	Crambidae	unknown genus	sp. CRAM132		1
semi-concealed	Crambidae	unknown genus	sp. PYRA038		1
semi-concealed	Crambidae	unknown genus	sp. TORT199		1
semi-concealed	Elachistidae	Agriophara	sp. near parilis	Meyrick	20
semi-concealed	Elachistidae	Peritormenta	sp.		1
semi-concealed	Elachistidae	near Peritormenta	sp. TORT167		4
semi-concealed	Elachistidae	unknown genus	sp. HYPE001		30
semi-concealed	Elachistidae	unknown genus	sp. XXXX117		21
semi-concealed	Gelechiidae	Anarsia	sp.		7
semi-concealed	Gelechiidae	Dichomeris	sp. XXXX120		12
semi-concealed	Gelechiidae	Dichomeris	sp. XXXX095		1

semi-concealed	Gelechiidae	Idiophantis	probably n. Sp		14
semi-concealed	Gelechiidae	Idiophantis	sp.		1
semi-concealed	Gelechiidae	unknown genus	sp. TORT055		1
semi-concealed	Gelechiidae	unknown genus	sp. XXXX136		1
semi-concealed	Gelechiidae	unknown genus	sp. XXXX148		1
semi-concealed	Gelechioidea (sf)	unknown genus	sp. XXXX126		2
semi-concealed	Hesperiidae	Chaetocneme	lunula		1
semi-concealed	Hesperiidae	Notocrypta	renardi	Oberthur	14
semi-concealed	Hyblaeidae	Hyblaea	amboinae	Felder	6
semi-concealed	Hyblaeidae	Hyblaea	constellata	Guenee	2
semi-concealed	Hyblaeidae	Hyblaea	puera complex		1
semi-concealed	Lecithoceridae	Scythropiodes	n. sp. near perissa	(Diakonoff)	13
semi-concealed	Oecophoridae	Lophopepla	sp.		5
semi-concealed	Oecophoridae	Stathmopoda?	sp.		2
semi-concealed	Oecophoridae	unknown genus	sp. TORT144		17
semi-concealed	Oecophoridae	unknown genus	sp. TORT206		2
semi-concealed	Peleopodidae	Acria	sciogramma	Meyrick	8
semi-concealed	Pyalidae	Orthaga	melanoperalis	Hampson	22
semi-concealed	Pyalidae	Orthaga	sp. nr. percnodes		6
semi-concealed	Pyalidae	unknown genus	sp. PYRA036		1
semi-concealed	Thyrididae	Addaea	pusilla	(Butler)	63
semi-concealed	Thyrididae	Addaea	sp. THYR025		1
semi-concealed	Thyrididae	Mellea	sp. THYR012		2
semi-concealed	Thyrididae	Mellea	nitida	(Pagenstecher)	21
semi-concealed	Thyrididae	Mellea	ramifera	(Warren)	15
semi-concealed	Thyrididae	Mellea	sp. THYR023		2
semi-concealed	Thyrididae	Mellea	sp. near but not ramifera and nitida		1
semi-concealed	Thyrididae	Rhodoneura	aurata	(Butler)	13
semi-concealed	Thyrididae	Striglina	asinina	Warren	5
semi-concealed	Thyrididae	Striglina	cinnamomea	(Rothschild)	53
semi-concealed	Thyrididae	unknown genus	sp. THYR020		3
semi-concealed	Tortricidae	Adoxophyes	fasciculana	(Walker)	44
semi-concealed	Tortricidae	Adoxophyes	sp.		37
semi-concealed	Tortricidae	Adoxophyes	sp. 3	Diakonoff	26
semi-concealed	Tortricidae	Adoxophyes	sp. 6A		38
semi-concealed	Tortricidae	Adoxophyes	sp. 9, perstricta complex	(Meyrick)	1
semi-concealed	Tortricidae	Adoxophyes	templana complex		83
semi-concealed	Tortricidae	Adoxophyes	thoracica	Diakonoff	43
semi-concealed	Tortricidae	Adoxophyes	tripselia	(Lower)	15
semi-concealed	Tortricidae	Ancylophyes	sp.		2
semi-concealed	Tortricidae	Archigraptis	chrysodema	(Diakonoff)	3
semi-concealed	Tortricidae	Dudua	n. sp. nr. aprobola	(Meyrick)	50
semi-concealed	Tortricidae	Dudua	near aprobola		1
semi-concealed	Tortricidae	Eboda	smaragdina	Walker	2
semi-concealed	Tortricidae	Gen. nov. nr. "Loboschiza	sp. nov.		18
semi-concealed	Tortricidae	Holocola	n. sp.		2
semi-concealed	Tortricidae	Homona	aestivana	(Walker)	5
semi-concealed	Tortricidae	Homona	phanaea	Meyrick	15
semi-concealed	Tortricidae	Homona	spargotis	Meyrick	2

