

Online Supplementary Material for  
**Seasonality, the Latitudinal Gradient of Diversity, and Eocene Insects**

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### **Analysis of ichneumon Wasp Specimens**

Size was not used in determination of ichneumonid wings to species due to its range within individuals of a species and sexual dimorphism, except in the extreme case of specimen 1988. Wings were grouped into six major groups (A-F) based on the shape of the “areolet”, the first Rs cell, a small cell in the centre of the forewing (online fig. 1). They were then categorized within each of these groups by combinations of three wing characters, and then further separated by comparisons of ratios of character measurements between the fossil specimens and in known, extant species.

#### *Separation to groups*

Abscissa numbers refer to those defined in online fig. 1D.

*Group A:* areolet triangular, or sub-triangular; abscissa 1 meets abscissa 3 (no or very short abscissa 2); abscissa 3 meets abscissa 5 (no abscissa 4);

*Group B:* areolet as in Group A, but open, i.e., abscissa 3 space empty or very weak;

*Group C:* areolet sub-triangular; but abscissa 4 present (Group A: absent), short relative to length of abscissa 3; abscissa 4 parallel or subparallel with abscissa 1; abscissa 1 meets abscissa 3 (no or very short abscissa 2);

*Group D:* as in Group C, but areolet open, i.e., abscissa 3 space empty or very weak;

*Group E:* areolet diamond-shaped: four-sided or slightly five-sided (if a short length of abscissa 2 present between abscissa 1 and abscissa 3), no side less than half length of other (other than brief length of abscissa 2, if present, as above);

*Group F:* areolet distinctly pentagonal: all five abscissae distinctly present (two abutting sides may be aligned).

Within these “areolet groups”, specimens were separated to subgroups by differing combinations of states of the following characters.

*Character 1:* 2m-cu: A) distinctly curved or B) rather straight;

*Character 2:* crossvein cu-a: joins Cu: A) at, or B) distad branching of M+Cu to M and Cu;

*Character 3:* cu-a joins A: A) at a distinct angle, or B) perpendicular or closely so to A.

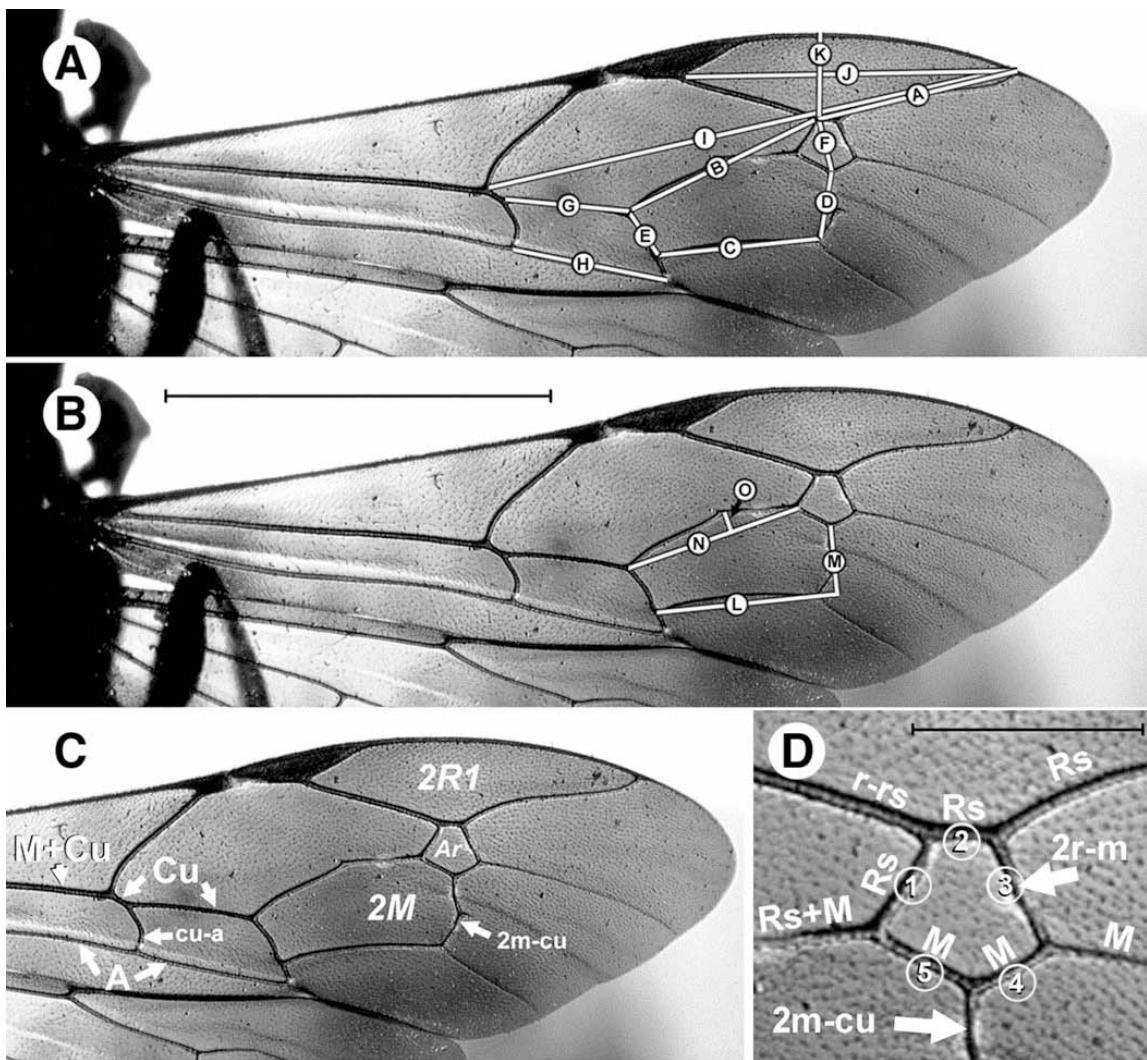
#### *Separation to species*

Within subgroups, specimens that shared the same states of characters 1-3 were evaluated further with ratios of measurements of wing characters. Twelve measurements (A-L) of forewing characters were taken from camera lucida drawings of each fossil. Ratios of pairs of the measurements were used to control for intra-specific size differences (individual and by sexual dimorphism). These were compared with inter- and intra-specific variation in known species, taken from photographs of forewings of 96 specimens of 9 extant species (pinned specimens, MCZ) in three genera of three subfamilies. These were: *Pterocormus annulatorius* (n = 9), *P. bucculentus* (n = 4), *P. centrator* (n = 10); *Compsocrypyus texensis* (n = 7), *C. resolutus* (n = 6), *C. melanostigmus* (n = 18); *Coccygomimus semirufus* (n = 8), *C. sumichrasti* (n = 21), *C. tomyris* (n = 23).

Within extant species, the average value of each ratio within that species was taken, and its standard deviation within the species was determined. Within each species, no specimens were separated by more than two standard deviations, and all individuals species differed by more than two standard deviations between them. For a given ratio, the coefficient of variation, the ratio of standard deviation divided by the mean was constant within and differed consistently between species over all species examined.

Three ratios, together, separated all extant species, and were compared in the fossil specimens: L/C, D/C, and J/K. These ratios in part describe the shapes of cells 2R1 and 2M.

Specimens were grouped for a given ratio-character if they did not differ by more than three times the coefficient of variation for that ratio times their mean value, and were considered to have a species-level difference for that character if the difference between their values was greater than that amount. All those specimens were included in the same species that are within three standard deviations of any member of the species group, i.e., two may differ by more, but a third that is intermediate and differs from neither by more than three the set amount bound those two together.



**Online Figure 1:** Forewing of *Pterocormus centrator* with characters of Ichneumonidae mentioned in the text. (A), (B) measurements taken. (C) cells Ar (areolet), 2M, and 2R1 in italics; veins M+Cu, Cu and A; crossveins cu-a and 2m-cu. (D) veins and crossveins surrounding the areolet; circled numbers, see text. (A)–(C) to scale, 5 mm; (D) to scale, 1 mm.

**Online Table 1**  
WING CHARACTER DATA USED FOR ICHNEUMONID SPECIES DEFINITIONS

number	Group	Species	Char.			L/C			D/C			J/K					
			1	2	3	Group	L/C	min	Group	D/C	min	max	Group	J/K	min		
2.07	A	sp. 1	A	?	?	AA1	0.82	0.77	0.87	AA1	0.44	0.34	0.54	AA1	2.13	1.72	2.54
1927	A	sp. 1	A	?	?	AA1	0.82	0.76	0.87	AA1	0.53	0.4	0.66	AA1	2.77	2.24	3.31
668	A	sp. 1	A	A	A	AA1	0.8	0.75	0.85	AA1	0.6	0.46	0.74	AA1	2.57	2.08	3.07
2433	A	sp. 2	A	A	AA2	0.89	0.83	0.95	AA1	0.57	0.44	0.71	AA1	2.8	2.26	3.34	
2820	A	sp. 3	A	A	B	AA3	0.97	0.91	1.03	AA1	0.45	0.34	0.55	AA2	3.69	2.98	4.4
2023	A	sp. 4	A	B	B	AA3	1.03	0.96	1.1	AA1	0.42	0.32	0.52	AA3	4.54	3.67	5.42
146	A	sp. 5	B	A	A	AB1	0.85	0.79	0.9	AB1	0.45	0.34	0.55	AB1	2.73	2.2	3.25
2200	A	sp. 6	B	A	A	AB2	0.92	0.86	0.99	AB1	0.62	0.48	0.77	AB1	2.26	1.82	2.69
2848	A	sp. 7	B	A	A	AB3	0.98	0.91	1.04	AB1	0.55	0.42	0.68	AB2	4.04	3.26	4.82
2416	B	sp. 1	A	?	B1	0.95	0.89	1.02	B1	0.57	0.43	0.7	B1	2.65	2.14	3.16	
2859	B	sp. 2	A	A	?	?	?	?	?	?	?	?	?	B2	3.9		
378	B	sp. 3	B	B	B	B2	0.86	0.81	0.92	B1	0.62	0.47	0.77	B1	2.29	1.85	2.73
684	C	sp. 1	A	A	A	AAAA1	0.79	0.74	0.84	AAAA1	0.67	0.51	0.83	AAAA1	2.31	1.87	2.76
563	C	sp. 1	A	A	A	AAAA1	0.85	0.79	0.91	AAAA1	0.57	0.43	0.7	AAAA1	2.65	2.14	3.16
2155	C	sp. 1	A	A	A	AAAA1	0.83	0.78	0.89	AAAA1	0.54	0.41	0.67	AAAA1	2.65	2.14	3.16
2783	C	sp. 1	A	A	A	AAAA1	0.8	0.75	0.86	AAAA1	0.54	0.41	0.67	AAAA1	2.67	2.15	3.18
2106	C	sp. 1	A	A	A	AAAA1	0.8	0.75	0.85	AAAA1	0.54	0.41	0.67	AAAA1	2.6	2.1	3.11
3004	C	sp. 1	A	A	A	AAAA1	0.82	0.76	0.87	AAAA1	0.51	0.39	0.63	AAAA1	2.24	1.81	2.68
2558	C	sp. 1	A	A	A	AAAA1	0.83	0.78	0.89	AAAA1	0.57	0.43	0.7	AAAA1	2.46	1.99	2.93
2097	C	sp. 1	A	A	A	AAAA1	0.86	0.8	0.91	AAAA1	0.51	0.39	0.63	AAAA1	2.63	2.12	3.14
2156	C	sp. 1	A	A	A	AAAA1	0.86	0.8	0.92	AAAA1	0.45	0.35	0.56	AAAA1	3.22	2.6	3.84
1139	C	sp. 1	A	A	A	AAAA1	0.9	0.84	0.96	AAAA1	0.58	0.44	0.71	AAAA1	2.73	2.2	3.25
2258	C	sp. 1	?	A	A	AAAA1	0.77	0.72	0.82	AAAA1	0.54	0.41	0.67	AAAA1	2.3	1.85	2.74
2214	C	sp. 2	A	A	B	CAAB1	0.93	0.87	0.99	CAAB1	0.47	0.36	0.58	CAAB1	2.4	1.94	2.86
138	C	sp. 3	A	A	B	CAAB2	0.98	0.92	1.05	CAAB1	0.48	0.37	0.6	CAAB2	3	2.42	3.58
110	C	sp. 4	A	B	B	CABB1	0.8	0.74	0.85	CABB1	0.52	0.39	0.64	?	?		
2263	C	sp. 5	A	B	B	CABB2	0.94	0.88	1	CABB1	0.48	0.37	0.6	CABB1	2.55	2.06	3.04
394	C	sp. 6	B	A	A	CBAA1	0.84	0.79	0.9	CBAA1	0.44	0.33	0.54	CBAA1	2.75	2.22	3.28
2444	C	sp. 7	B	A	A	CBAA1	0.85	0.79	0.91	CBAA1	0.48	0.37	0.59	CBAA2	2.18	1.76	2.6
638	C	sp. 8	B	A	B	CBAB1	0.87	0.81	0.93	CBAB1	0.46	0.35	0.57	CBAB1	3	2.42	3.58

