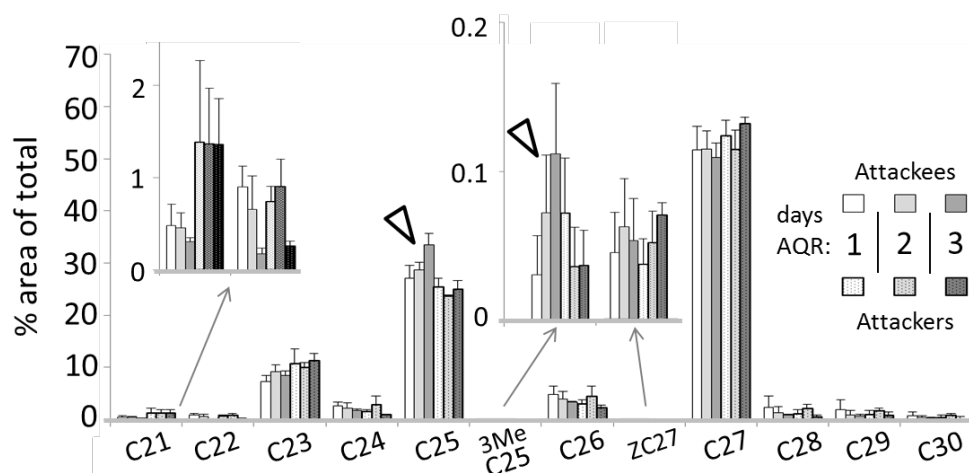
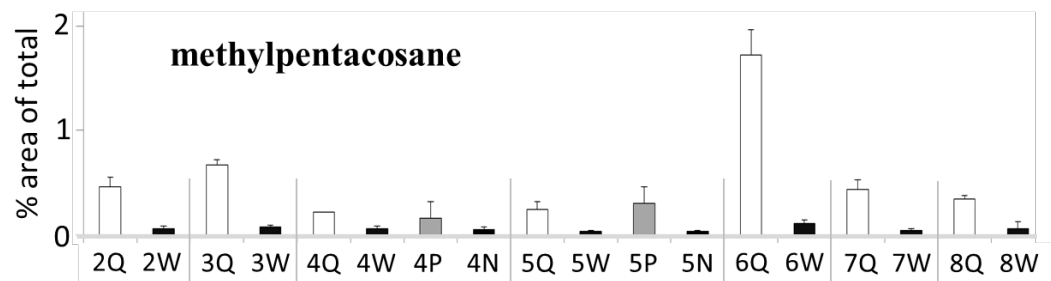


1  
2 **Supplementary Figure 1: Age cues in the cuticular hydrocarbon (CHC) profile of attackees.** Discriminant  
3 analysis based on CHC compounds of attackees and attackers from Colonies 4, 5 and 8, along with young  
4 (cuticular scores 1-3) and old workers (cuticular scores 4-5) from Colony 2. Attackees differ from  
5 attackers in the same direction as young females differ from old workers, indicating age as a  
6 determinant factor.

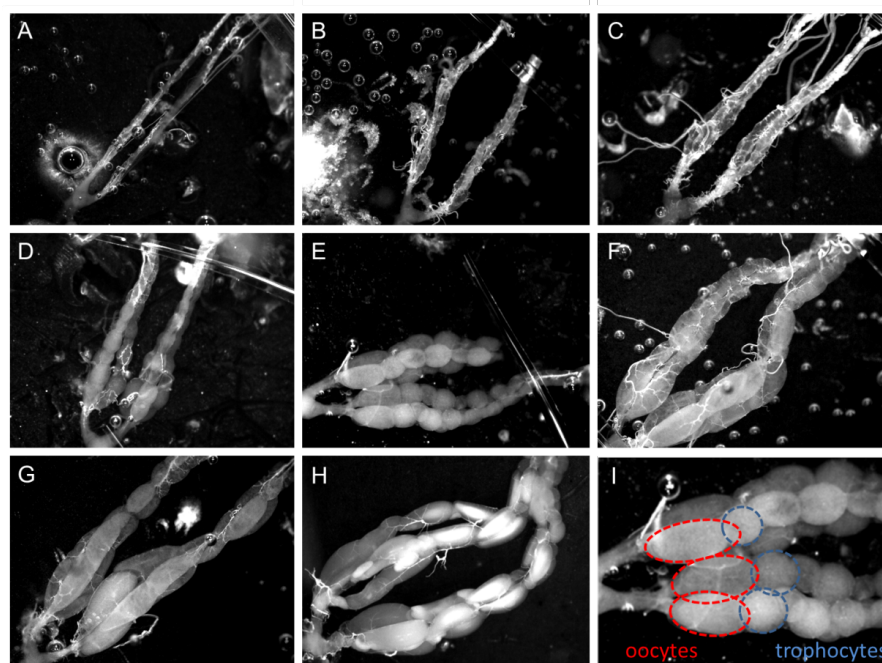


7  
8 **Supplementary Figure 2: CHC profile of attackees vs. attackers sampled over the first three days after**  
9 **queen removal (AQR) in Colony 4.** White arrowheads point to a perceptible rise of queen-associated  
10 compounds (in proportion to other compounds) in only the attackees. Data are shown as mean% ± s.d.



11

12 **Supplementary Figure 3: Colony by colony representation of methylpentacosane (3MeC25) in *P.***  
 13 ***micans*.** In all colonies examined, the 3MeC25 alkane was proportionally higher in queens (Q) than in  
 14 workers (W). 3MeC25 was also higher in prospective reproductives (P) than in presumptive workers (N)  
 15 removed at the same time. Number indicates colony. Data are shown as mean%  $\pm$  s.d.



