

Bulletin of Insectology Supplemental Material

Title: **Adult lifetime predation of *Tuta absoluta* eggs by three Neotropical mirid predators on tomato**

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Procedure followed to obtain lifetables for females and males of *Campyloneuropsis infumatus*, *Engytatus varians* and *Macrolophus basicornis* on tomato

As explained in the section “*Total egg predation by mirid adults*” in Material and Methods, we started with measuring the predation by *a couple* of predators during the first 7 days of their adult life, and the results are presented in **table S1**.

After 7 days, males and females were separated and predation of males and females was determined until they died (**table S2**).

Then, we calculated daily predation by males and females during day 8-17, i.e. the first ten days after males and females were separated. We used this period to obtain sufficient replicates and to prevent the effect of decreasing predation rates of females at the end of the adult life (see figures 1-3 in the main text of the paper). Next, the total number of *T. absoluta* eggs eaten by males and females during these ten days were used to calculate the percentages eggs eaten by the two sexes (**table S3**).

The percentages were then applied to the predation rates of couples during the first 7 days in order to obtain separate estimates for male and female predation rates; “partial” eggs were rounded off (**table S4**). The combination of **table S4** (predation during the first 7 days estimated for males and females) and **table S2** (predation rates for males and females from day 8 until death) provides the complete predation data for males and females during their adult life and is presented as table 1 in the main text of the paper.

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Table S1. Daily predation rates of couples of *Campyloneuropsis infumatus*, *Engytatus varians* and *Macrolophus basicornis* during the first 7 days of adult life. * = day on which male died, ** = day on which female died.

Campyloneuropsis infumatus

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	3	42	78	47	40	62	12	50	20	54	41	57	50	30	50	38	110	78	78	85
2	52	51	38	62	61	64	40	55	55	56	98	72	73	55	71	48	71	46	85	60
3	42	63	53	63	76	55	87	78	80	92	73	64	80	34	97**	60	54	59	77	73
4	52	90	27	80	72	45	80	70	67	89	72	49	61	35	30	46	71	69	112	64
5	35	79	23	99	82	60	77	57	22	64	55	42	56	31	36	60	77	73	75	62
6	62	102	18	70	42	36	58	81	70	51	76	40	42	18	20	50	83	71	42	42
7	35	112	24	80	85	46	63	44	32	72	53	33	100	8	12	46	76	105	67	25

Engytatus varians

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	25	4	77	16	33	45	46	50	78	40	27	40	43	52	33	33	21	2	64	60
2	49	70	92	75	93	69	81	34	48	54	119	82	73	86	87	76	91	58	66	73
3	111	72	98	118	80	96	78	51	87	106	104	92	72	89	118	117	71	115	91	95
4	90	87	52*	47	93	81	71	24	52	48	106	108*	30*	105	106	120	119	100	70	119
5	114	45	41	65	97	70	99	43	97	69	133	68	28	69	112	56	109	102	46	137
6	86	39	1**	26**	83	30	60	86	101	54	101	46	15	64	44	82	106	87	112	105
7	74**	35		2	108	106	98	86	107	76	104	43	25	81	103	95	139	34	26**	32

Macrolophus basicornis

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	29	39	39	44	61	61	60	32	46*	75	36	42	74	55	19	97	55	64	28	91
2	41	57	45	56	66	76	54	63	20	56	67	76	51	55	32	35	62	45	60	54
3	57	59	62	52	62	67	54	40	23	42	44	41	57	21	31**	56	75	14	70	42
4	65	51	94	52	66	35	72	35	17	51	45	72	54	44*	16	52	69	67	64	49
5	55	82	75	88	51	37**	63	29	10	67	54	27	53	63	22	59	38	50	89	35
6	63	74	74	74	55	22	63	47	10	66	40	22	68	28	10	86	50	66	61	68
7	54	42	57	59	47	13	71	54	7	35	28	59	48	36	12	40	38	67	72	25

Table S2. Daily predation rates of males and females of *Campyloneuropsis infumatus*, *Engytatus varians* and *Macrolophus basicornis* from day 8 until death.