2839	C	sp. 9	B	A	CBAB1	0.87	0.81	0.92	CBAB1	0.5	0.38	0.62	CBAB2	3.47	2.8	4.14	
2953	C	sp. 9	B	A	?	?	?	?	?	?	?	?	CBAB2	3.06	2.47	3.66	
3001	C	sp. 10	B	B	A	0.91	0.85	0.97	DAAB1	0.52	0.4	0.46	0.74	2.46	1.99	2.94	
767	D	sp. 1	A	A	DAAB1	0.82	0.76	0.87	DAAB1	0.48	0.37	0.6	DAAB1	2.56	2.07	3.05	
2096	D	sp. 1	A	A	DAAB1	0.82	0.76	0.87	DAAB1	0.55	0.42	0.67	DAAB1	2.74	2.21	3.27	
412	D	sp. 2	A	A	DAAB2	0.91	0.85	0.97	DAAB1	0.42	0.32	0.52	DBAA1	2.29	1.85	3.53	
1988	D	sp. 3	B	A	DBAA1	0.87	0.81	0.93	DBAA1	0.42	0.32	0.52	DBAA1	2.29	1.85	2.73	
2710	D	sp. 4	B	A	A?	DBAA1	0.82	0.76	0.87	DBAA1	0.48	0.36	0.59	DBAA1	2.3	1.85	2.74
2110	D	sp. 5	B	A	A	DBAA1	0.81	0.75	0.86	DBAA2	0.62	0.47	0.76	DBAA1	2.42	1.96	2.89
349	D	sp. 6	B	A	A	DBAA1	0.87	0.82	0.93	DBAA1	0.44	0.34	0.55	DBAA2	3.03	2.45	3.61
2417	D	sp. 7	B	A	B	DBAB1	0.95	0.89	1.02	DBAB1	0.45	0.35	0.56	?	?	?	?
2499	E	sp. 1	A	B	B	1	0.93	1.07		0.44	0.34	0.55		3.39	2.74	4.05	
140	E	sp. 2	B	B	B		1.06	0.99	1.13		0.58	0.44	0.72		?	?	?
605	F	sp. 1	A	A	A	0.76	0.71	0.81		0.56	0.42	0.69		?	?	?	
2975	F	sp. 2	A	A	B	FAAB1	0.98	0.92	1.05	FAAB1	0.46	0.35	0.57	FAAB1	3.1	2.5	3.69
2109	F	sp. 3	A	A	B	FAAB2	0.85	0.8	0.91	FAAB1	0.56	0.43	0.7	FAAB2	2.12	1.71	2.53
2428	F	sp. 4	B	A	A	0.84	0.78	0.89		0.52	0.39	0.64		2.31	1.86	2.75	
2551	F	sp. 5	?	B	B	?	?	?		?	?	?		?	?	?	

### **Analysis of *Plecia* Specimens**

March flies, species of the genus *Plecia* (Diptera: Bibionidae: Pleciinae), are the most common insects at most Okanagan Highlands localities, and comprise about a quarter of this fossil assemblage. Handlirsch (1910) defined twenty species in the British Columbia Eocene, a number Cockerell (1925: p. 12) called “scandalous”. Rice (1959) revised these, added another two species, and placed two in *Penthetria*, the sister taxon to *Plecia*, which has very similar wings.

Unfortunately, none of these authors provided diagnoses for these species, as was the custom then. Intraspecific variation in wing morphology as illustrated by Rice appears larger than differences between many species pairs. Although they are common fossils, no species determinations for Okanagan Highlands *Plecia* (or *Penthetria*) specimens have been subsequently published. Wilson (1977: p. 1146) noted that assignment of these bibionid specimens to species is “extremely difficult”, and suggested that further revision of the Okanagan Highlands Bibionidae is necessary.

The approach taken here was similar to that taken for the Ichneumonidae. Twenty-three characters were measured on each wing (A-W, online fig. 2) of 129 well-preserved specimens out of 335 total. To control for size differences in intra-specific variation and sexual dimorphism, only ratios of these were used, yielding  $23*22/2 = 253$  possible distinct ratios. Unfortunately, many fossil specimens are incomplete in some portion, precluding some measurements.

To establish intra- and inter-specific variation in these ratios to compare among the fossils, 53 specimens of 5 extant species of *Plecia* were examined and measured (males and females): *P. nearctica* ( $n = 20$ ), *P. americana* ( $n = 4$ ), *P. ephippium* ( $n = 8$ ), *P. plagiata* ( $n = 13$ ), and *P. collaris* ( $n = 8$ ); and 18 further specimens of the pleciine *Penthetria heteroptera*.

To establish if there was sexual dimorphism in the ratios themselves, which would hinder their use in species identification, the sum of squares of a ratio about its mean was partitioned into the between sex and within sex components, as in an analysis of variance. A ratio was rejected if the between sex component was more than 20% of the total.

Of the 253 possible measurement ratios, only 69 were sufficiently non-dimorphic to appear useful. Of these 69, many were highly correlated; hence, using all of them added nothing to our discrimination that a much smaller subset could achieve. A set of ratios were identified, which were not sexually dimorphic, which were not significantly correlated, which had a relatively small variance within an extant species, yet which had a much larger variance over the fossil specimens. They are: A/W, E/U, C/P, K/M, B/J, N/Q, T/W, R/U, I/O, Q/V, and A/F.

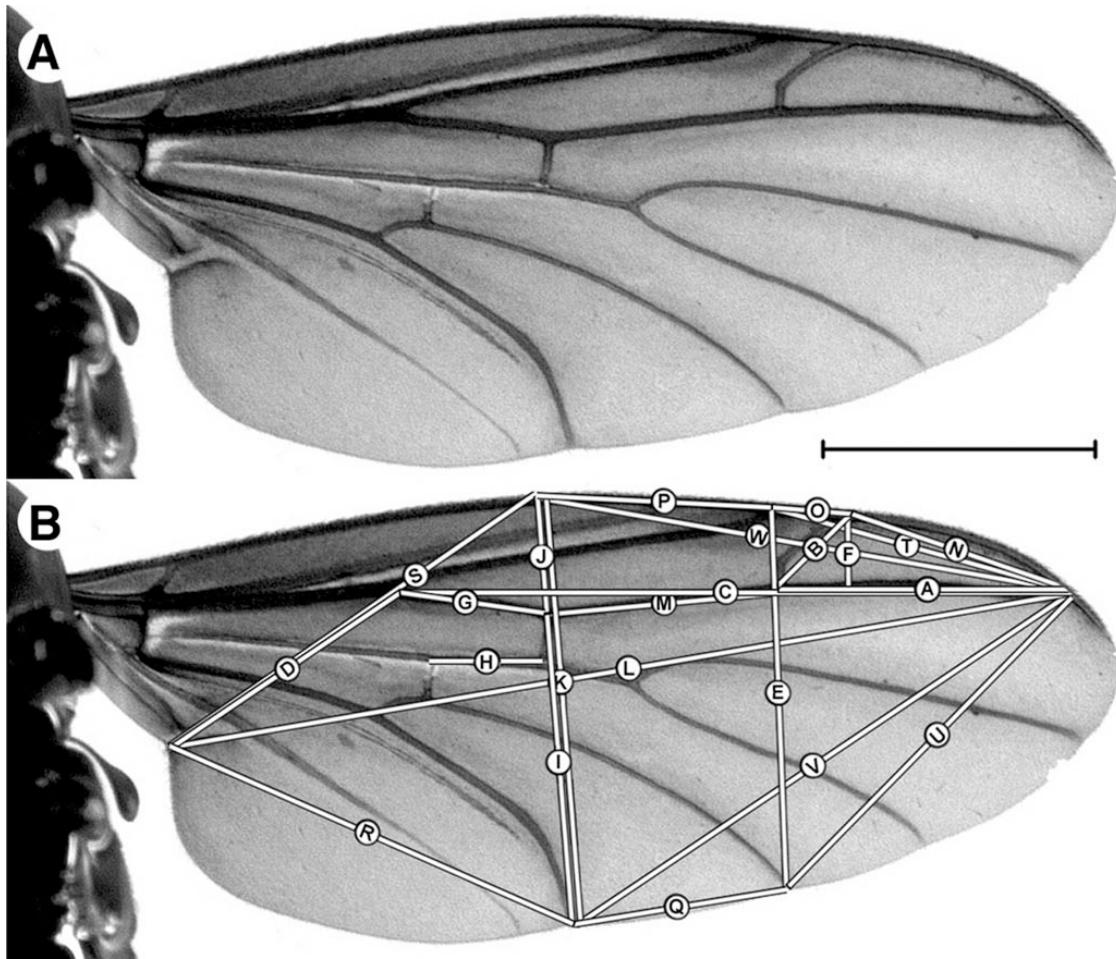
These ratios are highly diagnostic for the modern species. Linear Discriminant analysis using them split individual pairs of the 5 extant species perfectly, with Mahalonobis  $D^2$  values all in excess of 18. This is not helpful with regards to the fossils specimens, as the goal is not to assign them to modern species. It does suggest, however, that the ratios could be useful, with the caveat that only a subset are available in many due to partial preservation. No small subset of these ten ratios (two or three) reliably separates all of the extant species.

A Principal Components Analysis was done on the ten ratios over the extant species sample. The first two principal components explained about 90% of the total variance over the extant species. Unfortunately, projecting the data matrix for the extant species on these two main components did not separate the species.

Returning to the full set of 69 non-dimorphic ratios, variance of individual ratios between species was examined. Between each pair of extant species, with one notable exception, there was no overlap in ratio values for at least five of the ratios and at least one ratio in which the mean difference between the species was at least 0.33 times the average mean over the two species. This compares to the within species coefficient of variation, in which the standard deviation in any ratio was never more than about 17% of the mean, usually less than 10%. The exception to this result is the comparison of *P. nearctica* and *P. collaris*, which had overlap in all 69 of the non-dimorphic ratios. Despite this one failure, it seemed that a possible rule for grouping specimens into species was to pair specimens that did not differ in any one ratio by more than 30% of the mean value for that ratio in the two species. When this rule is applied to the aggregate 56 specimens of the five extant species, only  $32/56 = .57\%$  were assigned to their known species group correctly. A major error was assigning five of the *P. collaris* to the *P. nearctica* group. The number of specimens assigned to a single specimen group was 18/56, yielding a total of 22 “species” groups instead of the known 5 species. This increased the logarithmic Shannon species diversity index from 1.49 to 2.17, an error that seems intolerable. This amounts to an increase in the number of “effective” species taking relative abundance into consideration from 4.44 to 8.76. When this rule was applied to the fossil *Plecia* specimens 128 of the unknown specimens were assigned to 1 species and 1 specimen to a second species.

A rather arbitrary examination was done on the effect of reducing the difference required in any one ratio for separating a pair of specimens into two species, while adding a requirement that the average difference between the specimens over all of the ratios for which they have data in common. When two specimens were considered conspecific that do not differ by more than 34% of the mean of any one ratio, but split when the average relative difference (difference divided by the mean for the two specimens) over all ratios in common, the Shannon’s species diversity index was 1.49, exactly the known value. However, about 40% of the specimens were categorized incorrectly as to known species. Applying this mixed rule to the fossil specimens changed nothing. The result was two species with nearly all of the specimens in one species. Of course, this could be the correct categorization of the fossils, but the method for achieving it is very ad hoc, and cannot be accepted.

By the inability to obtain reliable species determinations for these fossil *Plecia* on the basis of these wing measurements, they were excluded.



**Online Figure 2:** *Plecia nearctica* wing, female. (A) habitus, (B) measurements taken on *Plecia* and *Penthetria* specimens; both to scale, 2 mm.