semi-concealed	Tortricidae	Homona	trachyptera	Diakonoff	15
semi-concealed	Tortricidae	Isotenes	sp. nr. but not miserana	(Walker)	2
semi-concealed	Tortricidae	Loboschiza	sp.		2
semi-concealed	Tortricidae	Macrothyma	sanguinolenta	(Diakonoff)	4
semi-concealed	Tortricidae	Ophiorrhabda	deceptor	Diakonoff	121
semi-concealed	Tortricidae	Sorolopha	cyclotoma	Lower	12
semi-concealed	Tortricidae	Statherotis	discana	(Felder & Rogenhofer)	2
semi-concealed	Tortricidae	Xenothictis	gnetivora	Brown, Miller & Horak	5
semi-concealed	Tortricidae	Eucosmini	sp. TORT207		1
semi-concealed	Tortricidae	unknown genus	sp. TORT169		1
semi-concealed	Tortricidae	unknown genus	sp. TORT185		3
semi-concealed	Tortricidae	unknown genus	sp. TORT197		2
semi-concealed	Tortricidae	unknown genus	sp. TORT203		1
semi-concealed	Tortricidae	unknown genus	sp. TORT205		1
semi-concealed	unknown	unknown genus	sp. XXXX130		13
semi-concealed	unknown	unknown genus	sp. XXXX131		11
semi-concealed	unknown	unknown genus	sp. XXXX132		21
semi-concealed	unknown	unknown genus	sp. XXXX133		14
semi-concealed	unknown	unknown genus	sp. XXXX145		1
semi-concealed	unknown	unknown genus	sp. XXXX146		1
semi-concealed	unknown	unknown genus	sp. XXXX150		5

Table S3 List of parasitoid species. Biology is abbreviated as follows: endo = endoparasitic, ekto = ectoparasitic, koino = koinobiont, idio = idiobiont, hyper = hyperparasitoid, G = gregarious, eH = eggs laid on host, eM = microtype eggs placed on vegetation, eW = well developed eggs laid in host vicinity, eI = eggs injected into host haemocoel with a piercing structure (eH, eM, eW and eI is given only for Tachinidae). N denotes number of rearings (number of host individuals which produced parasitoids). HS denotes if the species was included in host specificity analysis.

Order	Family	Subfamily	Genus	Species	Author(s)	Biology	N	HS
Hymenoptera	Braconidae	Agathidinae	Biroia	Sharkey02		endo koino	2	
Hymenoptera	Braconidae	Agathidinae	Bassus s.l.	Sharkey01		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Bassus s.s.	Sharkey02		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Bassus s.s.	Sharkey01		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Dispoprys	Sharkey01		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Hypsostypos	Sharkey01		endo koino	2	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek01		endo koino	23	Y
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek02		endo koino G	10	Y
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek03		endo koino	12	Y
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek04		endo koino	3	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek06		endo koino	7	Y
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek07		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek10		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek11		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek12		endo koino	3	Y
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek13		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek15		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek16		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek18		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Camptothlipsis	Hrcek20		endo koino	1	
Hymenoptera	Braconidae	Agathidinae	Biroia	Sharkey04		endo koino	8	
Hymenoptera	Braconidae	Agathidinae	Biroia	Sharkey05		endo koino	27	
Hymenoptera	Braconidae	Agathidinae	Biroia	Sharkey09		endo koino	2	Y
Hymenoptera	Bethylidae	Bethylinae	Goniozus	n. sp. nr. jacintae		ecto idio G	6	
Hymenoptera	Bethylidae	Bethylinae	Goniozus	n. sp. nr. triangulifer		ecto idio G	2	
Hymenoptera	Braconidae	Cardiochilinae	Schoenlandella	Whitfield01		endo koino	89	
Hymenoptera	Braconidae	Macrocentrinae	Aulacocentrum	pedicellatum	(Brues)	endo koino	12	Y

