Appendix A

See figures S1–S3; see tables S1 and S2.

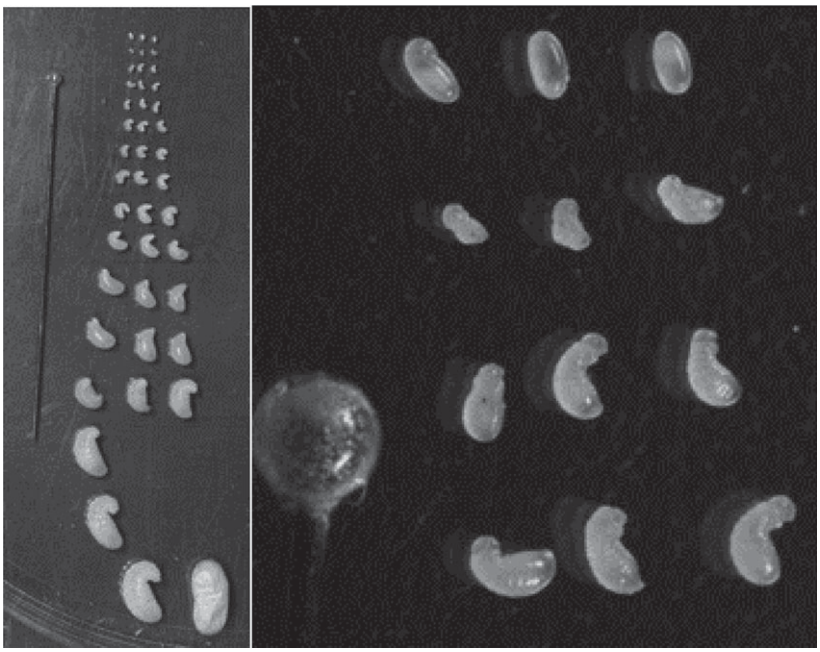

Figure S1. Size of *Formica fusca* larvae used in this study. (Left) Eggs in the top row, pupae in the bottom row and larvae of increasing size in between. The upper half of the range represents the larvae used in this study. (Right) Magnified view of the upper four rows. Reproduced from Morandin *et al*. [85].

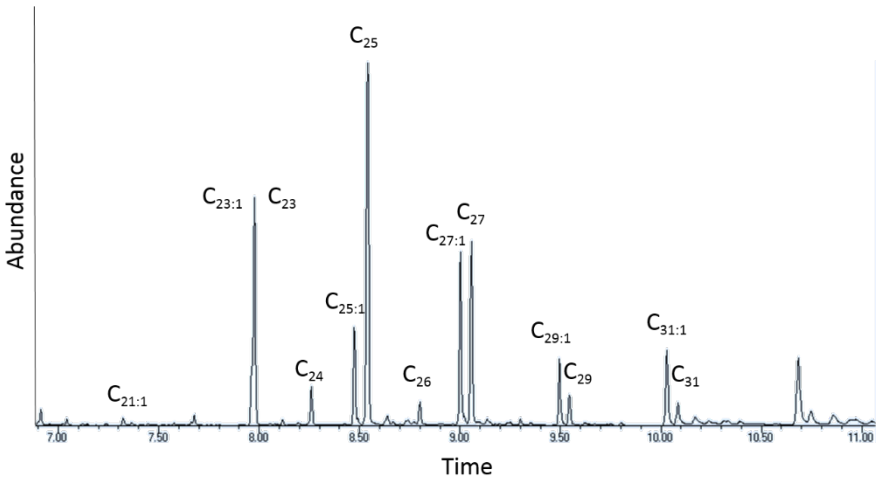

Figure S2. Typical chemical profile of a *Formica truncorum* egg. (Online version in colour.)