**Comparison of Climatic Estimation Methods**  
**Online Table 2**

COMPARISONS OF WEATHER STATION DATA AND PALEOCLIMATE EVALUATION METHODS.

site	N	LMP	MAT(obs)	MAT(LMA)	error	N	MAT(NLR)	error
LS	40	75%	25.8	21.6	2.0	28	20.7	$\pm 3.3$
HF	27	16.7%	7.2	7.3	1.8	33	9.1	$\pm 3.6$
Mc	21	29.2%	–	10.7	2.5	34	13.5	$\pm 2.5$

site	N	CMMT(obs)	CMMT(NLR)	error
LS	28	24.7	16.7	$\pm 4.7$
HF	33	-7.4	-1.4	$\pm 9.1$
Mc	35	–	5.8	$\pm 2.0$

site	N	MAP(obs)	MAP(NLR)	error
LS	29	396	126	$\pm 34$
HF	33	107	111	$\pm 45$
Mc	35	–	108	$\pm 36$

NOTE.—Abbreviations: mean annual temperature (MAT), coldest month mean temperature (CMMT) and mean annual precipitation (MAP), observed weather station data (obs) and nearest living relative (NLR) and leaf margin analysis (LMA). Data from La Selva (LS), Costa Rica; Harvard Forest (HF), Massachusetts, USA; Eocene McAbee (Mc), British Columbia, Canada. N is the number of leaves (LMA) or taxa (NLR) used; LMP is the percent entire margined (non-toothed) woody dicot leaves. MAT and CMMT in °C and MAP in cm/year.

For comparative value, the paleoclimatic estimation methods employed to evaluate McAbee climate (LMA and NLR) were done for Harvard Forest and La Selva, and results were compared with observed on-site weather station data. Harvard Forest LMA was calculated based on LMP data from Royer et al. (Royer et al. 2005), and La Selva on a new leaf collection. NLR was based on Harvard Forest online taxon lists (Harvard Forest 2006), and La Selva on determinations of the leaf collection by Orlando Vargas and Jose Gonzalez.

The LMA MAT for Harvard Forest, Massachusetts was accurate, with the mean value within 0.4° C of the observed weather station value. The mean value of the NLR estimate of MAT for Harvard Forest was about two degrees high, but with error values accurately reflected observed MAT. CMMT (NLR only) gave the Harvard Forest observed value, but only within the large error values. At La Selva, however, CMMT was underestimated, slightly inflating its prediction of seasonality there. MAP by NLR (only) gave a quite accurate prediction of the observed annual precipitation at Harvard Forest, but was less successful at La Selva, where it was underestimated by more than a third. CMMT and MAP are difficult to estimate using either proxy, with large errors and underestimation a common outcome when calibrated using modern sites. The lower than

observed MAT and CMMT NLR estimates for La Selva are due in part to the inclusion in the calculation of genera of Lauraceae and some other taxa (e.g., Aquifoliaceae, Clethraceae, and Symplocaceae) that are typical of higher elevation forests. The presence of tree taxa in the La Selva forests that are typical of cooler upland forests is thought to be due to the ever-wet and cloudy character of the climate (Gentry 1990; Hammel 1990). The inconsistencies reported here between observed and estimated MAP are similar to those reported in other studies, and may reflect many plant taxa responding to precipitation as a threshold or stepped response, rather than as a linear response (Greenwood 2001; Burnham et al. 2005).

**Online Table 3**

GENERAL COMPOSITIONS OF MCABEE, LA SELVA, AND HARVARD FOREST SAMPLES

Taxon	total	total to spp	spp.
<b>McAbee Sample</b>			
Fossil insects	<b>1417</b>	—	—
Identifiable to order	<b>1286</b>	<b>390</b>	<b>279</b>
<b>Diptera</b>	<b>487</b>	<b>45</b>	<b>38</b>
Nematocera	463	27	23
Mycetophilidae	28	11	10
Tipulomorpha	40	14	11
Bibionidae ( <i>Plecia</i> )	335	—	—
Trichoseridae?	2	2	2
<i>incertae sedis</i>	58	—	—
Brachycera	20	14	12
Syrphidae	8	7	6
<i>incertae sedis</i>	12	7	6
<i>incertae sedis</i>	4	4	3
<b>Hemiptera</b>	<b>403</b>	<b>128</b>	<b>74</b>
Auchenorrhyncha	306	90	55
Heteroptera	91	35	16
Sternorrhyncha	6	3	3
<b>Hymenoptera</b>	<b>194</b>	<b>99</b>	<b>83</b>
Symphyta	34	27	25
Siricidae	1	1	1
Cimbicidae	6	5	4
Tenthredinidae	26	21	20
Apocrita	160	72	58
Diapriidae	1	1	1
Proctotrupidae	2	2	2
Proctotrupoidea <i>in. sed.</i>	1	1	1
Ichneumonidae	86	48	34
Braconidae	6	2	2
Figitidae	2	1	1
Chrysoidoidea <i>in. sed.</i>	1	1	1

Vespidae	2	2	2
Formicidae	13	6	6
Sphecidae ( <i>s.l.</i> )	3	3	3
Apocrita <i>in. sed.</i>	44	5	5
<b>Coleoptera</b>	<b>86</b>	<b>54</b>	<b>49</b>
<b>Mecoptera</b>	<b>23</b>	<b>19</b>	<b>8</b>
Bittacidae	6	5	4
Dinopanorpidae	7	6	2
Unnamed fam.	7	7	1
Panorpidae	1	1	1
<i>incertae sedis</i>	2	—	—
<b>Trichoptera</b>	<b>21</b>	<b>18</b>	<b>7</b>
<b>Blattodea</b>	<b>19</b>	—	—
<b>Neuroptera</b>	<b>17</b>	<b>15</b>	<b>11</b>
Osmylidae	5	4	3
Hemerobiidae	3	3	3
Chrysopidae	8	7	4
<i>incertae sedis</i>	1	1	1
<b>Ephemeroptera</b>	<b>14</b>	—	—
<b>Orthoptera</b>	<b>10</b>	<b>6</b>	<b>5</b>
Ensifera	5	4	3
Prophalangopsidae	3	2	2
Tettigoniidae	2	2	1
Caelifera	3	2	2
<i>incertae sedis</i>	3	2	2
<i>incertae sedis</i>	2	—	—
<b>Isoptera</b>	<b>6</b>	<b>3</b>	<b>1</b>
Hodotermitidae	3	3	1
<i>incertae sedis</i>	3	—	—
<b>Dermoptera</b>	<b>3</b>	—	—
<b>Odonata</b>	<b>3</b>	<b>3</b>	<b>3</b>
Zygoptera	2	2	2
Megapodagrionidae	1	1	1
<i>incertae sedis</i>	1	1	1
Anisoptera	1	1	1
Aeshnidae	1	1	1

### La Selva Sample

<b>Total</b>	<b>3717</b>	<b>1110</b>
<b>Diptera</b>	<b>981</b>	<b>245</b>
Nematocera	253	72
Brachycera	728	173
<b>Hemiptera</b>	<b>705</b>	<b>176</b>
Sternorrhyncha	6	3
Auchenorrhyncha	618	136

Heteroptera	81	37
<b>Hymenoptera</b>	<b>1203</b>	<b>320</b>
Sympyta	18	5
Apocrita	1185	315
<b>Coleoptera</b>	<b>751</b>	<b>328</b>
<b>Trichoptera</b>	<b>3</b>	<b>3</b>
<b>Blattodea</b>	<b>1</b>	<b>1</b>
<b>Neuroptera</b>	<b>3</b>	<b>2</b>
<b>Ephemeroptera</b>	<b>1</b>	<b>1</b>
<b>Psocoptera</b>	<b>15</b>	<b>7</b>
<b>Orthoptera</b>	<b>48</b>	<b>23</b>
Caelifera	23	10
Ensifera	25	13
<b>Isoptera</b>	<b>1</b>	<b>1</b>
<b>Mantodea</b>	<b>4</b>	<b>2</b>
<b>Dermoptera</b>	<b>1</b>	<b>1</b>

### Harvard Forest Sample

<b>Total</b>	<b>1938</b>	<b>660</b>
<b>Diptera</b>	<b>771</b>	<b>178</b>
Nematocera	257	49
Brachycera	514	129
<b>Hemiptera</b>	<b>76</b>	<b>28</b>
Sternorrhyncha	5	2
Auchenorrhyncha	67	22
Heteroptera	4	4
<b>Hymenoptera</b>	<b>745</b>	<b>373</b>
Sympyta	31	8
Apocrita	714	365
<b>Coleoptera</b>	<b>262</b>	<b>54</b>
<b>Trichoptera</b>	<b>41</b>	<b>12</b>
<b>Blattodea</b>	<b>1</b>	<b>1</b>
<b>Neuroptera</b>	<b>5</b>	<b>2</b>
<b>Psocoptera</b>	<b>6</b>	<b>4</b>
<b>Orthoptera</b>	<b>17</b>	<b>1</b>
Caelifera	17	1
<b>Odonata</b>	<b>14</b>	<b>7</b>

Note: —For details of sample compositions, see online Table 4. See Archibald (2007) for photographs and / or drawings of all McAbee specimens.

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**Online Table 4**

Sample Compositions

**McAbee Sample**

Coleoptera						Quant.
Number	Superfamily	Family	Group	Species		
2829	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 1	2	
166	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 1		
164	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 2	2	
2266	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 2		
2025	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 3	1	
1251	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 4	1	
2020	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 5	1	
2456	<i>incertae sedis</i>	<i>incertae sedis</i>	A	sp. 6	1	
130	<i>incertae sedis</i>	<i>incertae sedis</i>	B	sp. 1	1	
1246	<i>incertae sedis</i>	<i>incertae sedis</i>	B	sp. 2	1	
1746	Chrysomeloidea	Cerambycidae	C	sp. 1	1	
982	Tenebrionoidea	Mordellidae	D	sp. 1	1	
2400	Elateroidea	cf.Cantharidae	E	sp. 1	1	
2076	Scarabaeoidea	Passalidae	F	sp. 1	1	
2707	Elateroidea	cf. Elateridae	G	sp. 1	1	
181	Elateroidea	cf. Elateridae	G	sp. 2	1	
2963	Elateroidea	cf. Elateridae	G	sp. 3	1	
2235	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 1		
2280	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 2		
249	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 3		
600	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 4		
1150	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 5		
332	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 6		
1902	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 7		
77	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 8		
2957	<i>incertae sedis</i>	<i>incertae sedis</i>	H	sp. 9		



**La Selva Sample**

Superfamily	Family	Species	Trap							ARB total
			T1M	T13	T1W2	T2W2	T3W2	T4W2	T5W2	
Coleoptera	Carabidae	sp.1	1	1	1	1	1	1	1	1
Caraboidea	Carabidae	sp.2								2
Caraboidea	Carabidae	sp.3	1		1					1
Caraboidea	Carabidae	sp.4								3
Caraboidea	Cicindelidae	sp.1	1	1	1					3
Caraboidea	Cicindelidae	sp.2								3
Caraboidea	Dytiscidae	sp.1								6
Caraboidea	Dytiscidae	sp.2								1
Hydrophiloidea	Hydrophilidae	sp.1				2		2		6
Staphylinoidea	Staphylinidae	sp.1								4
Staphylinoidea	Staphylinidae	sp.2								2
Staphylinoidea	Staphylinidae	sp.3								1
Staphylinoidea	Staphylinidae	sp.4	3							4
Staphylinoidea	Staphylinidae	sp.5								1
Staphylinoidea	Staphylinidae	sp.6								2
Staphylinoidea	Staphylinidae	sp.7			1					1
Staphylinoidea	Staphylinidae	sp.8								1
Staphylinoidea	Staphylinidae	sp.9								3
Staphylinoidea	Staphylinidae	sp.10			1					1
Staphylinoidea	Staphylinidae	sp.11								1
Staphylinoidea	Staphylinidae	sp.12								2
Staphylinoidea	Staphylinidae	sp.13								1
Staphylinoidea	Staphylinidae	sp.14								1
Staphylinoidea	Staphylinidae	sp.15								1
Staphylinoidea	Staphylinidae	sp.16								1
Staphylinoidea	Staphylinidae	sp.17								1
Staphylinoidea	Staphylinidae	sp.18								1
Staphylinoidea	Staphylinidae	sp.19								1
Staphylinoidea	Staphylinidae	sp.20								1
Staphylinoidea	Staphylinidae	sp.21								1
Staphylinoidea	Staphylinidae	sp.22								1