Hymenoptera	Braconidae	Macrocentrinae	Macrocentrus	novaguineensis	Szépligeti	endo koino	3	
Hymenoptera	Braconidae	Macrocentrinae	Aulacocentrum	sp. indet.		endo koino	1	
Hymenoptera	Encyrtidae	(Blank)	Copidosoma	Gates01		endo koino G	6	
Hymenoptera	Eulophidae	(Blank)	Euplectrus	Gates01		ecto koino	1	
Hymenoptera	Eulophidae	(Blank)	Miotropis!?	Gates01			2	
Hymenoptera	Elasmidae	(Blank)	Elasmus	Gates01		ecto idio G	1	
Hymenoptera	Perilampidae	(Blank)	Perilampus	Gates01		hyper	1	
Hymenoptera	Chalcididae	(Blank)	Brachymeria	Gates02			1	
Hymenoptera	Chalcididae	(Blank)	Brachymeria	Gates03			1	
Hymenoptera	Chalcididae	(Blank)	Brachymeria	Gates01			1	
Hymenoptera	Braconidae	Cheloninae	Ascogaster	Yu01		endo koino	3	
Hymenoptera	Braconidae	Cheloninae	Chelonus	Yu05		endo koino	2	
Hymenoptera	Braconidae	Cheloninae	Chelonus	Yu03		endo koino	2	
Hymenoptera	Braconidae	Cheloninae	Ascogaster	Yu04		endo koino	1	
Hymenoptera	Braconidae	Cheloninae	Chelonus	Yu02		endo koino	3	Y
Hymenoptera	Braconidae	Cheloninae	Chelonus	Yu01		endo koino	7	Y
Hymenoptera	Braconidae	Cheloninae	Ascogaster	Yu03		endo koino	3	
Hymenoptera	Braconidae	Cheloninae	Chelonus	Yu04		endo koino	1	
Hymenoptera	Braconidae	Cheloninae	Ascogaster	Hrcek05		endo koino	1	
Hymenoptera	Braconidae	Cheloninae	Chelonus	Hrcek06		endo koino	1	
Hymenoptera	Braconidae	Hormiinae	Hormiini n. gen. 1	Quicke01		ecto	6	Y
Hymenoptera	Braconidae	Hormiinae	?Parahormius	Quicke01		ecto	1	
Hymenoptera	Braconidae	Hormiinae	Hormiini n. gen. 2	Quicke01		ecto	1	
Hymenoptera	Ichneumonidae	Ophioninae	Enicospilus	delosus	(Tosquinet)	endo koino	1	
Hymenoptera	Ichneumonidae	Cremastinae	Pristomerus	Wahl01		endo koino	49	Y
Hymenoptera	Ichneumonidae	Cremastinae	Pristomerus	Wahl02		endo koino	13	Y
Hymenoptera	Ichneumonidae	Anomaloninae	Trichomma	Wahl01		endo koino	20	Y
Hymenoptera	Ichneumonidae	Campopleginae	Charops	Wahl01		endo koino	4	
Hymenoptera	Ichneumonidae	Campopleginae	Eriborus	Wahl01		endo koino	2	Y
Hymenoptera	Ichneumonidae	Cremastinae	Trathala	Wahl01		endo koino	2	
Hymenoptera	Ichneumonidae	Metopiinae	Seticornuta	Wahl01		endo koino	4	
Hymenoptera	Ichneumonidae	Banchinae	Apophua	Wahl01		endo koino	4	Y
Hymenoptera	Ichneumonidae	Pimplinae	Xanthopimpla	micrantha	Townes & Chiu	endo idio	1	

Hymenoptera	Ichneumonidae	Banchinae	Glyptini n. genus	Wahl01	endo koino	2	
Hymenoptera	Ichneumonidae	Mesochorinae	Mesochorus	Wahl01	hyper	1	
Hymenoptera	Ichneumonidae	Banchinae	Apophua	Wahl02	endo koino	1	
Hymenoptera	Ichneumonidae	Cremastinae	Pristomerus	Wahl04	endo koino	1	
Hymenoptera	Braconidae	Meteorideinae	Meteoridea	Sharkey01	endo	2	Y
Hymenoptera	Braconidae	Microgastrinae	Choeras	Whitfield01	endo koino	36	Y
Hymenoptera	Braconidae	Microgastrinae	Choeras	Whitfield02	endo koino	6	
Hymenoptera	Braconidae	Microgastrinae	Diolcogaster	Whitfield02	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Choeras	Whitfield04	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Choeras	Whitfield05	endo koino	10	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield01	endo koino G	112	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield02	endo koino	20	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield09	endo koino	2	
Hymenoptera	Braconidae	Microgastrinae	Diolcogaster	Whitfield01	endo koino	13	Y
Hymenoptera	Braconidae	Microgastrinae	Parapanteles	Whitfield02	endo koino	2	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield10	endo koino G	9	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield08	endo koino G	1	
Hymenoptera	Braconidae	Microgastrinae	Diolcogaster	Whitfield03	endo koino G	1	
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield03	endo koino	134	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield11	endo koino	4	Y
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield03	endo koino	2	
Hymenoptera	Braconidae	Microgastrinae	Apanteles?	trifasciatus(?)	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Microgaster	Whitfield01	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield07	endo koino	11	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield06	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Glyptapanteles	Whitfield01	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield10	endo koino G	1	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield09	endo koino	13	Y
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield12	endo koino G	8	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield06	endo koino G	3	Y
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield14	endo koino G	2	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield15	endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield16	endo koino	3	Y
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield17	endo koino G	33	Y