***Campyloneuropsis infumatus* predation by females**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 8	49	52	26	54	58	32	60	42	88	48	40	23	61	30	37	70	80	45	49	45
9	27	58	13	63	45	41	60	44	37	45	29	37	48	55	53	54	80	26	44	48
10	23	55	19	51	48	33	39	30	73	54	8	65	28	63	72	49	52		32	62
11	15	57	19	43	41	18	54	23	58	49		35	32	58		34	51		30	46
12	32	50	14	72	48	29	20	28	61	57			25	52		58	87		52	60
13	50	1	6	24	62	13	11	5	8	61			51	46		56	79		24	55
14	25			40	68	25	37	10	10	25			50	33		36	73		67	52
15	41			22	29	31	22	29	13	60			26	24		31	28		44	30
16	49			39	20	22	36	15	42	55			25	28		21	5		43	40
17	30			57	20	22	38	38	64	29			10	25		10	4		57	50
18	42			46	27	18	12	13	32	13			24	18		50	1		67	12
19	32			0	34	20		12	19	20			29	16		58	0		61	27
20	13				32	23		3	18	34			33	46		47			49	20
21	51				27	46		2	46	0			17	20		55			14	10
22	32				21	17		6	64				15	27		18			43	9
23	50				4	6		5	21				20	31		21			46	48
24	25				2	0		20	40				9	34		19			57	16
25	4					9		4	58					38		32			33	35
26	0					26		4	33					29		30			42	32
27						17		30	49					35		22			50	21
28						30		28	40					35		24			25	20
29						35		19	43					50		16			9	11
30						46		25	20					31		14			0	6
31						32		28	0					4		12				
32						37		2						20		13				
33						37		21						21		33				
34						30		1						31		35				
35						19		3						28		34				
36						14								20		0				
37						9								16						
38						24								10						
39						21								28						
40						9								0						
41						14														
42						9														
43						13														
44						6														
45						16														
46						25														
47						31														
48						19														
49						24														

50	26
51	20
52	17
53	14
54	17
55	15
56	13
57	1

Campyloneuropsis infumatus predation by males

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 8	0	4	2	3	4	6	10	9	25	18	1	0	1	20	11	16	5	10	16	10
9	5	5	4	16	14	10	14	18	17	9	0	0	8	22	23	24	20	18	18	3
10	12	7	10	24	15	33	10	25	9	15	0	0	0	21	14	20	4	4	12	17
11	1	10	18	14	7	34	11	23	17	13	20	8		22	14	0	0	6	4	15
12	16	6	17	4	9	41	18	19	30	10	12	5		0	17	0	0	0	6	17
13	11	3	15	14	5	46	17	20	15	12		2		10	28	0	4	11	1	24
14	2	0	12	15	6	38	15	15	6	2		20		11	11	19	17	16	17	30
15	1		3	20	5	30	9	11	12	0		20		26	11	30	22	27	18	8
16	12		3	10	12	12	15	10	7	2		19		25	13	30	12	3	8	7
17	17		13	5	11	0	8	13				0		8	20	23	9	21	3	11
18	1		13	10	4		18	10				13		12	27	12	14	23	7	11
19	19		10	17	18		29	9				19		3	8	18	2	25	15	26
20	5		3	12	10		12	5				2		0	9	0	2	20	12	9
21	17		5	23	22		17	7							21	17	2	17	19	10
22	15		0	20	15		8	16							19	16	5	21	7	11
23	11			10	2		27	14							27		11	26	2	5
24	20			12	1		7	16							2		13	24	2	3
25	23			23	0		19	9							8		9	23	27	17
26	16			14	0		16	2							26		6	14	18	9
27	5			4			2	20							25		5	9	21	5
28	12			10			8	18							8		8	9	3	20
29	4			26			9	14							13		6	13	2	10
30				18			10	17							10		9	6	3	3
31				8			8	13							9		3	8	15	0
32				4			18	16							7			0	31	
33				6			5	8							0					
34				8				20							18					
35				4				7							13					
36				24				16							8					
37				50				5							5					
38				19				7							4					
39				19				7							5					
40				14				4							3					
41				7											8					
42				10											20					
43				4											6					

44	11	0
45	9	26
46	24	29
47	7	25
48		20
49		13
50		16
51		5
52		21
53		20
54		9
55		14
56		18
57		10
58		0