Staphylinoidea	Staphylinidae	Staphylinidae	sp. 23
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 24
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 25
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 26
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 27
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 28
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 29
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 30
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 31
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 32
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 33
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 34
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 35
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 36
Staphylinoidea	Staphylinidae	Staphylinidae	sp. 37
Staphylinoidea	Scaphidiidae	Scaphidiidae	sp. 1
Scarabaeoidea	Scarabaeidae	Scarabaeidae	sp. 1
Scarabaeoidea	Scarabaeidae	Scarabaeidae	sp. 2
Scarabaeoidea	Ceratocanthid sp.	Ceratocanthid sp.	1
Scarabaeoidea	Ceratocanthid sp.	Ceratocanthid sp.	3
Buprestoidea	Buprestidae	Buprestidae	1
Buprestoidea	Buprestidae	Buprestidae	2
Buprestoidea	Buprestidae	Buprestidae	1
Buprestoidea	Buprestidae	Buprestidae	1
Buprestoidea	Buprestidae	Buprestidae	1
Buprestoidea	Buprestidae	Buprestidae	1
Buprestoidea	Buprestidae	Buprestidae	1
Buprestoidea	Buprestidae	Buprestidae	1
Byrrhoidea	Ptilodactylidae	Ptilodactylidae	1
Byrrhoidea	Ptilodactylidae	Ptilodactylidae	2
Byrrhoidea	Ptilodactylidae	Ptilodactylidae	1
Byrrhoidea	Ptilodactylidae	Ptilodactylidae	1
Elateroidea	Elateridae	Elateridae	1
Elateroidea	Elateridae	Elateridae	2
Elateroidea	Elateridae	Elateridae	1







Chrysomeloidei	Chrysomelidae sp.	8
Chrysomeloidei	Chrysomelidae sp.	9
Chrysomeloidei	Chrysomelidae sp.	10
Chrysomeloidei	Chrysomelidae sp.	11
Chrysomeloidei	Chrysomelidae sp.	12
Chrysomeloidei	Chrysomelidae sp.	13
Chrysomeloidei	Chrysomelidae sp.	14
Chrysomeloidei	Chrysomelidae sp.	15
Chrysomeloidei	Chrysomelidae sp.	16
Chrysomeloidei	Chrysomelidae sp.	17
Chrysomeloidei	Chrysomelidae sp.	18
Chrysomeloidei	Chrysomelidae sp.	19
Chrysomeloidei	Chrysomelidae sp.	20
Chrysomeloidei	Chrysomelidae sp.	21
Chrysomeloidei	Chrysomelidae sp.	22
Chrysomeloidei	Chrysomelidae sp.	23
Chrysomeloidei	Chrysomelidae sp.	24
Chrysomeloidei	Chrysomelidae sp.	25
Chrysomeloidei	Chrysomelidae sp.	26
Chrysomeloidei	Chrysomelidae sp.	27
Chrysomeloidei	Chrysomelidae sp.	28
Chrysomeloidei	Chrysomelidae sp.	29
Chrysomeloidei	Chrysomelidae sp.	30
Chrysomeloidei	Chrysomelidae sp.	31
Chrysomeloidei	Chrysomelidae sp.	32
Chrysomeloidei	Chrysomelidae sp.	33
Chrysomeloidei	Chrysomelidae sp.	34
Chrysomeloidei	Chrysomelidae sp.	35
Chrysomeloidei	Chrysomelidae sp.	36
Chrysomeloidei	Chrysomelidae sp.	37
Chrysomeloidei	Chrysomelidae sp.	38
Chrysomeloidei	Chrysomelidae sp.	39
Chrysomeloidei	Chrysomelidae sp.	40
Chrysomeloidei	Chrysomelidae sp.	41
Chrysomeloidei	Chrysomelidae sp.	42
Chrysomeloidei	Chrysomelidae sp.	43



Chrysomeloidea	Chrysomelidae	sp. 80	2
Chrysomeloidea	Chrysomelidae	sp. 81	1
Chrysomeloidea	Chrysomelidae	sp. 82	15
Chrysomeloidea	Chrysomelidae	sp. 83	3
Chrysomeloidea	Chrysomelidae	sp. 84	3
Chrysomeloidea	Chrysomelidae	sp. 85	3
Chrysomeloidea	Chrysomelidae	sp. 86	3
Chrysomeloidea	Chrysomelidae	sp. 87	1
Chrysomeloidea	Chrysomelidae	sp. 88	1
Chrysomeloidea	Chrysomelidae	sp. 89	1
Chrysomeloidea	Chrysomelidae	sp. 90	1
Chrysomeloidea	Chrysomelidae	sp. 91	1
Chrysomeloidea	Chrysomelidae	sp. 92	1
Curculionoidea	Curculionidae	sp. 1	1
Curculionoidea	Curculionidae	sp. 2	3
Curculionoidea	Curculionidae	sp. 3	2
Curculionoidea	Curculionidae	sp. 4	1
Curculionoidea	Curculionidae	sp. 5	1
Curculionoidea	Curculionidae	sp. 6	1
Curculionoidea	Curculionidae	sp. 7	1
Curculionoidea	Curculionidae	sp. 8	1
Curculionoidea	Curculionidae	sp. 9	1
Curculionoidea	Curculionidae	sp. 10	1
Curculionoidea	Curculionidae	sp. 11	2
Curculionoidea	Curculionidae	sp. 12	1
Curculionoidea	Curculionidae	sp. 13	1
Curculionoidea	Curculionidae	sp. 14	1
Curculionoidea	Curculionidae	sp. 15	1
Curculionoidea	Curculionidae	sp. 16	1
Curculionoidea	Curculionidae	sp. 17	1
Curculionoidea	Curculionidae	sp. 18	1
Curculionoidea	Curculionidae	sp. 19	1
Curculionoidea	Curculionidae	sp. 20	1
Curculionoidea	Curculionidae	sp. 21	1
Curculionoidea	Curculionidae	sp. 22	2
Curculionoidea	Curculionidae	sp. 23	3
Curculionoidea	Curculionidae	sp. 24	1



Curculionoidea	Curculionidae	sp. 60	1
Curculionoidea	Curculionidae	sp. 61	1
Curculionoidea	Curculionidae	sp. 62	1
Curculionoidea	Curculionidae	sp. 63	1
Curculionoidea	Curculionidae	sp. 64	1
Curculionoidea	Scolytidae	sp. 1	1
Curculionoidea	Scolytidae	sp. 2	2
Curculionoidea	Scolytidae	sp. 3	1
Curculionoidea	Scolytidae	sp. 4	1
Curculionoidea	Scolytidae	sp. 5	1

## Harvard Forest Sample

Coleoptera		Superfamily	Family	Species	6/25/05	8/16/04	total
Caraboidea	Carabidae		sp. 1	1		1	1
Caraboidea	Carabidae		sp. 2	1		1	1
Staphylinoidea	Silphidae	sp. 1	2		1	2	
Staphylinoidea	Staphylinidae	sp. 1			5	5	
Staphylinoidea	Staphylinidae	sp. 2			16	16	
Staphylinoidea	Staphylinidae	sp. 3		16			
Staphylinoidea	Scaphidiidae	sp. 1		1	1	1	
Staphylinoidea	Leptodiridae	sp. 1			1	1	
Eucinetoidea	Scirtidae	sp. 1		2	2	2	
Eucinetoidea	Scirtidae	sp. 2	21		21		
Eucinetoidea	Scirtidae	sp. 3	8		8		
Eucinetoidea	Scirtidae	sp. 4	15	2	17		
Scarabaeoidea	Scarabidae	sp. 1	1		1	1	
Buprestoidea	Buprestidae	sp. 1		1	1	1	
Buprestoidea	Buprestidae	sp. 2			1	1	
Elateroidea	Throscidae	sp. 1		1	1	1	
Elateroidea	Throscidae	sp. 2	3		9	12	
Elateroidea	Throscidae	sp. 3			49	49	
Elateroidea	Elateridae	sp. 1		3	1	4	
Elateroidea	Elateridae	sp. 2		1		1	
Elateroidea	Elateridae	sp. 3		3		3	
Elateroidea	Lycidae	sp. 1		4		4	
Elateroidea	Lampyridae	sp. 1		2		2	
Elateroidea	Lampyridae	sp. 2		4		4	
Elateroidea	Lampyridae	sp. 3			1	1	
Elateroidea	Cantharidae	sp. 1			1	1	
Elateroidea	Cantharidae	sp. 2		1		1	
Elateroidea	Cantharidae	sp. 3			26	26	
Bostrichoidea	Anobiidae	sp. 1		1		1	
Bostrichoidea	Anobiidae	sp. 2			1	1	
Cleoidea	Cleridae	sp. 1			1	1	

<b>Cleoidea</b>	Cleridae	sp. 2
<b>Cleoidea</b>	Cleridae	sp. 3
<b>Cleoidea</b>	Cleridae	sp. 4
<b>Cucujoidea</b>	Erotylidae	sp. 1
<b>Cucujoidea</b>	Endomychida	sp. 1
<b>Cucujoidea</b>	Coccinellidae	sp. 1
<b>Cucujoidea</b>	Coccinellidae	sp. 2
<b>Tenebrionoidea</b>	Mordellidae	sp. 1
<b>Tenebrionoidea</b>	Mordellidae	sp. 2
<b>Tenebrionoidea</b>	Mordellidae	sp. 3
<b>Tenebrionoidea</b>	Melandryidae	sp. 1
<b>Tenebrionoidea</b>	Synchroidae	sp. 1
<b>Tenebrionoidea</b>	Synchroidae	sp. 2
<b>Tenebrionoidea</b>	Synchroidae	sp. 1
<b>Tenebrionoidea</b>	Synchroidae	sp. 3
<b>Tenebrionoidea</b>	Synchroidae	sp. 4
<b>Tenebrionoidea</b>	Synchroidae	sp. 3
<b>Tenebrionoidea</b>	Synchroidae	sp. 5
<b>Chrysomeloidea</b>	Cerambycidae	sp. 1
<b>Chrysomeloidei</b>	Cerambycidae	sp. 2
<b>Chrysomeloidei</b>	Cerambycidae	sp. 3
<b>Chrysomeloidei</b>	Cerambycidae	sp. 4
<b>Curculionoidea</b>	Curculionidae	sp. 1
<b>Curculionoidea</b>	Curculionidae	sp. 2
<b>Incertae sedis</b>	<i>Incertae sedis</i>	sp. 1
		1

**McAbee Sample**

Hemiptera	Number	Suborder	Superfamily	Family	Species	Quant.
	60	Sternorrhyncha	Aphidoidea	Aphididae	sp. 1	1
	1895	Sternorrhyncha	Aphidoidea	Aphididae	sp. 2	1
	2725	Sternorrhyncha	Aphidoidea	Aphididae	sp. 3	1
	1016	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 1	2
	2875	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 1	1
	1543	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 2	1
	2275	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 3	1
	1845	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 4	1
	2317	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 5	2
	2502	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 5	1
	2099	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 6	1
	2421	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 7	1
	2447	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 8	1
	2561	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 9	1
	2916	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 10	1
	2241	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 11	1
	2808	Auchenorrhyncha	Membracoidea	Cicadellidae	sp. 12	1
	990	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 1	7
	1237	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 1	1
	1994	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 1	1
	2005	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 1	1
	2967	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 1	1
	1508	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 1	1
	1912	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 2	5
	994	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 2	2
	2427	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 2	2
	208	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 2	2
	659	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 2	2
	993	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 3	1
	2183	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 4	1
	221	Auchenorrhyncha	Cercopoidea	Cercopoidea	sp. 4	1

