

**Table 1-** Relative and absolute abundances (in brackets) of primary parasitoids and hyperparasitoids (Hymenoptera) emerging from mummified *B. brassicae*, *L. pseudobrassicae*, and *M. persicae*. Uberlândia-MG, Brazil, August 2005–March 2006 and October 2006–January 2008.

Hymenoptera emerged		Species of host aphid		
		<i>B. brassicae</i>	<i>L. pseudobrassicae</i>	<i>M. persicae</i>
Primary Parasitoids	<i>Aphelinus</i> sp.	0.04% (2)	0.33% (1)	0% (0)
	<i>Diaeretiella rapae</i>	8.61% (389)	13.16% (40)	15.75% (46)
	<b>Total parasitoids</b>	<b>8.65% (391)</b>	<b>13.49 (41)</b>	<b>15.75% (46)</b>
Secondary parasitoids (Hyperparasitoids)	<i>Alloxysta fuscicornis</i>	72.30% (3.267)	43.75% (133)	38.01% (111)
	<i>Dendrocerus</i> spp.	0.04% (2)	0.33% (1)	0.34% (1)
	<i>Pachyneuron</i> spp.	2.79% (126)	10.53% (32)	11.99% (35)
	<i>Tetrastichus</i> sp.	0.02% (1)	0% (0)	0% (0)
	<i>Syrphophagus</i> spp.	16.20% (732)	31.91% (97)	33.90% (99)
	<b>Total hyperparasitoids</b>	<b>91.35% (4.128)</b>	<b>86.52% (263)</b>	<b>84.24% (246)</b>

**Table 2** *Brevicoryne brassicae* abundance: hurdle models. Two complementary models were used: a logistic model to test for presence/absence and a lognormal model to assess the type of abundance of count data. In both models the effects of leaf position were assessed: [M leaf = Aphid density on middle vs upper leaves], [B leaf = Aphid density on bottom vs upper leaves], average temperature (Av. temp), accumulated precipitation (PPT), and the interaction between average temperature and PPT (Av. temp × PPT). Statistically significant results are indicated in bold text (< 0.05).

	LOGISTIC MODEL					LOGNORMAL MODEL				
	X	±	SE	Z	Pvalue	X	±	SE	T	Pvalue
Intercept	-13.62	±	5.54	-2.46	<b>0.014</b>	-16.47	±	3.76	-4.38	<b>0.000</b>
M leaf	0.35	±	0.40	0.86	0.392	0.24	±	0.24	1.00	0.317
B leaf	0.17	±	0.40	0.43	0.671	-0.02	±	0.24	-0.10	0.920
Av. temp	0.68	±	0.25	2.77	<b>0.006</b>	0.87	±	0.16	5.42	<b>0.000</b>
PPT	0.26	±	0.12	2.13	<b>0.033</b>	0.19	±	0.09	2.06	<b>0.043</b>
Av. temp×PPT	-0.01	±	0.01	-2.16	<b>0.031</b>	-0.01	±	0.00	-2.11	<b>0.038</b>

**Table 3** *Myzus persicae* abundance: hurdle models. Two complementary models were used: a logistic model to test for presence/absence and a lognormal model to assess the type of abundance of count data. In both models the effects of leaf position were assessed: [M leaf = Aphid density on middle vs upper leaves], [B leaf = Aphid density on bottom vs upper leaves], average temperature (Av. temp), accumulated precipitation (PPT), and the interaction between average temperature and PPT (Av. temp  $\times$  PPT). Statistically significant results are indicated in bold text ( $< 0.05$ ).

	LOGISTIC MODEL					LOGNORMAL MODEL				
	X	$\pm$	SE	Z	Pvalue	X	$\pm$	SE	t	Pvalue
Intercept	-10.39	$\pm$	3.93	-2.65	<b>0.008</b>	-6.28	$\pm$	2.24	-2.79	<b>0.006</b>
M leaf	2.32	$\pm$	0.38	6.16	<b>0.000</b>	1.37	$\pm$	0.24	5.60	<b>0.000</b>
B leaf	3.19	$\pm$	0.43	7.44	<b>0.000</b>	1.69	$\pm$	0.24	7.02	<b>0.000</b>
Av. temp	0.43	$\pm$	0.17	2.55	<b>0.011</b>	0.33	$\pm$	0.10	3.45	<b>0.000</b>
PPT	0.22	$\pm$	0.10	2.28	<b>0.023</b>	0.05	$\pm$	0.06	0.89	0.376
Av. temp $\times$ PPT	-0.01	$\pm$	0.00	-2.33	<b>0.020</b>	-0.00	$\pm$	0.00	-0.86	0.390

**Table 4** *Lipaphis pseudobrassicae* abundance: hurdle models. Two complementary models were used: a logistic model to test for presence/absence and a lognormal model to assess the type of abundance of count data. In both models the effects of leaf position were assessed: [M leaf = Aphid density on middle vs upper leaves], [B leaf = Aphid density on bottom vs upper leaves], average temperature (Av. temp), accumulated precipitation (PPT), and the interaction between average temperature and PPT (Av. temp  $\times$  PPT). Statistically significant results are indicated in bold text ( $< 0.05$ ).