***Engytatus varians* predation by females**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 8	34				9	68	75	77	79	3	49	73	67	53	0	75	79	14		39
9	29				1	69	80	79	79		2	70	46	10		25	80	33		2
10	41				2	87	85	84	61		1	77	39	2		33	82	13		0
11	39				2	67	80	79	51			67	21			23	37	3		
12	49				0	76	84	90	71			79	22			28	10	28		
13	58					44	74	9	63			80	28			35		19		
14	65					51	73	40	66			80	29			11		32		
15	69					59	75	78	66			15	18			23		22		
16	51					18	72	46	62			27	17			12		10		
17	42					53	4	86	71			0	33			5		7		
18	57					1	0	52					20			0				
19	27					1	0	76					19							
20	1					1		74					22							
21								75					31							
22								72					25							
23								52					1							
24								66					12							
25								40					13							
26								14					9							
27								2					20							
28								0												

***Engytatus varians* predation by males**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 8	18	0		0	13	24	35	0	7	33	8			22	19	10	19	11	9	7
9	20				23	14	22		18	21	20			27	8	30	1	22	10	11
10	24				36	29	24		26	31	8			29	13	25	7	23	5	12
11	18				30	13	20		24	17	12			18	22	32	0	34	24	13
12	16				32	16	36		28	35	23			19	9	11	0	13	29	10

13	5		11	13	13		18	33	24		0	21	22	0	12	20	15
14	17		18	18	6		30	31	20			20	14	17	0	28	20
15	20		16	12	0		2	25	10			10	10	2	0	21	12
16	1		18	10	16			34	17			15	9	13		18	34
17	1		20	23	19			30	25			23	13	21		33	24
18	0		13	29	18			20	2			31	20	28		19	27
19			15	36	26			47				7	31	3		12	21
20			22	24	30			18				3	45			14	23
21			25	21	26			17				10	16			1	5
22			23	10	26			7				0	16				17
23			1	18	14			2					25				8
24				12	36			0					12				2
25				16	40												2
26				18	30												1
27				7	6												0
28				12	2												
29				9													
30				31													
31				11													
32				5													
33				10													
34				12													
35				9													
36				0													

***Macrolophus basicornis* predation by females**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 8	36	48	32	48	64		41	37	8	76	65	41	45	60		45	34	27	40	33
9	35	20	37	43	39		41	24	16	82	37	28	57	34		36	38	45	36	44
10	31	43	21	37	59		57	10	27	31	29	51	55	32		40	26	41	42	43
11	44	39	56	25	51		50	42	13	71	37	32	55	18		34	43	36	17	48
12	41	50	26	43	49		48	55	25	51	41	38	50	20		24	34	32	24	41
13	55	29	34	41	72		40	41	19	28	19	31	47	1		21	48	44	24	35
14	15	36	37	56	53		62	32	13	28	4	22	53			2	46	44	7	64
15	36	47	52	57	56		42	34	8	44	21	34	51			0	36	32	0	35
16	45	46	44	49	44		28	20	8	50	36	39	15			45	38	24		29
17	46	47	51	45	52		9	17	2	38	47	45	16			16	49	44		30
18	47	45	7	51	51		33	2	0	26	20	40	51			16	45	0		31
19	30	46	1	37	63		55	0		30	39	5	42			20	29			14
20	40	32		41	42		37			50	38	52	24			25	20			48
21	30	33		56	52		29			46	41	53	3				44			42
22	35	47		50	51		44			47	54	42	0				44			28
23	47	55		55	16		7			28	48						33			26
24	55	26		57	28		67			52	54						54			28
25	42	45		56	36		24			42	48						38			23
26	55	29		59	31		31			23	26						21			
27	47	42		59	60		28			22	9						18			

28	56	55	68	48	33	23	11	14
29	55	33	59	43	36	19	16	4
30	43	33	40	48	38	9	9	30
31	60	39	45	46	42	3		38
32	58	0	53	44	47	8		20
33	46		51	31	51	37		5
34	50		34	34	33	35		
35	49		17	28	0	26		
36				35		49		
37				28		27		
38				39		28		
39				39		13		
40				50		14		
41				38		24		
42				28		20		
43				39		12		
44				28		28		
45				35		32		
46				33		30		
47				19		25		
48				19		15		
49				10		8		
50				13		28		
51						24		
52						39		
53						27		
54						10		
55						10		
56						55		
57						36		
58						30		
59						37		
60						25		
61						19		
62						12		
63						7		