Hymenoptera	Braconidae	Microgastrinae	Venanides	Whitfield01		endo koino	6	Y
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield12		endo koino	2	Y
Hymenoptera	Braconidae	Microgastrinae	Glyptapanteles	Whitfield02		endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield13		endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield21		endo koino G	1	
Hymenoptera	Braconidae	Microgastrinae	Apanteles	Whitfield22		endo koino	6	Y
Hymenoptera	Braconidae	Microgastrinae	Choeras	Whitfield06		endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield18		endo koino	1	
Hymenoptera	Braconidae	Microgastrinae	Dolichogenidea	Whitfield19		endo koino	1	
Hymenoptera	Braconidae	Orgilinae	Stantonia	aff. scutellaris		endo koino	5	
Hymenoptera	Braconidae	Orgilinae	Stantonia	baiteta	Braet & Quicke	endo koino	25	Y
Hymenoptera	Braconidae	Orgilinae	Stantonia	vittata or sabahensis	van Achterberg	endo koino	2	Y
Hymenoptera	Braconidae	Orgilinae	Stantonia	Braet01 aff. baiteta		endo koino	2	Y
Hymenoptera	Braconidae	Rogadinae	Aleiodes	Quicke01		endo koino	8	Y
Hymenoptera	Braconidae	Rogadinae	Colastomion	Quicke01		endo koino	2	
Hymenoptera	Braconidae	Rogadinae	Colastomion	wanang	Quicke	endo koino	4	
Hymenoptera	Braconidae	Rogadinae	Colastomion	masalaii	Quicke	endo koino G	2	
Hymenoptera	Braconidae	Rogadinae	Aleiodes	Quicke02		endo koino	1	
Hymenoptera	Braconidae	Rogadinae	Canalirogas	Quicke01		endo koino	1	
Hymenoptera	Braconidae	Rogadinae	Aleiodes	Quicke04		endo koino	1	
Hymenoptera	Braconidae	Rogadinae	?Aleiodes	Quicke05		endo koino	1	
Hymenoptera	Braconidae	Rogadinae	Yelicones	Quicke01		endo koino	1	
Hymenoptera	Braconidae	Rogadinae	Colastomion	parotiphagus	Quicke	endo koino	1	
Hymenoptera	Braconidae	Rogadinae	Iporhogas	Quicke01		endo koino	1	
Hymenoptera	Braconidae	Rogadinae	Aleiodes	Quicke03		endo koino	1	
Diptera	Tachinidae	Exoristinae	Argyrophylax	Shima01 (n. sp.)		endo koino eM	67	
Diptera	Tachinidae	Tachininae	Peribaea	Shima01 (nr. hyalinata (Mall.))		endo koino eH	6	Y
Diptera	Tachinidae	Tachininae	Ceromya	Shima02 (n. sp. nr punctum)		endo koino G eH	5	
Diptera	Tachinidae	Exoristinae	Argyrophylax	Shima04 (nr contracta (Walker))		endo koino eM	70	Y
Diptera	Tachinidae	Exoristinae	Paratryphera	Shima01		endo koino eH	4	Y
Diptera	Tachinidae	Exoristinae	Eryciine Gen. 2	Shima01 (n. sp.)		endo koino G eH	35	Y
Diptera	Tachinidae	Exoristinae	Drino (Palexorista)	solennis	(Walker)	endo koino eH	25	Y