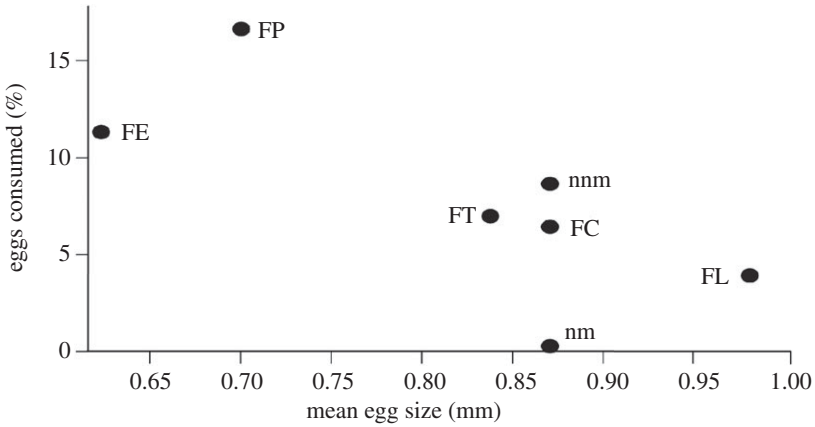

Figure S3. Percentage of eggs consumed plotted against mean egg size. FE, *F. exsecta*; F P , *F. pressilabris*; F T , *F. truncorum*; FC, *F. cinerea*; FL, *F. lemani*; nnm, *F. fusca* non-nest-mate; nm, *F. fusca* nest-mate.

Table S1. Presence–absence matrix of egg hydrocarbons across species (grey, present; white, absent).

Peak #	Compound	*F. fusca*	*F. cinerea*	*F. lemani*	*F. exsecta*	*F. pressilabris*	*F. truncorum*
1	$C_{21:1}$						
2	C_{21}						
3	7-MeC_{21}						
4	C_{22}						
5	8,10-DiMeC_{22}						
6	6-MeC_{22}						
7	$C_{23:1}$						
8	C_{23}						
9	9,11-DiMeC_{23}						
10	7-MeC_{23}	a					
11	7,y-DiMeC_{23}	a					
12	5-MeC_{23}						
13	3-MeC_{23}						
14	7,15-DiMeC_{23}						
15	$C_{24:1}$						
16	C_{24}	b					
17	3,x-DiMeC_{23}	b					
18	8,10,12-TriMeC_{24}						
19	3,7-DiMeC_{23}						
20	x,y,z-TriMeC_{23}						
21	6-MeC_{24}						
22	4-MeC_{24}						
23	$C_{25:1}$						
24	C_{25}						
25	9,11-DiMeC_{25}						
26	7-MeC_{25}						
27	5-MeC_{25}						
28	9,11-DiMeC_{25}						
29	3-MeC_{25}						
30	5,x-DiMeC_{25}						
31	C_{26}	c	c				
32	C_{25}, C_{26} Methyls & DiMethyls	c	c				
33	$C_{27:1}$						
34	C_{27}						
35	9,11-DiMeC_{27}						
36	7-MeC_{27}						
37	5-MeC_{27}						
38	11,15-DiMeC_{27}						
39	3-MeC_{27}						
40	x,y-DiMeC_{27}						
41	unknown						
42	x,y-DiMeC_{27}						
43	$C_{28:1}$						
44	10,12-DiMeC_{28}						
45	$C_{29:1}$						
46	C_{29}						
47	9,11-DiMeC_{29}						
48	7-MeC_{29}						
49	3-MeC_{29}						
50	$C_{31:1}$						
51	C_{31}						

[a]Peaks 10 and 11 in *F. fusca* eluted together, the peak area of this coleuted peak was divided in half to obtain the raw peak areas for peaks 10 and 11.
[b]Peaks 16 and 17 in *F. fusca* eluted together, the peak area of this coleuted peak was divided in half to obtain the raw peak areas for peaks 16 and 17.
[c]Peak 31: C_{26} coeluted together with a 5,x-DiMeC_{25} in *F. fusca* and with 5,y-DiMeC_{25} in *F. cinerea*. The peak areas of these coleuted peaks were divided in half to obtain the raw peak areas for C_{26} and the DiMeC_{25} in both species. Peak 32 (C_{25}, C_{26} methyls and dimethyls) in *F. fusca* and *F. cinerea* contains several unidentified methyls and dimethyls of C_{25} and C_{26}, including the other halves of the peaks that coeluted with C_{26} (peak 31). All these combined peaks were located between C_{26} and $C_{27:1}$ (chemical profiles: [30]).

Table S2. The contributions of the compounds to the principal components.

