

Title: **The Neotropical mirid predator *Macrolophus basicornis* uses volatile cues to avoid contacting old, *Trichogramma pretiosum* parasitized eggs of *Tuta absoluta***

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**Table S1.** Behavioural observation of the predator *M. basicornis* towards five unparasitized (unpar) versus five parasitized (par) eggs of *T. absoluta* during 2 hours. Number of contacts with unparasitized and parasitized prey eggs per 2 hours, number of contacts before consumption of prey egg, percentage acceptance for consumption, and time interval between introduction and first consumption of prey egg. Five unparasitized eggs were tested against five eggs of 1-, 5- and 9-day old parasitized eggs by *T. pretiosum*.

Number ( $\pm$ SE) of contacts with unparasitized and parasitized eggs of <i>T. absoluta</i> per replicate during the 2 hours observation period						
	unpar	par1	unpar	par5	unpar	par9
#	12.14 a	5.25 b	7.86 a	2.57 b	8.03 a	1.48 b
SE	$\pm 0.94$	$\pm 0.32$	$\pm 0.52$	$\pm 0.31$	$\pm 0.62$	$\pm 0.19$
reps	36	36	28	28	33	33
Average number of contacts ( $\pm$ SE) before consumption of unparasitized and parasitized eggs						
	unpar	par1	unpar	par5	unpar	par9
avg #	2.47 a	1.24 a	0.84 a	1.00 a	1.67 a	0.58 a
SE	$\pm 0.32$	$\pm 0.23$	$\pm 0.22$	$\pm 0.41$	$\pm 0.26$	$\pm 0.16$
reps	41	29	44	3	27	12
Percentage acceptance for consumption of unparasitized and parasitized eggs expressed as number of prey accepted for feeding divided by the number of contacts before feeding took place						
	unpar	par1	unpar	par5	unpar	par9
% accept	28.85	44.62	54.00	50.00	38.00	63.16
Average time interval (minutes, $\pm$ SE) between introduction of predator in the petri dish and first consumption of unparasitized and parasitized eggs of <i>T. absoluta</i>						
	unpar	par1	unpar	par5	unpar	par9
avg	44.82 a	29.19 a	46.77 a	78.00 a	56.54 a	68.42 a
SE	$\pm 4.77$	$\pm 5.67$	$\pm 4.27$	$\pm 7.51$	$\pm 5.16$	$\pm 10.9$
reps	43	29	43	3	27	12

**Table S2.** Choice experiment with behavioural observations. Choice test: 5 unparasitized and 5 parasitized *T. absoluta* eggs offered to an individual predator par 1, 5, 9 = 1, 5 or 9-day old parasitized prey eggs. **unpar** = unparasitized eggs. **encounter** = contact without feeding. **start time feeding** = time between introduction of predator and first feeding on prey egg. **total contacts** = number of encounters before first feeding + feeding contact. **% accept** = 100/total contacts.

	unpar				par1			
	encounter	start time feeding	total contacts	% accept	encounter	start time feeding	total contacts	% accept
	2	33	3	33.3	3	37	4	25
	1	0.5	2	50	3	8	4	25
	4	44	5	20	4	5	5	20
		3	1	100	5	0.3	6	16.7
	1	6	2	50		8	1	100
	2	12	3	33.3		23	1	100
	2	11	3	33.3	1	74	2	50
	4	70	5	20	2	85	3	33.3
	1	64	2	50	2	2	3	33.3
	3	73	4	25	1	3	2	50
	1	75	2	50		7	1	100
	2	84	3	33		8	1	100
	1	70	2	50	1	0.3	2	50
	3	61	4	25		56	1	100
	1	64	2	50	1	34	2	50
		0.75	1	100	1	0.6	2	50
	1	57	2	50	1	104	2	50
		55	1	100		48	1	100
	3	7	4	25	3	47	4	25
	4	19	5	20		7	1	100
		14	1	100		8	1	100
		3	1	100	1	29	2	50
	3	63	4	25		62	1	100
	1	52	2	50		107	1	100
	1	71	2	50		57	1	100
	1	48	2	50	2	67	3	33.3
	4	72	5	20	2	6	3	33.3
	1	102	2	50		45	1	100
	2	74	3	33.3	3	19	4	25
	1	75	2	50				
	4	99	5	20				
	2	12	3	33.3				
	6	64	7	14.3				
	2	14	3	33.3				
	3	6	4	25				
	1	3	2	50				
	4	83	5	20				
	3	89	4	25				
	6	40	7	14.3				
	5	41	6	16.7				
	3	63	4	25				
	6	22	7	14.3				
	11	8	12	8.3				
<b>total</b>	106	1927.25	149	1745.7	36	788.2	65	1869.9
<b>avg</b>	2.47	44.82	3.47	28.85	1.24	29.19	2.24	44.62
<b>sd</b>	2.068527	31.3072	2.141971		1.218726	29.48529	1.405478	
<b>se</b>	0.32	4.77	0.33		0.23	5.67	0.26	
<b>n</b>		43				29 / 27		
<b>total contacts during 2 hours</b>			<b>437</b>				<b>189</b>	

(Continued)