			<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>
2503	Auchenorrhyncha Cercopoidea	sp. 5				
2182	Auchenorrhyncha Cercopoidea	sp. 6				
1519	Auchenorrhyncha Cercopoidea	sp. 7				
210	Auchenorrhyncha Cercopoidea					
68	Auchenorrhyncha Cercopoidea					
2376	Auchenorrhyncha Cercopoidea					
705	Auchenorrhyncha Cercopoidea					
2972	Auchenorrhyncha Cercopoidea					
2408	Auchenorrhyncha Cercopoidea					
2260	Auchenorrhyncha Cercopoidea					
406	Auchenorrhyncha Cercopoidea					
672	Auchenorrhyncha Cercopoidea					
70	Auchenorrhyncha Cercopoidea					
1749	Auchenorrhyncha Cercopoidea					
1012	Auchenorrhyncha Cercopoidea					
2130	Auchenorrhyncha Cercopoidea					
2119	Auchenorrhyncha Cercopoidea					
2933	Auchenorrhyncha Cercopoidea					
2960	Auchenorrhyncha Cercopoidea					
1840	Auchenorrhyncha Cercopoidea					
2455	Auchenorrhyncha Cercopoidea					
2574	Auchenorrhyncha Cercopoidea					
469	Auchenorrhyncha Cercopoidea					
2973	Auchenorrhyncha Cercopoidea					
1015	Auchenorrhyncha Cercopoidea					
261	Auchenorrhyncha Cercopoidea					
1545	Auchenorrhyncha Cercopoidea					
656	Auchenorrhyncha Cercopoidea					
2127	Auchenorrhyncha Cercopoidea					
2966	Auchenorrhyncha Cercopoidea					
2868	Auchenorrhyncha Cercopoidea					
2915	Auchenorrhyncha Cercopoidea					
1913	Auchenorrhyncha Cercopoidea					
1221	Auchenorrhyncha Cercopoidea					
2501	Auchenorrhyncha Cercopoidea					
2817	Auchenorrhyncha Cercopoidea					
		sp. 25	3			
		sp. 26	4			

			sp. 27	2	sp. 28	3	
2863	Auchenorrhyncha Cercopoidea						
2864	Auchenorrhyncha Cercopoidea						
2344	Auchenorrhyncha Cercopoidea						
325	Auchenorrhyncha Cercopoidea						
260	Auchenorrhyncha Cercopoidea						
1017	Auchenorrhyncha Cercopoidea						
2129	Auchenorrhyncha Cercopoidea						
2368	Auchenorrhyncha Cercopoidea						
2932	Auchenorrhyncha Cercopoidea						
74	Auchenorrhyncha Cercopoidea						
2023	Auchenorrhyncha Cercopoidea						
2212	Auchenorrhyncha Cercopoidea						
2514	Auchenorrhyncha Cercopoidea						
1804	Auchenorrhyncha Cercopoidea						
2730	Auchenorrhyncha Cercopoidea						
73	Auchenorrhyncha Cercopoidea						
3005	Auchenorrhyncha Cercopoidea						
683	Auchenorrhyncha Cercopoidea						
2017	Auchenorrhyncha Cercopoidea						
1511	Auchenorrhyncha Cercopoidea						
1841	Auchenorrhyncha Cercopoidea						
663	Auchenorrhyncha Cercopoidea						
2282	Auchenorrhyncha Cercopoidea						
2794	Auchenorrhyncha Cercopoidea						
2812	Auchenorrhyncha Cercopoidea						
2815	Auchenorrhyncha Cercopoidea						
258	Heteroptera						
415	Heteroptera						
1007	Heteroptera						
1117	Heteroptera						
1818	Heteroptera						
1821	Heteroptera						
2019	Heteroptera						
2022	Heteroptera						
2088	Heteroptera						
2393	Heteroptera						

2569	Heteroptera	sp. 1					
2641	Heteroptera	sp. 1					
2653	Heteroptera	sp. 1					
2858	Heteroptera	sp. 1					
262	Heteroptera	2	sp. 2				
524	Heteroptera	sp. 2	sp. 2				
2719	Heteroptera	sp. 3	1				
1500	Heteroptera	sp. 4	2				
1700	Heteroptera	sp. 4					
2207	Heteroptera	sp. 5	1				
430	Heteroptera	sp. 6	1				
2974	Heteroptera	sp. 7	2				
2346	Heteroptera	sp. 7					
2630	Heteroptera	sp. 8	1				
2087	Heteroptera	sp. 9	1				
26	Heteroptera	sp. 10	1				
1766	Heteroptera	sp. 11	1				
2158	Heteroptera	sp. 12	3				
427	Heteroptera	sp. 12					
2617	Heteroptera	sp. 12					
2853	Heteroptera	sp. 13	2				
2148	Heteroptera	sp. 13					
2234	Heteroptera	sp. 14	1				
712	Heteroptera	sp. 15	1				
614	Heteroptera	sp. 16	1				

**La Selva Sample**

Hemiptera		Suborder	Superfamily	Family	Species	Trap							ARB total
T1M13	T1W2					T2W2	T3W2	T4W	T5W2	T6W2	HTW2	ARB	
Sternorrhyncha	Psylloidea	Psyllidae	sp. 1									1	1
Sternorrhyncha	Aphidoidea	Aphididae	sp. 1	1	1							3	2
Sternorrhyncha	Aphidoidea	Aphididae	sp. 2									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 1									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 2									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 3									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 4									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 5									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 6									2	2
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 7									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 8									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 9									1	1
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 10	11	7	3						21	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 1			3						3	3
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 2	2	2	2						6	6
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 3	78	16	1						99	99
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 4	18		4						1	25
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 5	35	12	4						4	55
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 6			1						1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 7		1	7						7	13
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 8	6	8	4						1	14
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 9	3	5	4						8	8
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 10		1	3						1	5
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 11			1						2	2
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 12			3						1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 13			1						1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 14									1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 15			1						2	3
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 16									1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 17	1								1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 18	3	2	2						2	2









Heteroptera

Pentatomoides Pentatomidae sp. 7

1

1

**Harvard Forest Sample**

Hemiptera	Suborder	Superfamily	Family	Species	6/25/05	8/16/04	total
Sternorrhyncha	Aleyrodoidea	Aleyrodidae	sp. 1	1	0	1	1
Sternorrhyncha	Aphidoidea	Aphididae	sp. 1	0	4	4	4
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 1	0	7	7	7
Auchenorrhyncha	Cercopoidea	Aphrophoridae	sp. 2	0	1	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 1	4	0	4	4
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 2	0	5	5	5
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 3	0	2	2	2
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 4	1	2	3	3
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 5	0	11	11	11
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 6	0	2	2	2
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 7	0	1	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 8	3	0	3	3
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 9	1	0	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 10	2	1	3	3
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 11	1	0	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 12	0	1	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 13	0	1	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 14	0	1	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 15	9	0	9	9
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 16	0	7	7	7
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 17	1	0	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 18	1	0	1	1
Auchenorrhyncha	Cicadelloidea	Cicadellidae	sp. 19	1	0	1	1
Auchenorrhyncha	Fulgoroidea	Issidae	sp. 1	1	0	1	1
Heteroptera	Miroidea	Miridae	sp. 1	0	1	1	1
Heteroptera	Miroidea	Miridae	sp. 2	0	1	1	1
Heteroptera	Lygaeoidea	<i>incertae sedis</i>	sp. 1	0	1	1	1

**McAbee Sample**

Hymenoptera		Number	Suborder	Superfamily	Family	Subfamily	Group	Species	Quantity
1	Sympyta	Stictoidea							1
2959	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	A		sp. 1		1
375	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	A		sp. 1		1
536	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	A		sp. 2		1
2185	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	A		sp. 3		1
329	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	A		sp. 4		1
227	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	A		sp. 5		1
192	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	B		sp. 6		1
2524	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	B		sp. 7		1
2497	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	B		sp. 8		1
2186	Sympyta	Tenthredoidea	Tenthredinidae	Tenthredininae	C		sp. 9		1
248	Sympyta	Tenthredoidea	Tenthredinidae	Allantinae			sp. 10		2
244	Sympyta	Tenthredoidea	Tenthredinidae	Allantinae			sp. 10		1
2388	Sympyta	Tenthredoidea	Tenthredinidae	Allantinae			sp. 11		1
82	Sympyta	Tenthredoidea	Tenthredinidae	Allantinae			sp. 12		1
2828	Sympyta	Tenthredoidea	Tenthredinidae	Blephocampinae			sp. 13		1
2831	Sympyta	Tenthredoidea	Tenthredinidae	Nematinae			sp. 14		1
1966	Sympyta	Tenthredoidea	Tenthredinidae	Nematinae			sp. 15		1
2559	Sympyta	Tenthredoidea	Tenthredinidae	Nematinae			sp. 16		1
108	Sympyta	Tenthredoidea	Tenthredinidae	Nematinae or Susanna sp.			sp. 17		1
2000	Sympyta	Tenthredoidea	Tenthredinidae	incertae sedis			sp. 18		1
2374	Sympyta	Tenthredoidea	Tenthredinidae	incertae sedis			sp. 19		1
1975	Sympyta	Tenthredoidea	Cimbicidae	Cimbicinae			sp. 20		1
1139	Sympyta	Tenthredoidea	Cimbicidae	Cimbicinae			sp. 1		1
2418	Sympyta	Tenthredoidea	Cimbicidae	Coryninae or Pachyllost sp.			sp. 2		1
530	Sympyta	Tenthredoidea	Cimbicidae	incertae sedis			sp. 3		1
2990	Sympyta	Tenthredoidea	Cimbicidae	incertae sedis			sp. 4		2
228	Apocrita	Proctotropoidea	Diapriidae	incertae sedis			sp. 4		1
2902	Apocrita	Proctotropoidea	Proctotrupidae	incertae sedis			sp. 1		1
485	Apocrita	Proctotropoidea	Proctotrupidae	incertae sedis			sp. 2		1
720	Apocrita	Proctotropoidea	Petiolatae	Proctotrupidae			sp. 1		1



1988	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	D	sp. 3	D	sp. 4
2710	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	D	sp. 4	D	sp. 5
2110	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	D	sp. 5	D	sp. 6
349	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	D	sp. 6	D	sp. 7
2417	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	D	sp. 6	E	sp. 1
2499	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	E	sp. 2	F	sp. 2
140	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	E	sp. 2	F	sp. 3
605	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	F	sp. 1	F	sp. 4
2975	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	F	sp. 2	F	sp. 5
2109	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	F	sp. 3	F	sp. 6
2428	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	F	sp. 4	F	sp. 7
2551	Apocrita	Apocrita	Ichneumonoides Ichneumonidae <i>incertae sedis</i>	F	sp. 5	F	sp. 8
1963	Apocrita	Apocrita	Ichneumonoides Braconidae <i>incertae sedis</i>	sp. 1	sp. 1	sp. 2	sp. 1
419	Apocrita	Apocrita	Ichneumonoides Braconidae <i>incertae sedis</i>	sp. 1	sp. 2	sp. 2	sp. 1
507	Apocrita	Cynipoidea	Figitidae <i>incertae sedis</i>	sp. 1	sp. 1	sp. 1	sp. 1
225	Apocrita	Chrysididae	<i>incertae sedis incertae sedis</i>	sp. 1	sp. 1	sp. 1	sp. 1
592	Apocrita	Vespidae	Vespidae	sp. 1	sp. 2	sp. 1	sp. 1
1094	Apocrita	Vespidae	Vespidae	sp. 1	sp. 1	sp. 1	sp. 1
376	Apocrita	Vespidae	Formicidae	sp. 2	sp. 2	sp. 3	sp. 4
390	Apocrita	Vespidae	Formicidae	sp. 2	sp. 2	sp. 5	sp. 6
2292	Apocrita	Vespidae	Formicidae	sp. 3	sp. 4	Myrmeciinae?	Myrmeciinae
2111	Apocrita	Vespidae	Formicidae	sp. 4	sp. 5		
2832	Apocrita	Vespidae	Formicidae	sp. 5	sp. 6		
2996	Apocrita	Vespidae	Formicidae	sp. 6			
403	Apocrita	Sphecoidea	Sphecidae (s.l.) <i>incertae sedis</i>	sp. 1			
526	Apocrita	Sphecoidea	Sphecidae (s.l.) <i>incertae sedis</i>	sp. 2			
2401	Apocrita	Sphecoidea	Sphecidae (s.l.) <i>incertae sedis</i>	sp. 3			
2988	Apocrita	<i>incertae sedis</i>	<i>incertae sedis incertae sedis</i>	sp. 1			
383	Apocrita	<i>incertae sedis</i>	<i>incertae sedis incertae sedis</i>	sp. 2			
545	Apocrita	<i>incertae sedis</i>	<i>incertae sedis incertae sedis</i>	sp. 3			
418	Apocrita	<i>incertae sedis</i>	<i>incertae sedis incertae sedis</i>	sp. 4			
2994	Apocrita	<i>incertae sedis</i>	<i>incertae sedis incertae sedis</i>	sp. 5			

