

## Swede midge (Diptera: Cecidomyiidae) diapause initiation under stable conditions: not a family affair

**Supplementary Table S1.** Recovery and developmental trajectories of swede midges. **A**, Reared under warm, long days ( $24.9 \pm 1.0$  °C, 16.5:7.5 hour light:dark photoperiod; 19 families); **B**, reared under cool, short days ( $13.3 \pm 1.4$  °C, 10:14 hour light:dark photoperiod; 20 families). Individual female swede midges each laid eggs on a cauliflower plant over 48 hours under warm, long-day conditions, with the last day taken as the maternal lay date. Larvae of a given family developed until the third instar wandering stage at which point they were transferred to a lidded cup containing moist peat moss substrate for burrowing. Emerging adults were enumerated, and the peat moss was then sifted to recover any remaining individuals. Diapause larvae were taken as those in spherical cocoons. See the main text for methods details. An asterisk indicates families for which fewer than 10 individuals with known destiny (direct development or diapause) were recovered, and therefore omitted from analyses. L, live; D, dead; M, male; F, female. Note that dead adults were often unable to be sexed.

<b>A</b>			Recovery of individuals						
Family number	Maternal lay date	Number of third instars	Larvae L/D	Pupae L/D	Dead adults	Emerged adults (M/F)	Diapausing larvae	% of family accounted for	Family diapause (%)
1	19 August	41	5/-	1/1	1	27 (F)	-	85	0
2	19 August	67	2/-	1/2	-	62 (M)	-	100	0
3	19 August	90	7/4	-/1	1	66 (F)	-	88	0
4	19 August	15	1/-	-/1	-	13 (F)	-	100	0
5	21 August	12	1/-	-/1	-	9 (F)	-	92	0*
6	21 August	16	1/-	-/1	-	13 (M)	-	94	0
7	21 August	19	1/1	-/-	-	17 (F)	-	100	0
8	21 August	12	3/1	-/-	-	8 (F)	-	100	0
9	23 August	54	5/2	-/1	2	42 (F)	-	96	0
10	23 August	25	-/-	-/2	1	19 (F)	-	88	0
11	25 August	33	3/-	-/1	-	31 (F)	-	100	0
12	25 August	11	-/-	-/-	1	8 (M)	-	82	0*
13	5 September	18	-/-	-/-	-	18 (F)	-	100	0
14	5 September	13	3/2	-/-	2	4 (M)	-	85	0*
15	7 September	10	-/-	-/1	-	8 (M)	-	90	0*
16	7 September	10	1/1	1/-	-	6 (M)	-	90	0*
17	9 September	19	1/-	-/1	-	16 (F)	-	95	0
18	9 September	20	1/1	-/-	-	18 (F)	-	100	0
19	13 September	17	2/-	-/-	-	11 (M)	2	75	15

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<b>B</b>			Recovery of individuals						
Family number	Maternal lay date	Number of third instars	Larvae L/D	Pupae L/D	Dead adults	Emerged adults (M/F)	Diapausing larvae	% of family accounted for	Family diapause (%)
1	19 August	46	6/7	-/3	2	7 (F)	14	85	54
2	19 August	37	4/1	-/-	-	-	27	89	100
3	19 August	61	5/2	-/1	-	8 (F)	37	87	80
4	19 August	18	-/-	-/-	-	2 (F)	16	100	89
5	21 August	19	3/1	-/-	-	2 (F)	6	67	75*
6	23 August	57	6/2	-/-	-	-	41	86	100
7	23 August	17	1/2	-/-	-	6 (F)	8	100	57
8	25 August	31	1/1	-/-	-	4 (1M,3F)	19	81	83
9	27 August	27	-/1	1/2	1 (M)	5 (4M,1F)	5	56	36
10	27 August	53	2/-	-/-	-	5 (M)	46	100	90
11	5 September	32	1/-	-/-	-	-	29	94	100
12	5 September	20	1/1	-/-	-	2 (F)	14	90	88
13	7 September	17	1/3	-/-	-	-	1	29	100*
14	7 September	10	2/1	-/1	-	-	2	60	67*
15	7 September	18	-/-	-/-	-	-	15	83	100
16	9 September	11	-/-	-/1	-	1 (M)	7	82	78*
17	11 September	40	-/-	-/1	-	1 (F)	38	100	95
18	11 September	23	1/2	-/2	-	1 (F)	13	83	81
19	13 September	28	2/-	-/1	-	-	23	93	96
20	13 September	21	3/1	-/1	-	2 (1M,1F)	11	86	79