	LOGISTIC MODEL					LOGNORMAL MODEL				
	X	$\pm$	SE	Z	Pvalue	X	$\pm$	SE	T	Pvalue
Intercept	8.68	$\pm$	4.55	1.91	0.056	-0.51	$\pm$	2.94	-0.18	0.862
M leaf	1.36	$\pm$	0.48	2.82	<b>0.005</b>	2.14	$\pm$	0.22	9.95	<b>0.000</b>
B leaf	1.64	$\pm$	0.51	3.20	<b>0.001</b>	3.25	$\pm$	0.21	15.29	<b>0.000</b>
Av. temp	-0.29	$\pm$	0.19	-1.48	0.139	0.13	$\pm$	0.13	0.99	0.320
PPT	0.03	$\pm$	0.11	0.23	0.819	0.13	$\pm$	0.07	1.75	0.083
Av. temp $\times$ PPT	-0.00	$\pm$	0.00	-0.31	0.755	-0.01	$\pm$	0.00	-1.85	0.067

**Table 5** *Brevicoryne brassicae* parasitism rate: hurdle models. Two complementary models were used: a logistic model to test for presence/absence and a lognormal model to assess the type of abundance of count data. In both models the effects of leaf position were assessed: [M leaf = Aphid density on middle vs upper leaves], [B leaf = Aphid density on bottom vs upper leaves], average temperature (Av. temp), accumulated precipitation (PPT), and the interaction between average temperature and PPT (Av. temp  $\times$  PPT). Statistically significant results are indicated in bold text ( $< 0.05$ ).

	LOGISTIC MODEL					LOGNORMAL MODEL				
	X	$\pm$	SE	Z	Pvalue	X	$\pm$	SE	t	Pvalue
Intercept	-20.36	$\pm$ 4.48		-4.55	<b>0.000</b>	3.70	$\pm$ 2.60		1.43	0.159
M leaf	0.14	$\pm$ 0.35		0.40	0.690	0.42	$\pm$ 0.22		1.91	0.059
B leaf	0.62	$\pm$ 0.35		1.78	0.075	0.91	$\pm$ 0.22		4.18	<b>0.000</b>
Av. temp	0.86	$\pm$ 0.19		4.46	<b>0.000</b>	-0.09	$\pm$ 0.11		-0.88	0.381
PPT	0.36	$\pm$ 0.10		3.56	<b>0.000</b>	0.04	$\pm$ 0.06		0.61	0.543
Av. temp $\times$ PPT	-0.02	$\pm$ 0.00		-3.52	<b>0.000</b>	-0.00	$\pm$ 0.00		-0.53	0.597

**Table 6** *Myzus persicae* parasitism rate: hurdle models. Two complementary models were used: a logistic model to test for presence/absence and a lognormal model to assess the type of abundance of count data. In both models the effects of leaf position were assessed: [M leaf = Aphid density on middle vs upper leaves], [B leaf = Aphid density on bottom vs upper leaves], average temperature (Av. temp), accumulated precipitation (PPT), and the interaction between average temperature and PPT (Av. temp  $\times$  PPT). Statistically significant results are indicated in bold text ( $< 0.05$ ).

	LOGISTIC MODEL					LOGNORMAL MODEL				
	X	$\pm$	SE	Z	Pvalue	X	$\pm$	SE	t	Pvalue
Intercept	-21.89	$\pm$ 4.84		-4.52	0.000	2.17	$\pm$ 2.58		0.84	0.402
M leaf	3.16	$\pm$ 0.65		4.82	<b>0.000</b>	-0.40	$\pm$ 0.52		-0.78	0.440
B leaf	5.11	$\pm$ 0.68		7.50	<b>0.000</b>	0.31	$\pm$ 0.51		0.62	0.539
Av. temp	0.74	$\pm$ 0.20		3.69	<b>0.000</b>	-0.02	$\pm$ 0.11		-0.16	0.870
PPT	0.34	$\pm$ 0.11		3.02	<b>0.002</b>	0.10	$\pm$ 0.06		1.58	0.119
Av. temp $\times$ PPT	-0.01	$\pm$ 0.01		-2.97	<b>0.003</b>	-0.00	$\pm$ 0.00		-1.57	0.122

**Table 7** *Lipaphis pseudobrassicae* parasitism rate: hurdle models. Two complementary models were used: a logistic model to test for presence/absence and a lognormal model to assess the type of abundance of count data. In both models the effects of leaf position were assessed: [M leaf = Aphid density on middle vs upper leaves], [B leaf = Aphid density on bottom vs upper leaves], average temperature (Av. temp), accumulated precipitation (PPT), and the interaction between average temperature and PPT (Av. temp  $\times$  PPT). Statistically significant results are indicated in bold text ( $< 0.05$ ).

	LOGISTIC MODEL					LOGNORMAL MODEL				
	X	$\pm$	SE	Z	Pvalue	X	$\pm$	SE	t	Pvalue
Intercept	-19.96	$\pm$	6.23	-3.20	<b>0.001</b>	1.02	$\pm$	4.75	0.21	0.831
M leaf	3.61	$\pm$	1.05	3.45	<b>0.000</b>	1.35	$\pm$	0.78	1.73	0.101
B leaf	5.99	$\pm$	1.07	5.61	<b>0.000</b>	1.46	$\pm$	0.78	1.88	0.075
Av. temp	0.57	$\pm$	0.26	2.19	<b>0.028</b>	-0.14	$\pm$	0.20	-0.72	0.473
PPT	0.51	$\pm$	0.15	3.29	<b>0.000</b>	0.03	$\pm$	0.10	0.29	0.770
Av. temp $\times$ PPT	-0.02	$\pm$	0.00	-3.25	<b>0.001</b>	-0.00	$\pm$	0.00	-0.21	0.833