La Selva Sample



Apocrita	Chalcidoidea	Eulophidae	?	sp. 3	1
Apocrita	Chalcidoidea	Eupelmidae	?	sp. 1	1
Apocrita	Chalcidoidea	Eupelmidae	?	sp. 2	1
Apocrita	Chalcidoidea	Eupelmidae	?	sp. 3	1
Apocrita	Chalcidoidea	Eupelmidae	?	sp. 4	1
Apocrita	Chalcidoidea	Eupelmidae	?	sp. 5	1
Apocrita	Chalcidoidea	Eupelmidae	?	sp. 12	1
Apocrita	Chalcidoidea	Eurytomidae	Eurytoma	sp. 1	1
Apocrita	Chalcidoidea	Eurytomidae	Eurytoma	sp. 2	1
Apocrita	Chalcidoidea	Eurytomidae	Eurytoma	sp. 3	1
Apocrita	Chalcidoidea	Eurytomidae	Isosomodes	sp. 1	1
Apocrita	Chalcidoidea	Eurytomidae	Isosomodes	sp. 2	1
Apocrita	Chalcidoidea	Eurytomidae	Isosomodes	sp. 3	1
Apocrita	Chalcidoidea	Eurytomidae	Prodecatoma	sp. 1	1
Apocrita	Chalcidoidea	Eurytomidae	Prodecatoma	sp. 2	1
Apocrita	Chalcidoidea	Eurytomidae	Prodecatoma	sp. 3	1
Apocrita	Chalcidoidea	Eurytomidae	?	sp. 1	1
Apocrita	Chalcidoidea	Pteromalida	Cleonyminae	Amotura	1
Apocrita	Chalcidoidea	Pteromalida	Cleonyminae	sp. 1	1
Apocrita	Chalcidoidea	Pteromalida	Cleonyminae	Lyciscini	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	?	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	sp. 1	2
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	sp. 2	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	?	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	?	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	sp. 3	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	sp. 4	1
Apocrita	Chalcidoidea	Pteromalida	Pteromalinae	sp. 1	2
Apocrita	Chalcidoidea	Torymidae	Spalangia	Podagrion	1
Apocrita	Chalcidoidea	Torymidae	Monodontome	Podagrion	1
Apocrita	Chalcidoidea	Torymidae	Monodontome	Podagrion	1
Apocrita	Ichneumono	Ichneumon	Anomaloninae	Ophionellus	1
Apocrita	Ichneumono	Ichneumon	Banchinae	?	1
Apocrita	Ichneumono	Ichneumon	Banchinae	sp. 1	1
Apocrita	Ichneumono	Ichneumon	Banchinae	sp. 2	1
Apocrita	Ichneumono	Ichneumon	Banchinae	sp. 3	1
Apocrita	Ichneumono	Ichneumon	Brachycyrtinae	?	1
Apocrita	Ichneumono	Ichneumon	Campoleginae	?	1
Apocrita	Ichneumono	Ichneumon	Campoleginae	?	1
Apocrita	Ichneumono	Ichneumon	Campoleginae	sp. 2	1
Apocrita	Ichneumono	Ichneumon	Campoleginae	sp. 3	1
Apocrita	Ichneumono	Ichneumon	Cremastinae	?	1
Apocrita	Ichneumono	Ichneumon	Cremastinae	sp. 1	1
Apocrita	Ichneumono	Ichneumon	Cremastinae	sp. 2	1







Apocrita	Ichneumono Braconidae	Rogadinae	?	2
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Ichneumono Braconidae	Rogadinae	?	1
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	1
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	2
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	3
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	4
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	5
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	6
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	7
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Dissomphalus sp.	8
Apocrita	Chryssidoide Bethylidae	Pristocera	sp. 1	1
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Pristocera	sp. 2
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Pseudisobracci	sp. 1
Apocrita	Chryssidoide Bethylidae	Pristocerinae	Pseudisobracci	sp. 2
Apocrita	Chryssidoide Bethylidae	Epyrinae	Anisepyrus	sp. 1
Apocrita	Chryssidoide Bethylidae	Epyrinae	Bakerella	sp. 1
Apocrita	Chryssidoide Bethylidae	Epyrinae	Bakerella	sp. 2
Apocrita	Chryssidoide Bethylidae	Epyrinae	Epyris	sp. 1
Apocrita	Chryssidoide Bethylidae	Epyrinae	Epyris	sp. 2
Apocrita	Chryssidoide Bethylidae	Bethylinae	Prosirola	sp. 1
Apocrita	Chryssidoide Chrysidiidae	Bethylinae	Adelphe	sp. 1
Apocrita	Chryssidoide Chrysidiidae	Amiseginae	?	7

Apocrita	Chrysidoidei	Dryinidae	Dryininae	?	sp. 1
Apocrita	Chrysidoidei	Dryinidae	Gonatopodinae?	?	sp. 2
Apocrita	Chrysidoidei	Dryinidae	Tiphinae	sp. 3	sp. 3
Apocrita	Vespoidea	Tiphidae	Tiphinae	sp. 1	1
Apocrita	Vespoidea	Tiphidae	Tiphinae	sp. 2	2
Apocrita	Vespoidea	Mutillidae	Mutillinae	Ephuta	sp. 1
Apocrita	Vespoidea	Mutillidae	Mutillinae	Ephuta	sp. 2
Apocrita	Vespoidea	Rhopalosomatidae	Rhopalosoma	Rhopalosoma	sp. 1
Apocrita	Vespoidea	Pompilidae	Ceropalinae	Irenangelus	sp. 1
Apocrita	Vespoidea	Pompilidae	Pepsinae	Ageniella	sp. 1
Apocrita	Vespoidea	Pompilidae	Pepsinae	Ageniella	sp. 2
Apocrita	Vespoidea	Pompilidae	Pepsinae	Caliadurgus	sp. 1
Apocrita	Vespoidea	Pompilidae	Pepsinae	Genus?	1
Apocrita	Vespoidea	Pompilidae	Pompilinae	Anoplus	sp. 1
Apocrita	Vespoidea	Pompilidae	Pompilinae	Episyron	sp. 1
Apocrita	Vespoidea	Pompilidae	Pompilinae	Poecilopompil	sp. 1
Apocrita	Vespoidea	Pompilidae	Pompilinae	Priochilus	sp. 1
Apocrita	Vespoidea	Pompilidae	Pompilinae	Priochilus	sp. 2
Apocrita	Vespoidea	Pompilidae	Pompilinae	Priochilus	sp. 3
Apocrita	Vespoidea	Pompilidae	Pompilinae	Montezumia	sp. 1
Apocrita	Vespoidea	Vespidae	Eumeninae	Leipomeles	sp. 1
Apocrita	Vespoidea	Vespidae	Polistinae	Polypbia	sp. 1
Apocrita	Vespoidea	Vespidae	Polistinae	Pseudopolybiidae	sp. 1
Apocrita	Vespoidea	Vespidae	Polistinae	Chlorion	sp. 1
Apocrita	Vespoidea	Vespidae	Polistinae	Sphex	sp. 1
Apocrita	Vespoidea	Sphecidae	Sphecinae	Psemphredonin	Psenulus
Apocrita	Apoidea	Sphecidae	Sphecinae	Crabronidae	Stigmus
Apocrita	Apoidea	Crabronidae	Psemphredonin	Crabronidae	Larra
Apocrita	Apoidea	Crabronidae	Psemphredonin	Crabronidae	Liris
Apocrita	Apoidea	Crabronidae	Crabroninae	Crabronidae	Tachytes
Apocrita	Apoidea	Crabronidae	Crabroninae	Crabronidae	Trypoxylon
Apocrita	Apoidea	Crabronidae	Crabroninae	Crabronidae	Trypoxylon
Apocrita	Apoidea	Crabronidae	Crabroninae	Crabronidae	Trypoxylon



Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Megalomyrmex</i> sp.	1
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Megalomyrmex</i> sp.	2
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Megalomyrmex</i> sp.	2
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Nesomyrmex</i> sp.	1
Apocrita	Vespoidae	Formicidae	Myrmicinae	Atine A	2
Apocrita	Vespoidae	Formicidae	Myrmicinae	Atine B	1
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Pheidole</i> sp.	1
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Pheidole</i> sp.	1
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Pheidole</i> sp.	1
Apocrita	Vespoidae	Formicidae	Myrmicinae	<i>Pheidole</i> sp.	1

**Harvard Forest Sample**

Hymenoptera		Suborder	Superfamily	Family	Subfamily	Genus	Species	06/26/09	08/17/08	Sum
Sympyta		Tenthredoidea	Tenthredinidae	Allantinae	Allantinae	?	sp. 1	0	1	1
Sympyta		Tenthredoidea	Tenthredinidae	Allantinae	Blennocampinae	?	sp. 2	0	2	2
Sympyta		Tenthredoidea	Tenthredinidae	Nematinae	Nematinae	?	sp. 1	1	0	1
Sympyta		Tenthredoidea	Tenthredinidae	Nematinae	Nematinae	?	sp. 1	3	9	12
Sympyta		Tenthredoidea	Tenthredinidae	Nematinae	Nematinae	?	sp. 2	0	11	11
Sympyta		Tenthredoidea	Tenthredinidae	Nematinae	Nematinae	?	sp. 3	1	0	1
Sympyta		Tenthredoidea	Tenthredinidae	Nematinae	Nematinae	?	sp. 4	2	0	2
Sympyta		Tenthredoidea	Tenthredinidae	Nematinae	Nematinae	?	sp. 1	1	0	1
Apocrita		Eanoidea	Evaniiidae	Hypria	Hypria	?	sp. 1	0	1	1
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 1	1	0	1
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 2	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 3	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 4	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 5	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 6	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 7	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 8	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 9	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 10	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 11	0	1	1
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 12	11	0	11
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 13	0	5	5
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 14	0	1	1
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 15	0	2	2
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 16	0	1	1
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 17	0	2	2
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 18	0	1	1
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 19	0	2	2
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 20	0	0	0
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 21	0	2	2
Apocrita		Proctotropoidea	Diapriidae	?	?	?	sp. 22	0	1	1









*Enicospilus*











**McAbee Sample**

Diptera	number	Suborder	Family	Genus	Species	Quant.
	1991	Nematocera	Tipulidae		sp. 1	1
	2460	Nematocera	Tipulidae		sp. 2	2
	1933	Nematocera	Tipulidae		sp. 2	
	2154	Nematocera	Tipulidae		sp. 3	1
	46	Nematocera	Tipulidae		sp. 4	2
	2986	Nematocera	Tipulidae		sp. 4	
	1134	Nematocera	Tipulidae		sp. 5	2
	1350	Nematocera	Tipulidae		sp. 5	
	2372	Nematocera	Limoniiidae		sp. 1	1
	2405	Nematocera	Limoniiidae		sp. 2	1
	288	Nematocera	Limoniiidae		sp. 3	1
	2160	Nematocera	Cylindrotomidae		sp. 1	1
	2536	Nematocera	Cylindrotomidae		sp. 2	1
	673	Nematocera	Tipulomorpha <i>in. sed.</i>		sp. 1	1
	1979	Nematocera	Mycetophilidae		sp. 1	1
	2219	Nematocera	Mycetophilidae		sp. 2	1
	2390	Nematocera	Mycetophilidae		sp. 3	1
	2021	Nematocera	Mycetophilidae		sp. 4	2
	399	Nematocera	Mycetophilidae		sp. 4	
	1124	Nematocera	Mycetophilidae		sp. 5	1
	2717	Nematocera	Mycetophilidae		sp. 6	1
	521	Nematocera	Mycetophilidae		sp. 7	1
	506	Nematocera	Mycetophilidae		sp. 8	1
	2555	Nematocera	Mycetophilidae		sp. 9	1
	617	Nematocera	Mycetophilidae		sp. 10	1
	694	Nematocera	Trichoceridae		sp. 1	1
	1237	Nematocera	Trichoceridae?		sp. 2	1
	2995	Brachycera	Syrphidae		sp. 1	1
	1210	Brachycera	Syrphidae		sp. 2	1
	2777	Brachycera	Syrphidae		sp. 3	2
	2578	Brachycera	Syrphidae		sp. 3	

2276	Brachycera	Syrphidae	sp. 4
1064	Brachycera	Syrphidae	sp. 5
1982	Brachycera	Syrphidae	sp. 6
575	Brachycera	<i>incertae sedis</i>	sp. 1
135	Brachycera	<i>incertae sedis</i>	sp. 2
45	Brachycera	<i>incertae sedis</i>	sp. 2
1091	Brachycera	<i>incertae sedis</i>	sp. 3
184	Brachycera	<i>incertae sedis</i>	sp. 4
588	Brachycera	<i>incertae sedis</i>	sp. 5
1247	Brachycera	<i>incertae sedis</i>	sp. 6
1092	<i>incertae sedi:</i>	<i>incertae sedis</i>	sp. 1
207	<i>incertae sedi:</i>	<i>incertae sedis</i>	sp. 2
2600	<i>incertae sedi:</i>	<i>incertae sedis</i>	sp. 3
2826	<i>incertae sedi:</i>	<i>incertae sedis</i>	sp. 3