Diptera	Tachinidae	Exoristinae	Cadurcia	Shima01 (n. sp.)		endo koino eM	27	Y
Diptera	Tachinidae	Exoristinae	Argyrophylax	proclinata	Crosskey	endo koino eM	33	Y
Diptera	Tachinidae	Exoristinae	Senometopia	Shima03 (n. sp.)		endo koino eH	5	Y
Diptera	Tachinidae	Exoristinae	Argyrophylax	cinerella	Mesnil	endo koino eM	1	
Diptera	Tachinidae	Exoristinae	Pseudoperichaeta	roseanilea	(Baranov)	endo koino eH	11	Y
Diptera	Tachinidae	Exoristinae	Argyrophylax	solomonica	(Baranov)	endo koino eM	35	Y
Diptera	Tachinidae	Exoristinae	Calozenillia	picta	(Curran)	endo koino eM	11	Y
Diptera	Tachinidae	Tachininae	Actia	Shima01 (n. sp. nr deferens)	Malloch	endo koino G eW	79	
Diptera	Tachinidae	Exoristinae	Senometopia	Shima01 (n. sp. nr cinerea)		endo koino eH	12	Y
Diptera	Tachinidae	Exoristinae	Sisyropa	thermophila	(Wiedemann)	endo koino G eH	8	Y
Diptera	Tachinidae	Tachininae	Siphona (Aphanthoraphopsis)	Shima02		endo koino G eW	2	
Diptera	Tachinidae	Tachininae	Actia	Shima02 (n. sp. nr. mimetica)	Malloch	endo koino eW	7	
Diptera	Tachinidae	Tachininae	Actia	Shima03 (n. sp.)		endo koino eW	1	
Diptera	Tachinidae	Exoristinae	?Medinodexia	Shima01 (n. sp.)		endo koino G el	2	
Diptera	Tachinidae	Exoristinae	Aplomya	Shima01 (n. sp.)		endo koino eH	4	Y
Diptera	Tachinidae	Exoristinae	Argyrophylax	Shima05		endo koino eM	1	
Diptera	Tachinidae	Exoristinae	Winthemia	sumatrana	(Townsend)	endo koino G eH	10	Y
Diptera	Tachinidae	Exoristinae	Catacarcelia	kockiana	Townsend	endo koino eH	5	Y
Diptera	Tachinidae	Exoristinae	Nemorilla	sp.		endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Eryciine Gen. 1	Shima01 (n. sp.)		endo koino eH	3	
Diptera	Tachinidae	Exoristinae	Drino (Palexorista)	Shima01	(Walker)	endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Nemorilla	sp.		endo koino eH	2	
Diptera	Tachinidae	Exoristinae	Winthemia	Shima03 (nr novaguinea)		endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Senometopia	Shima04 (n. sp. nr polyvalens)		endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Senometopia	quarta	(Baranov)	endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Carcelia	Shima02 (Calocarcelia)		endo koino eH	2	
Diptera	Tachinidae	Exoristinae	Chetogena	Shima01 (n. sp.)		endo koino eH	4	Y
Diptera	Tachinidae	Tachininae	Peribaea	Shima03		endo koino G eH	2	
Diptera	Tachinidae	Exoristinae	Senometopia	Shima02 (n. sp.)		endo koino eH	10	Y
Diptera	Tachinidae	Exoristinae	Carceliella	Shima02 (n. sp.)		endo koino eM	1	
Diptera	Tachinidae	Exoristinae	Goniine Gen. 1	Shima01 (n. sp.)		endo koino eM	3	
Diptera	Tachinidae	Exoristinae	Goniine Gen. 1	Shima02 (n. sp.)		endo koino eM	1	

Diptera	Tachinidae	Exoristinae	Paravibrissina	discalis	Shima	endo koino eM	4	Y
Diptera	Tachinidae	Exoristinae	Eozenillia	Shima01 (nr equatorialis Towns.)		endo koino eH	1	
Diptera	Tachinidae	Dexiinae	Hyleorus	furcatus	Aldrich	endo koino eH	3	Y
Diptera	Tachinidae	Exoristinae	Senometopia	Shima06 ?nitidapex (Mesnil)		endo koino eH	2	
Diptera	Tachinidae	Exoristinae	Bactromya	Shima01 (n. sp.)		endo koino G eH	3	
Diptera	Tachinidae	Exoristinae	Carcelia	Shima01 (n. sp. nr malayana)		endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Winthemia	Shima02		endo koino eH	1	
Diptera	Tachinidae	Exoristinae	Senometopia	cinerea	(Brauer & Bergenstamm)	endo koino eH	26	Y
Diptera	Tachinidae	Tachininae	Siphona (Aphanthoraphopsis)	Shima01 (n. sp.)		endo koino eW	1	
Diptera	Tachinidae	Exoristinae	Paradrino	Shima02		endo koino eH	11	Y
Diptera	Tachinidae	Tachininae	Peribaea	Shima06		endo koino eH	3	
Diptera	Tachinidae	Tachininae	Peribaea	Shima04		endo koino eH	1	
Diptera	Tachinidae	Tachininae	Siphona (Aphanthoraphopsis)	Shima03		endo koino eW	1	
Diptera	Tachinidae	Exoristinae	Gen. nr Carceliella	Shima01		endo koino eM	1	