(Table S2 continued)

	unpar				par5			
	encounter	start time feeding	total contacts	% accept	encounter	start time feeding	total contacts	% accept
	6	68	7	13.3	1	65	2	50
	2	52	3	33.3		91	1	100
		106	1	100	2	78	3	33.3
	1	92	2	50				
	5	62	6	16.7				
		12	1	100				
		10	1	100				
	1	35	2	50				
	1	48	2	50				
	3	72	4	25				
		6	1	100				
		15	1	100				
		61	1	100				
		58	1	100				
		41	1	100				
	1	35	2	50				
		45	1	100				
		58	1	100				
		50	1	100				
	2	82	3	33.3				
	1	41	2	50				
		8	1	100				
		35	1	100				
	1	99	2	50				
		58	1	100				
		33	1	100				
		62	1	100				
	3	78	4	25				
		81	1	100				
		79	1	100				
	1	8	2	50				
		74	1	100				
		11	1	100				
		5	1	100				
	1	35	2	50				
	2	65	3	33.3				
		83	1	100				
		41	1	100				
		27	1	100				
	2	23	3	33.3				
	1	34	2	50				
		15	1	100				
	3	not found	4	25				
		8	1	100				
<b>total</b>	37	2011	81	3529.9	3	234	6	183.3
<b>avg</b>	0.84	46.77	1.84	0.54	1	78	2	50
<b>sd</b>	1.474179	28.03385	1.379976		0.707107	13	1	
<b>se</b>	0.22	4.27	0.21		0.41	7.51	0.58	
<b>n</b>		44 / 43				3		
<b>total contacts during 2 hours</b>			<b>220</b>				<b>72</b>	

(Continued)

(Table S2 continued)

	unpar				par9			
	encounter	start time feeding	total contacts	% accept	encounter	start time feeding	total contacts	% accept
	2	53	3	33.3		72	1	100
	3	67	4	25		46	1	100
	1	71	2	50		61	1	100
	4	65	5	20		1	1	100
	3	79	4	25	1	87	2	50
	1	62	2	50	2	56	3	33.3
	2	26	3	33.3	2	73	3	33.3
	1	75	2	50	1	92	2	50
		83	1	100		112	1	100
	3	72	4	25		48	1	100
	1	3	2	33.3		89	1	100
	6	87	7	14.3	1	84	2	50
		43	1	100				
	1	31	2	50				
	3	49	3	33.3				
	1	62	2	50				
		100	1	100				
	1	84	2	50				
	2	23	3	33.3				
		66	1	100				
	1	68	2	50				
		43	1	100				
	3	31	4	25				
	4	78	5	20				
		70	1	100				
		14	1	100				
	2	8	3	33.3				
<b>total</b>	45	1470	71	1404.1	7	821	19	916.6
<b>avg</b>	1.67	56.54	2.63	38	0.58	68.42	1.58	63.16
<b>sd</b>	1.371707	26.31689	1.522855		0.547723	28.8805	0.792961	
<b>se</b>	0.26	5.16	0.29		0.16	10.9	0.23	
<b>n</b>		27 / 26				12		
<b>total contacts during 2 hours</b>			<b>265</b>				<b>49</b>	

	avg # contacts before 1 <sup>st</sup> feeding	% accept	# feeds	# feeds per rep	total # contacts 2 hours	total # contacts 2 hours / rep	avg time before 1 <sup>st</sup> feed	reps
<b>unpar</b>	2.47	28.85	43	1.19	437	12.14	44.82	36
<b>par1</b>	1.24	44.62	29	0.81	189	5.25	29.19	36
<b>unpar</b>	0.84	54	44	1.57	220	7.86	46.77	28
<b>par5</b>	1	50	3	0.11	72	2.57	78	28
<b>unpar</b>	1.67	38	27	0.82	265	8.03	56.54	33
<b>par9</b>	0.58	63.16	12	0.36	49	1.48	68.42	33

(Continued)

(Table S2 continued)

repl	number of contacts with eggs during 2 hours		number of contacts with eggs during 2 hours		number of contacts with eggs during 2 hours	
	unpar	par 1	unpar	par 5	unpar	par 9
1	20	7	11	2	8	1
2	19	6	9	3	15	1
3	14	9	7	0	21	0
4	9	2	7	4	8	0
5	10	6	9	2	10	1
6	5	7	7	2	7	1
7	11	9	9	3	9	1
8	7	8	7	3	5	1
9	5	6	5	2	6	0
10	6	2	6	3	9	2
11	8	3	9	2	11	2
12	10	5	10	8	3	2
13	17	3	9	1	8	0
14	10	4	6	2	7	2
15	19	5	9	5	10	4
16	8	4	8	4	8	3
17	6	4	18	5	9	3
18	7	3	5	2	13	4
19	11	5	7	1	6	1
20	6	4	11	3	8	3
21	9	5	6	3	6	2
22	15	5	8	2	4	1
23	16	6	8	2	7	0
24	8	5	8	3	9	1
25	12	5	7	1	7	2
26	16	7	6	2	11	3
27	23	8	3	0	4	1
28	7	2	5	2	8	1
29	26	6			8	1
30	15	8			6	1
31	9	4			2	1
32	15	8			4	1
33	24	5			8	2
34	15	5				
35	9	3				
36	10	5				
<b>Total contacts</b>	<b>437</b>	<b>189</b>	<b>220</b>	<b>72</b>	<b>265</b>	<b>49</b>
<b>avg/rep se</b>	12.14 0.94	5.25 0.32	7.86 0.52	2.57 0.31	8.03 1.48	0.62 0.19