**La Selva Sample**

Diptera	Suborder	Family	Species	Trap								ARB total
				T1M13	T1W2	T2W2	T3W2	T4W2	T5W2	T6W2	HTW2	
Nematocera Tipulidae	sp. 1		1	1	2	1	2	2	2	2	9	1
Nematocera Tipulidae	sp. 2										1	1
Nematocera Tipulidae	sp. 3		2	1	3	1	1	1	4	1	12	12
Nematocera Tipulidae	sp. 4		5	4					6	1	20	20
Nematocera Tipulidae	sp. 5								1	1	2	2
Nematocera Tipulidae	sp. 6		2								6	6
Nematocera Tipulidae	sp. 7		1			1					1	1
Nematocera Tipulidae	sp. 8		4	1							18	18
Nematocera Tipulidae	sp. 9		3	1			2		3	5	1	3
Nematocera Tipulidae	sp. 10		1			2	1	1	1	2	2	2
Nematocera Tipulidae	sp. 11		2			2	1	1	4	2	1	1
Nematocera Tipulidae	sp. 12										6	6
Nematocera Tipulidae	sp. 13						1				3	3
Nematocera Tipulidae	sp. 14										1	1
Nematocera Tipulidae	sp. 15		1			1	1				33	33
Nematocera Tipulidae	sp. 16										1	1
Nematocera Tipulidae	sp. 17										2	2
Nematocera Tipulidae	sp. 18		2								1	1
Nematocera Tipulidae	sp. 19										5	5
Nematocera Tipulidae	sp. 20										1	1
Nematocera Tipulidae	sp. 21						1				1	1
Nematocera Tipulidae	sp. 22							3			6	6
Nematocera Tipulidae	sp. 23		5				10				1	1
Nematocera Tipulidae	sp. 24					4	2				1	1
Nematocera Tipulidae	sp. 25		1								3	3
Nematocera Tipulidae	sp. 26					1					1	1
Nematocera Tipulidae	sp. 27								1	1	1	1
Nematocera Tipulidae	sp. 28										1	1
Nematocera Tipulidae	sp. 29										1	1
Nematocera Tipulidae	sp. 30										1	1
Nematocera Tipulidae	sp. 31										1	1

Nematocera	Tipulidae	sp. 32	1
Nematocera	Tipulidae	sp. 33	1
Nematocera	Tipulidae	sp. 34	1
Nematocera	Tipulidae	sp. 35	1
Nematocera	Tipulidae	sp. 36	1
Nematocera	Tipulidae	sp. 37	1
Nematocera	Tipulidae	sp. 38	1
Nematocera	Tipulidae	sp. 39	1
Nematocera	Tipulidae	sp. 40	1
Nematocera	Tipulidae	sp. 41	1
Nematocera	Tipulidae	sp. 42	1
Nematocera	Tipulidae	sp. 43	1
Nematocera	Tipulidae	sp. 44	1
Nematocera	Tipulidae	sp. 45	1
Nematocera	Mycetophilidae	sp. 1	1
Nematocera	Mycetophilidae	sp. 2	1
Nematocera	Mycetophilidae	sp. 3	1
Nematocera	Mycetophilidae	sp. 4	1
Nematocera	Mycetophilidae	sp. 5	1
Nematocera	Mycetophilidae	sp. 6	1
Nematocera	Mycetophilidae	sp. 7	3
Nematocera	Mycetophilidae	sp. 8	1
Nematocera	Mycetophilidae	sp. 9	2
Nematocera	Mycetophilidae	sp. 10	1
Nematocera	Mycetophilidae	sp. 11	1
Nematocera	Mycetophilidae	sp. 12	1
Nematocera	Mycetophilidae	sp. 13	1
Nematocera	Mycetophilidae	sp. 14	1
Nematocera	Mycetophilidae	sp. 15	1
Nematocera	Mycetophilidae	sp. 16	1
Nematocera	Mycetophilidae	sp. 17	1
Nematocera	Mycetophilidae	sp. 18	8
Nematocera	Mycetophilidae	sp. 19	7
Nematocera	Mycetophilidae	sp. 20	4
Nematocera	Mycetophilidae	sp. 21	3

Nematocera	Mycetophilidae	sp. 22	3	4	1	1	1	1	17
Nematocera	Mycetophilidae	sp. 23							
Nematocera	Mycetophilidae	sp. 24							
Nematocera	Mycetophilidae	sp. 25							
Nematocera	Mycetophilidae	sp. 26							
Nematocera	Mycetophilidae	sp. 27							
Brachycera	Tabanidae	sp. 1	1	3	1	1	1	1	1
Brachycera	Tabanidae	sp. 2	1	1	1	1	1	1	1
Brachycera	Tabanidae	sp. 3	1	1	1	1	1	1	1
Brachycera	Tabanidae	sp. 4	1	1	1	1	1	1	1
Brachycera	Tabanidae	sp. 5	1	1	1	1	1	1	1
Brachycera	Tabanidae	sp. 6	1	2	1	1	1	1	1
Brachycera	Tabanidae	sp. 7	1	3	1	1	1	1	1
Brachycera	Tabanidae	sp. 8	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 1	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 2	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 3	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 4	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 5	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 6	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 7	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 8	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 9	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 10	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 11	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 12	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 13	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 14	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 15	2	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 16	4	3	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 17	4	3	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 18	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 19	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 20	1	1	1	1	1	1	1
Brachycera	Stratiomyidae	sp. 21	1	1	1	1	1	1	1







Brachycera	Sarcophagidae sp.	3	1	4	15
Brachycera	Sarcophagidae sp.	4	11	6	6
Brachycera	Sarcophagidae sp.	5	3	8	8
Brachycera	Sarcophagidae sp.	6	5	2	2
Brachycera	Sarcophagidae sp.	7	2	26	26
Brachycera	Sarcophagidae sp.	8	5	4	4
Brachycera	Sarcophagidae sp.	9	2	1	1
Brachycera	Sarcophagidae sp.	10	1	1	1
Brachycera	Sarcophagidae sp.	11	1	1	1
Brachycera	Sarcophagidae sp.	12	1	1	1
Brachycera	Sarcophagidae sp.	13	1	1	1
Brachycera	Sarcophagidae sp.	14	2	5	5
Brachycera	Sarcophagidae sp.	15	1	2	2
Brachycera	Sarcophagidae sp.	16	1	2	2
Brachycera	Sarcophagidae sp.	17	1	1	1
Brachycera	Sarcophagidae sp.	18	1	1	1
Brachycera	Sarcophagidae sp.	19	1	1	1
Brachycera	Sarcophagidae sp.	20	1	1	1
Brachycera	Sarcophagidae sp.	21	1	1	1
Brachycera	Sarcophagidae sp.	22	1	1	1
Brachycera	Tachinidae sp.	1	1	1	1
Brachycera	Muscoid inc. se sp.	1	8	6	6
Brachycera	Muscoid inc. se sp.	2	1	7	7
Brachycera	Muscoid inc. se sp.	3	1	2	2
Brachycera	Muscoid inc. se sp.	4	3	3	3
Brachycera	Muscoid inc. se sp.	5	8	12	12
Brachycera	Muscoid inc. se sp.	6	2	1	1
Brachycera	Muscoid inc. se sp.	7	1	1	1
Brachycera	Muscoid inc. se sp.	8	1	1	1
Brachycera	Muscoid inc. se sp.	9	2	2	2
Brachycera	Muscoid inc. se sp.	10	2	1	1
Brachycera	Muscoid inc. se sp.	11	1	1	1
Brachycera	Muscoid inc. se sp.	12	1	1	1
Brachycera	Muscoid inc. se sp.	13	1	1	1
Brachycera	Muscoid inc. se sp.	14	1	2	2

Brachycera	Muscoid <i>inc.</i> se sp. 15		2		2		1					
Brachycera	Muscoid <i>inc.</i> se sp. 16											
Brachycera	Muscoid <i>inc.</i> se sp. 17		1		1							
Brachycera	<i>incertae sedis</i> sp. 1		1	2								
			2	1	3							

**Harvard Forest Sample**

Diptera	Suborder	Family	Species	06/25/05	08/16/04	total
Nematocera	Tipulidae	sp. 1	1	1	0	1
Nematocera	Tipulidae	sp. 2	1	1	0	1
Nematocera	Tipulidae	sp. 3	1	1	0	1
Nematocera	Tipulidae	sp. 4	1	8	9	18
Nematocera	Tipulidae	sp. 5	1	0	1	1
Nematocera	Tipulidae	sp. 6	1	12	13	26
Nematocera	Tipulidae	sp. 7	5	0	5	10
Nematocera	Tipulidae	sp. 8	0	23	23	46
Nematocera	Tipulidae	sp. 9	0	2	2	4
Nematocera	Tipulidae	sp. 10	0	2	2	4
Nematocera	Tipulidae	sp. 11	0	2	2	4
Nematocera	Tipulidae	sp. 12	0	2	2	4
Nematocera	Tipulidae	sp. 13	0	1	1	2
Nematocera	Tipulidae	sp. 14	0	1	1	2
Nematocera	Tipulidae	sp. 15	0	1	1	2
Nematocera	Tipulidae	sp. 16	0	1	1	2
Nematocera	Tipulidae	sp. 17	0	3	3	6
Nematocera	Tipulidae	sp. 18	0	1	1	2
Nematocera	Tipulidae	sp. 19	0	1	1	2
Nematocera	Mycetophilidae	sp. 1	1	0	1	1
Nematocera	Mycetophilidae	sp. 2	3	6	9	18
Nematocera	Mycetophilidae	sp. 3	3	14	17	34
Nematocera	Mycetophilidae	sp. 4	0	3	3	6
Nematocera	Mycetophilidae	sp. 5	0	2	2	4
Nematocera	Mycetophilidae	sp. 6	1	2	3	5
Nematocera	Mycetophilidae	sp. 7	0	15	19	34
Nematocera	Mycetophilidae	sp. 8	8	9	9	26
Nematocera	Mycetophilidae	sp. 9	0	4	4	4
Nematocera	Mycetophilidae	sp. 10	0	3	3	6
Nematocera	Mycetophilidae	sp. 11	0	0	0	0
Nematocera	Mycetophilidae	sp. 12	0	3	3	6

Nematocera	Mycetophilidae	sp. 13	5
Nematocera	Mycetophilidae	sp. 14	2
Nematocera	Mycetophilidae	sp. 15	9
Nematocera	Mycetophilidae	sp. 16	24
Nematocera	Mycetophilidae	sp. 17	11
Nematocera	Mycetophilidae	sp. 18	16
Nematocera	Mycetophilidae	sp. 19	1
Nematocera	Mycetophilidae	sp. 20	1
Nematocera	Mycetophilidae	sp. 21	1
Nematocera	Mycetophilidae	sp. 22	1
Nematocera	Mycetophilidae	sp. 23	1
Nematocera	Mycetophilidae	sp. 24	1
Nematocera	Mycetophilidae	sp. 25	1
Nematocera	Mycetophilidae	sp. 26	1
Nematocera	Mycetophilidae	sp. 27	8
Nematocera	Mycetophilidae	sp. 28	0
Nematocera	Mycetophilidae	sp. 29	0
Nematocera	Mycetophilidae	sp. 30	0
Brachycera	Rhagionidae	sp. 1	0
Brachycera	Tabanidae	sp. 1	1
Brachycera	Tabanidae	sp. 2	4
Brachycera	Tabanidae	sp. 3	0
Brachycera	Tabanidae	sp. 4	2
Brachycera	Tabanidae	sp. 5	0
Brachycera	Stratiomyidae	sp. 1	1
Brachycera	Stratiomyidae	sp. 2	3
Brachycera	Stratiomyidae	sp. 3	2
Brachycera	Theridiidae	sp. 1	1
Brachycera	Empididae	sp. 1	4
Brachycera	Empididae	sp. 2	1
Brachycera	Dolichopodidae	sp. 1	22
Brachycera	Dolichopodidae	sp. 2	5
Brachycera	Dolichopodidae	sp. 3	98
Brachycera	Dolichopodidae	sp. 4	3
Brachycera	Dolichopodidae	sp. 5	2