***Macrolophus basicornis* predation by males**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 8	11	5	1	15	23	9	10	0		8	26	0	7		9	16	9	19	6	14
9	13	1	7	10	19	21	12	1		8	9	0	1		21	11	15	22	8	10
10	15	10	3	19	10	19	19	8		0	7	15			13	23	13	16	16	18
11	9	17	17	11	19	12	22	8		0	13	28			8	9	14	15	11	11
12	12	8	10	15	31	12	18	9		0	5	2			10	8	16	8	5	7
13	7	7	8	12	14	10	10	4			9	14			6	15	7	10	15	6
14	5	9	9	14	9	11	9	5			14	12			7	19	16	9	10	10
15	3	10	10	10	20	18	7	8			10	11			6	21	9	11	5	9

16	12	12	10	15	5	10	7	22	0	15	5	3	15	19	11	10
17	6	15	12	15	17	12	11	22	0	12	13	13	0	14	17	20
18	2	14	10	11	3	20	11	19	17	7	8	14	14	11	9	17
19	7	11	6	10	21	18	8	7	17	13	12	16	16	6	15	8
20	2	14	10	7	18	14	12	5	11	5	4	28	18	6	12	13
21	2	8	10	7	14	14	9	2	10	15	0	15	10	17	15	14
22	1	3	12	15	10	15	11	6	7	19	6	15	15	12	9	22
23	4	2	12	18	10		11	5	10		0	16	9	8	9	12
24	6	6	6	10	14		12	13	17			11	6	18	2	10
25	3	8	12	10	10		10	17	13			15	17	6	4	12
26	1	10	10	7	27		10	3	14			6	7	3	3	8
27	8	6	10	8	7		5	11	11			4	9	2	5	2
28	5	18	9	7	12		4	17	13			5	17	2	2	4
29	3	8	11	9	21		21	10	8			24	9	25	25	17
30	2	17	7	13	3		6	15	4			28	22	23	11	23
31	5	7	16	12	19		9	8	6			4	11	21	6	14
32	1	20	13	5	9		8	12	24			5	11	22	22	15
33		10	8	16	6		3	9	22			2	29	24	29	24
34		17	15		9		3	5	10			2	15	17	15	14
35		12	13		5		3	25	11			2	18	21	16	16
36		6	13		5		3	25	13				11	12	21	16
37		0	3		3			10	13				14	5	14	14
38			7		9			10	7				2		11	12
39			10		16			13	22				0		10	10
40			4		19			4	25							4
41					13			2	15							
42					15			0	5							
43					2				0							
44					4											
45					11											
46					24											
47					15											
48					9											
49					9											

Table S3. Average daily predation data of males and females of *Campyloneuroopsis infumatus*, *Engytatus varians* and *Macrolophus basicornis* from day 8-17.

Mirid species	Average number of <i>T. absoluta</i> eggs eaten per day by			Percentage of <i>T. absoluta</i> eggs eaten per day by	
	Males	Females	Total	Males	Females
<i>Campyloneuroopsis infumatus</i>	13.0	37.8	50.8	25.6	74.4
<i>Engytatus varians</i>	18.5	52.2	70.7	26.2	73.8
<i>Macrolophus basicornis</i>	11.6	38.1	49.7	23.3	76.7

Table S4. Estimated daily predation rates for male and female *Campyloneuropsis infumatus*, *Engytatus varians* and *Macrolophus basicornis* during the first 7 days of adult life.