		PC-axis 1	PC-axis 2	PC-axis 3	PC-axis 4	PC-axis 5
	variance	53.6%	28.5%	7.5%	6.2%	3.4%
	cumulative %	53.6%	82.1%	89.6%	95.9%	99.2%
	lambda	5.23	3.81	1.96	1.78	1.31
peak #	compound	loading comp. 1	loading comp. 2	loading comp. 3	loading comp. 4	loading comp. 5
1	$C_{21:1}$	0.069	0.193	0.114	0.292	0.021
2	C_{21}	0.135	0.001	0.300	−0.016	0.294
3	7-MeC_{21}	0.164	−0.134	0.024	0.008	0.008
4	C_{22}	0.145	−0.064	0.113	0.233	0.271
5	8,10-DiMeC_{22}	0.161	−0.140	0.022	0.012	−0.003
6	6-MeC_{22}	0.163	−0.136	0.024	0.009	0.005
7	$C_{23:1}$	0.163	0.131	0.035	−0.003	0.076
8	C_{23}	0.121	0.196	0.086	0.013	−0.052
9	9,11-DiMeC_{23}	0.053	0.123	0.257	−0.361	0.140
10	7-MeC_{23}	0.001	−0.252	0.022	0.090	−0.165
11	7,y-DiMeC_{23}	−0.188	0.038	0.040	0.002	0.042
12	5-MeC_{23}	0.161	−0.140	0.022	0.012	−0.003
13	3-MeC_{23}	−0.019	−0.170	−0.382	−0.047	0.005
14	7,15-DiMeC_{23}	0.162	−0.137	0.023	0.009	0.001
15	$C_{24:1}$	0.059	0.141	−0.313	−0.173	0.291
16	C_{24}	0.108	0.194	0.042	0.019	−0.206
17	3,x-DiMeC_{23}	−0.190	0.017	0.033	0.014	0.008
18	8,10,12-TriMeC_{24}	−0.190	0.026	0.036	0.009	0.021
19	3,7-DiMeC_{23}	0.163	−0.135	0.024	0.008	0.006
20	x,y,z-TriMeC_{23}	0.162	−0.137	0.023	0.010	0.002
21	6-MeC_{24}	0.163	−0.137	0.023	0.009	0.003
22	4-MeC_{24}	0.164	−0.134	0.024	0.007	0.007
23	$C_{25:1}$	0.101	0.220	0.015	−0.026	−0.034
24	C_{25}	0.083	0.231	0.050	0.004	−0.101
25	9,11-DiMeC_{25}	−0.052	−0.138	0.301	−0.289	−0.138
26	7-MeC_{25}	−0.068	−0.233	0.025	0.093	−0.171
27	5-MeC_{25}	−0.190	0.016	0.032	0.015	0.006
28	9,11-DiMeC_{25}	−0.189	0.021	0.035	0.011	0.015
29	3-MeC_{25}	−0.023	−0.109	−0.165	−0.470	0.025
30	5,x-DiMeC_{25}	−0.190	0.015	0.032	0.015	0.004
31	C_{26}	0.019	0.074	−0.132	−0.310	−0.551
32	C_{25}, C_{26} methyls and dimethyls	−0.063	−0.235	0.021	0.096	−0.181
33	$C_{27:1}$	0.097	0.217	−0.010	−0.063	−0.122
34	C_{27}	0.087	0.220	0.050	−0.009	−0.197
35	9,11-DiMeC_{27}	−0.190	0.011	0.031	0.017	−0.002
36	7-MeC_{27}	−0.190	0.016	0.033	0.014	0.007
37	5-MeC_{27}	−0.189	0.024	0.036	0.009	0.020
38	11,15-DiMeC_{27}	−0.189	0.023	0.035	0.011	0.015
39	3-MeC_{27}	−0.040	−0.143	−0.409	−0.060	0.019
40	x,y-DiMeC_{27}	−0.047	−0.242	0.027	0.093	−0.169

(*Continued.*)

Table S2. (*Continued.*)

peak #	compound	loading comp. 1	loading comp. 2	loading comp. 3	loading comp. 4	loading comp. 5
41	unknown	−0.190	0.024	0.036	0.009	0.018
42	x,y-DiMeC_{27}	−0.189	0.025	0.036	0.009	0.019
43	$C_{28:1}$	0.058	0.139	−0.320	−0.172	0.287
44	10,12-DiMeC_{28}	−0.189	0.029	0.037	0.007	0.026
45	$C_{29:1}$	0.127	0.179	−0.053	−0.004	−0.167
46	C_{29}	0.091	0.213	0.016	0.043	−0.219
47	9,11-DiMeC_{29}	−0.190	0.023	0.035	0.011	0.017
48	7-MeC_{29}	−0.189	0.027	0.037	0.008	0.024
49	3-MeC_{29}	−0.187	0.026	0.036	0.009	0.018
50	$C_{31:1}$	0.043	0.063	−0.293	0.410	−0.115
51	C_{31}	−0.067	0.197	−0.197	0.227	0.000