Brachycera	Dolichopodidae	sp. 6	2
Brachycera	Dolichopodidae	sp. 7	11
Brachycera	Dolichopodidae	sp. 8	1
Brachycera	Dolichopodidae	sp. 9	0
Brachycera	Dolichopodidae	sp. 10	10
Brachycera	Dolichopodidae	sp. 11	1
Brachycera	Dolichopodidae	sp. 12	1
Brachycera	Dolichopodidae	sp. 13	2
Brachycera	Dolichopodidae	sp. 14	0
Brachycera	Dolichopodidae	sp. 15	0
Brachycera	Dolichopodidae	sp. 16	3
Brachycera	Dolichopodidae	sp. 17	6
Brachycera	Dolichopodidae	sp. 18	6
Brachycera	Dolichopodidae	sp. 19	2
Brachycera	Asilidae	sp. 1	6
Brachycera	Asilidae	sp. 2	5
Brachycera	Asilidae	sp. 3	12
Brachycera	Asilidae	sp. 4	0
Brachycera	Asilidae	sp. 5	0
Brachycera	Asilidae	sp. 6	0
Brachycera	Pipunculidae	sp. 1	0
Brachycera	Pipunculidae	sp. 2	2
Brachycera	Pipunculidae	sp. 3	1
Brachycera	Syrphidae	sp. 1	4
Brachycera	Syrphidae	sp. 2	3
Brachycera	Syrphidae	sp. 3	1
Brachycera	Syrphidae	sp. 4	2
Brachycera	Syrphidae	sp. 5	3
Brachycera	Syrphidae	sp. 6	3
Brachycera	Syrphidae	sp. 7	8
Brachycera	Syrphidae	sp. 8	0
Brachycera	Syrphidae	sp. 9	1
Brachycera	Syrphidae	sp. 10	1
Brachycera	Syrphidae	sp. 11	1
Brachycera	Syrphidae	sp. 12	0



Brachycera	Sarcophagidae	sp. 10																	
Brachycera	Sarcophagidae	sp. 11																	
Brachycera	Sarcophagidae	sp. 12																	
Brachycera	Sarcophagidae	sp. 13																	
Brachycera	Sarcophagidae	sp. 14																	
Brachycera	Sarcophagidae	sp. 15																	
Brachycera	Sarcophagidae	sp. 16																	
Brachycera	Sarcophagidae	sp. 17																	
Brachycera	Sarcophagidae	sp. 18																	
Brachycera	Sarcophagidae	sp. 19																	
Brachycera	Sarcophagidae	sp. 20																	
Brachycera	Sarcophagidae	sp. 21																	
Brachycera	Sarcophagidae	sp. 22																	
Brachycera	Sarcophagidae	sp. 23																	
Brachycera	Sarcophagidae	sp. 24																	
Brachycera	Sarcophagidae	sp. 25																	
Brachycera	Sarcophagidae	sp. 26																	
Brachycera	Sarcophagidae	sp. 27																	
Brachycera	Sarcophagidae	sp. 28																	
Brachycera	Sarcophagidae	sp. 29																	
Brachycera	Sarcophagidae	sp. 30																	
Brachycera	Sarcophagidae	sp. 31																	
Brachycera	Sarcophagidae	sp. 32																	
Brachycera	Sarcophagidae	sp. 33																	
Brachycera	Tachinidae	sp. 1																	
Brachycera	Tachinidae	sp. 2																	
Brachycera	Tachinidae	sp. 3																	
Brachycera	Tachinidae	sp. 4																	
Brachycera	Tachinidae	sp. 5																	
Brachycera	Tachinidae	sp. 6																	
Brachycera	Tachinidae	sp. 7																	
Brachycera	Tachinidae	sp. 8																	
Brachycera	Tachinidae	sp. 9																	
Brachycera	Tachinidae	sp. 10																	
Brachycera	Tachinidae	sp. 11																	

Brachycera	Tachinidae	sp. 12	0	5
Brachycera	Tachinidae	sp. 13	0	1
Brachycera	Tachinidae	sp. 14	0	1
Brachycera	Tachinidae	sp. 15	0	1
Brachycera	Tachinidae	sp. 16	0	1
Brachycera	Tachinidae	sp. 17	0	1
Brachycera	Tachinidae	sp. 18	0	2

**McAbee Sample**

**Mecoptera**

Number	Suborder	Family	Genus	Species	Quant.
2026		Bittacidae		sp.1	1
1127		Bittacidae		sp.2	2
2991		Bittacidae		sp.2	1
1924		Bittacidae		sp.3	1
2500		Bittacidae		sp.4	1
2837		Dinopano	Dinokane	sp.1	3
299		Dinopano	Dinokane	sp.1	3
2861		Dinopano	Dinokane	sp.1	3
2227		Dinopano	Dinokane	sp.2	3
627		Dinopano	Dinokane	sp.2	3
628		Dinopano	Dinokane	sp.2	7
54		New Family		sp.1	1
424		New Family		sp.1	1
1745		New Family		sp.1	1
2188		New Family		sp.1	1
2273		New Family		sp.1	1
2990		New Family		sp.1	1
198		New Family		sp.1	1
2772		Panorpidae	Panopora	sp.1	1

**Trichoptera**

53	<i>incertae sedis</i>	sp. 1	9
572	<i>incertae sedis</i>	sp. 1	
1123	<i>incertae sedis</i>	sp. 1	
2833	<i>incertae sedis</i>	sp. 1	
2954	<i>incertae sedis</i>	sp. 1	
1126	<i>incertae sedis</i>	sp. 1	
2100	<i>incertae sedis</i>	sp. 1	
2392	<i>incertae sedis</i>	sp. 1	
2666	<i>incertae sedis</i>	sp. 1	
328	<i>incertae sedis</i>	sp. 2	1

490	<i>incertae sedis</i>	sp. 3	<b>3</b>
450	<i>incertae sedis</i>	sp. 3	
1922	<i>incertae sedis</i>	sp. 3	
646	<i>incertae sedis</i>	sp. 4	<b>1</b>
1163	<i>incertae sedis</i>	sp. 5	<b>2</b>
2825	<i>incertae sedis</i>	sp. 5	
2224	<i>incertae sedis</i>	sp. 6	<b>1</b>
1926	<i>incertae sedis</i>	sp. 7	<b>1</b>

### **Neuroptera**

25	Osmyliidae	sp.1	<b>2</b>
1220	Osmyliidae	sp.1	
159	Osmyliidae	sp.2	<b>1</b>
2851	Osmyliidae	sp.3	<b>1</b>
651	Hemerobiidae	sp.1	<b>1</b>
1987	Hemerobiidae	sp.2	<b>1</b>
2716	Hemerobiidae	sp.3	<b>1</b>
2705	Chrysopidae	sp.1	<b>3</b>
1121	Chrysopidae	sp.1	
2763	Chrysopidae	sp.1	
983	Chrysopidae	sp.2	<b>1</b>
243	Chrysopidae	sp.3	<b>2</b>
2190	Chrysopidae	sp.3	
2189	Chrysopidae	sp.4	<b>1</b>
2790	<i>incertae sedis</i>	sp.1	<b>1</b>

### **Orthoptera**

3003	Ensifera	Tettigoniid <i>in. sedis</i> sp. 1	<b>2</b>
327	Ensifera	Tettigoniid <i>in. sedis</i> sp. 1	
629	Ensifera	Prophalai <i>in. sedis</i> sp. 1	<b>1</b>
623	Ensifera	Prophalai <i>in. sedis</i> sp. 2	<b>1</b>
265	Caelifera	<i>incertae sin. sedis</i> sp. 1	<b>1</b>
679	Caelifera	<i>incertae sin. sedis</i> sp. 2	<b>1</b>

### **Isoptera**

664	Hodoterm <i>Ulmeriell</i> sp. 1	<b>3</b>
633	Hodoterm <i>Ulmeriell</i> sp. 1	
2465	Hodoterm <i>Ulmeriell</i> sp. 1	
<b>Odonata</b>		
2801	Zygoptera Megapodagrionidae sp. 1	<b>1</b>
423	Zygoptera <i>incertae sedis</i> sp. 1	<b>1</b>
105	Anisoptera Aeshnidae sp. 1	<b>1</b>

**La Selva Sample**

Suborder	Family	Species	Trap							ARB	total
			T1M13	T1W2	T2W2	T3W2	T4W2	T5W2	T6W2		
<b>Trichoptera</b>											
		<i>incertae sea</i> sp. 1					1			1	
		<i>incertae sea</i> sp. 2						1		1	
		<i>incertae sea</i> sp. 3							1		
<b>Blattodea</b>											
		<i>Incertae sec</i> sp. 1						1		1	
<b>Neuroptera</b>											
		Chrysopidae sp. 1				1				1	
		Hemerobiidae sp. 1			2					2	
<b>Ephemeroptera</b>											
		<i>Incertae sec</i> sp. 1				1				1	
<b>Psocoptera</b>											
		<i>incertae sea</i> sp. 1					1			1	
		<i>incertae sea</i> sp. 2						1		1	
		<i>incertae sea</i> sp. 3							2	3	
		<i>incertae sea</i> sp. 4							2	2	
		<i>incertae sea</i> sp. 5					1			2	
		<i>incertae sea</i> sp. 6							2	2	
		<i>incertae sea</i> sp. 7							1	2	
<b>Orthoptera</b>											
	Caelifera	Tetrigidae	sp. 1							2	
	Caelifera	Tetrigidae	sp. 2		1					5	
	Caelifera	Tetrigidae	sp. 3	1							1
	Caelifera	<i>incertae sea</i>	sp. 1	1							1
	Caelifera	<i>incertae sea</i>	sp. 2								

Caelifera	<i>incertae sec</i>	sp. 3	1	1	1	1	1	1
Caelifera	<i>incertae sec</i>	sp. 4	1	1	1	1	1	1
Caelifera	<i>incertae sec</i>	sp. 5	2	2	1	1	1	1
Caelifera	<i>incertae sec</i>	sp. 6	1	1	1	1	1	1
Caelifera	<i>incertae sec</i>	sp. 7	1	1	1	1	1	1
Grylidae	Grylidae	sp. 1	1	1	1	1	1	1
Grylidae	Grylidae	sp. 2	1	1	1	1	1	1
Grylidae	Grylidae	sp. 3	1	1	1	1	1	1
Grylidae	Grylidae	sp. 4	1	1	1	1	1	1
Grylidae	Grylidae	sp. 5	5	5	1	1	1	1
Grylidae	Grylidae	sp. 6	1	1	1	1	1	1
Grylidae	Grylidae	sp. 7	1	1	1	1	1	1
Grylidae	Grylidae	sp. 8	1	1	1	1	1	1
Grylidae	Grylidae	sp. 9	1	1	1	1	1	1
Tettigoniidae	Tettigoniidae	sp. 1	1	1	1	1	1	1
Tettigoniidae	Tettigoniidae	sp. 2	1	1	1	1	1	1
Tettigoniidae	Tettigoniidae	sp. 3	1	1	1	1	1	1
Tettigoniidae	Tettigoniidae	sp. 4	1	1	1	1	1	1
<b>Isoptera</b>								
	<i>Incptae sec</i>	sp. 1	1	1	1	1	1	1
<b>Mantodea</b>								
	<i>Incptae sec</i>	sp. 1	1	1	1	1	3	3
	<i>Incptae sec</i>	sp. 2	1	1	1	1	1	1
<b>Dermoptera</b>								
	<i>Incptae sec</i>	sp. 1	1	1	1	1	1	1

**Harvard Forest Sample**

Suborder	Family	Species	06/25/05	08/16/04	total
<b>Trichoptera</b>					
	Glossosomatic sp. 1	0	10	10	10
	Glossosomatic sp. 2	3	0	3	3
	Glossosomatic sp. 3	1	0	1	1
	Glossosomatic sp. 4	3	0	3	3
	Helicopsychid sp. 1	1	0	1	1
	Helicopsychid sp. 2	1	0	1	1
	Helicopsychid sp. 3	1	0	1	1
	Leptoceridae sp. 1	0	1	1	1
	Leptoceridae sp. 2	1	0	1	1
	Hydroptilidae sp. 1	11	0	11	11
	Hydroptilidae sp. 2	1	0	1	1
	Polycentropidae sp. 1	0	7	7	7
<b>Blattodea</b>					
	<i>incertae sedis</i> sp. 1	0	1	1	1
<b>Neuroptera</b>					
	Sisyridae sp. 1	2	2	4	4
	Hemerobiidae sp. 1	1	0	1	1
<b>Psocoptera</b>					
	<i>incertae sedis</i> sp. 1	1	0	1	1
	<i>incertae sedis</i> sp. 2	2	0	2	2
	<i>incertae sedis</i> sp. 3	2	0	2	2
	<i>incertae sedis</i> sp. 4	1	0	1	1
<b>Orthoptera</b>					
Caelifera	Acrididae	sp. 1	0	17	17

**Odonata**

Zygoptera	Coenagrionida sp. 1	0	1
Zygoptera	Coenagrionida sp. 2	3	0
Zygoptera	Coenagrionida sp. 3	3	0
Zygoptera	Lestidae sp. 1	0	4
Zygoptera	Lestidae sp. 2	1	0
Zygoptera	Lestidae sp. 3	0	1
Anisoptera	Libellulidae sp. 1	0	1

1	3	3	4	1	1	1
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