***Campyloneuropsis infumatus* predation by females**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	2	32	59	36	30	47	9	38	15	41	31	43	38	23	38	29	84	59	59	65
2	40	39	29	47	46	49	30	42	42	43	74	55	55	42	54	36	54	35	65	46
3	32	48	40	48	58	42	66	59	61	70	55	49	61	26	74	46	41	45	59	55
4	40	68	21	61	55	34	61	53	51	68	55	37	46	27	0	35	54	52	85	49
5	27	60	17	75	62	46	59	43	17	49	42	32	43	24	0	46	59	55	57	47
6	47	78	14	53	32	27	44	62	53	39	58	30	32	14	0	38	63	54	32	32
7	27	85	18	61	65	35	48	33	24	55	40	25	76	6	0	35	58	80	51	19

***Campyloneuropsis infumatus* predation by males**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	1	10	19	11	10	15	3	12	5	13	10	14	12	7	12	9	26	19	19	20
2	12	12	9	15	15	15	10	13	13	13	24	17	18	13	17	12	17	11	20	14
3	10	15	13	15	18	13	21	19	19	22	18	15	19	8	23	14	13	14	18	18
4	12	22	6	19	17	11	19	17	16	21	17	12	15	8	30	11	17	17	27	15
5	8	19	6	24	20	14	18	14	5	15	13	10	13	7	36	14	18	18	18	15
6	15	24	4	17	10	9	14	19	17	12	18	10	10	4	20	12	20	17	10	10
7	8	27	6	19	20	11	15	11	8	17	13	8	24	2	12	11	18	25	16	6

***Engytatus varians* predation by females**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	18	3	57	12	24	33	34	37	58	30	20	30	32	38	24	24	15	1	47	44
2	36	52	68	55	69	51	60	25	35	40	88	61	54	63	64	56	67	43	49	54
3	82	53	72	87	59	71	58	38	64	78	77	68	53	66	87	86	52	85	67	70
4	66	64	52	35	69	60	52	18	38	35	78	80	30	77	78	89	88	74	52	88
5	84	33	41	48	72	52	73	32	72	51	98	68	28	51	83	41	80	75	34	101
6	63	29	1	0	61	22	44	63	75	40	75	46	15	47	32	61	78	64	83	77
7	55	26	0	0	80	78	72	63	79	56	77	43	25	60	76	70	103	25	0	24

***Engytatus varians* predation by males**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	7	1	20	4	9	12	12	13	20	10	7	10	11	14	9	9	6	1	17	16
2	13	18	24	20	24	18	21	9	13	14	31	21	19	23	23	20	24	15	17	19
3	29	19	26	31	21	25	20	13	23	28	27	24	19	23	31	31	19	30	24	25
4	24	23	0	12	24	21	19	6	14	13	28	28	0	28	28	31	31	26	18	31
5	30	12	0	17	25	18	26	11	25	18	35	0	0	18	29	15	29	27	12	36
6	23	10	0	26	22	8	16	23	26	14	26	0	0	17	12	21	28	23	29	28
7	19	9	0	2	28	28	26	23	28	20	27	0	0	21	27	25	36	9	26	8

***Macrolophus basicornis* predation by females**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	22	30	30	34	47	47	46	25	35	57	28	32	57	42	15	74	42	49	21	70
2	31	44	35	43	51	58	41	48	20	43	51	58	39	42	25	27	48	35	46	41
3	44	45	48	40	48	51	41	31	23	32	34	31	44	16	24	43	57	11	54	32
4	50	39	72	40	51	27	55	27	17	39	35	55	41	34		40	53	51	49	38
5	42	63	58	67	39	28	48	22	10	51	41	21	41	63		45	29	38	68	27
6	48	57	57	57	42		48	36	10	51	31	17	52	28		66	38	51	47	52
7	41	32	44	45	36		54	41	7	27	21	45	37	36		31	29	51	55	19

***Macrolophus basicornis* predation by males**

repl.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
day 1	7	9	9	10	14	14	14	7	11	17	8	10	17	13	4	23	13	15	7	21
2	10	13	11	13	15	18	13	15		13	16	18	12	13	7	8	14	10	14	13
3	13	14	14	12	14	16	13	9		10	10	10	13	5	7	13	18	3	16	10
4	15	12	22	12	15	8	17	8		12	10	17	13	10	16	12	16	16	15	11
5	13	19	17	21	12	9	15	7		16	13	6	12		22	14	9	12	21	8
6	15	17	17	17	13	22	15	11		15	9	5	16		10	20	12	15	14	16
7	13	10	13	14	11	13	17	13		8	7	14	11		12	9	9	16	17	6