16

17 **Supplementary Figure 4: Scores of ovarian status for *P. micans*.** Stage A ovaries are filamentous,  
 18 bearing no discernible oocytes. The ovarioles of stage B ovaries are irregular and bulbous, comprised of  
 19 very small (and sometimes likely degenerate) oocytes. Stage C ovaries contain discernible oocytes, but  
 20 these are not as pronounced as in Stage D ovaries which feature spherical oocytes adjoined to spherical  
 21 trophocyte chambers of comparable length. Stage E ovaries bear oocytes which take on an oval shape  
 22 and are perceptibly longer than the adjoining trophocyte chamber. Such elongated oocytes are likely  
 23 taking in vitellogenin by endocytosis. Vitellogenesis is further evidenced by an opaqueness of the  
 24 oocytes at this stage. Further development will result in the complete dumping of the trophocyte  
 25 chamber cytoplasm into the oocyte, marking the onset of Stage F ovaries. Stage G ovaries have 1-3  
 26 chorionated (or chorionating) oocytes. Stage H ovaries are queen-like, bearing many eggs. (I) Ovaries  
 27 from box E showing in detail 3 of 6 basal oocytes (red) and adjoining nurse cell chambers (blue) circled.

			QUEENRIGHT										QUEENLESS			
			All Colonies				Colony 1		Colonies 4, 5 & 8				Colonies 4 & 5			
			Queens		Workers		Newly Emerged		Attakees		Attackers		Prosp. Repro.		Presump. workers	
			N=59		N=129		N=4		N=43		N=32		N=16		N=35	
#	CHC	Ret. Time	m%	s.d.	m%	s.d.	m%	s.d.	m%	s.d.	m%	s.d.	m%	s.d.	m%	s.d.
1	C21	18.07	<b>0.06</b>	0.02	<b>0.47</b>	0.48	<b>6.03</b>	0.59	<b>0.51</b>	0.20	<b>0.96</b>	0.66	<b>0.18</b>	0.06	<b>0.52</b>	0.68
2	C22	20.83	<b>0.18</b>	0.18	<b>0.56</b>	0.61	<b>2.26</b>	0.15	<b>1.36</b>	0.92	<b>0.90</b>	0.53	<b>0.15</b>	0.04	<b>0.17</b>	0.10
3	C23	23.56	<b>2.25</b>	0.66	<b>7.02</b>	3.95	<b>54.4</b>	5.23	<b>8.38</b>	1.96	<b>9.36</b>	3.85	<b>3.45</b>	0.95	<b>6.56</b>	4.75
4	C24	26.23	<b>0.93</b>	0.27	<b>1.32</b>	0.72	<b>2.15</b>	0.13	<b>2.76</b>	0.95	<b>1.76</b>	0.82	<b>1.26</b>	0.35	<b>0.87</b>	0.42
5	C25	28.92	<b>42.5</b>	4.84	<b>23.7</b>	4.13	<b>22.4</b>	1.66	<b>25.7</b>	3.55	<b>24.2</b>	3.57	<b>33.4</b>	3.70	<b>24.1</b>	4.45
6	3MeC25	30.00	<b>0.97</b>	0.67	<b>0.07</b>	0.05	n.d.	n/a	<b>0.05</b>	0.03	<b>0.05</b>	0.03	<b>0.23</b>	0.17	<b>0.03</b>	0.02
7	C26	31.34	<b>5.32</b>	1.14	<b>3.42</b>	1.01	<b>1.90</b>	0.46	<b>4.82</b>	1.47	<b>3.32</b>	0.95	<b>4.48</b>	1.25	<b>3.21</b>	1.28
8	ZC27	33.65	<b>0.51</b>	0.36	<b>0.13</b>	0.05	n.d.	n/a	<b>0.08</b>	0.04	<b>0.08</b>	0.04	<b>0.50</b>	0.50	<b>0.11</b>	0.05
9	C27	33.89	<b>44.6</b>	4.52	<b>57.7</b>	7.72	<b>8.29</b>	2.13	<b>44.9</b>	7.94	<b>52.3</b>	7.78	<b>51.7</b>	3.49	<b>60.4</b>	6.90
10	C28	36.14	<b>0.82</b>	0.73	<b>1.62</b>	1.23	<b>1.08</b>	0.34	<b>2.77</b>	1.85	<b>1.44</b>	0.69	<b>1.90</b>	1.40	<b>1.54</b>	1.61
11	C29	38.42	<b>0.68</b>	0.68	<b>1.59</b>	1.45	<b>0.65</b>	0.30	<b>1.99</b>	1.53	<b>1.08</b>	0.56	<b>1.82</b>	1.25	<b>1.67</b>	1.65
12	C30	40.64	<b>0.52</b>	0.51	<b>0.98</b>	0.83	<b>0.48</b>	0.27	<b>1.48</b>	1.11	<b>0.75</b>	0.42	<b>0.92</b>	0.66	<b>0.78</b>	0.78
13	C31	42.77	<b>0.39</b>	0.39	<b>0.89</b>	1.16	<b>0.19</b>	0.10	C31 & C32 were not detected in all of the above females and were therefore excluded							
14	C32	44.99	<b>0.28</b>	0.26	<b>0.46</b>	0.44	<b>0.12</b>	0.04								

**Supplementary Table 1.** Mean percentage (m%) of composition and standard deviation (s.d.) of cuticular hydrocarbon (CHC) components in various types of females of *Polybia micans*. Colony(s) of origin noted on top. Gray rows indicate components which are consistently elevated in queens and prospective reproductives (“Prosp. Repro.”) on a queenless nest. n.d. = compound not detected. Retention time in minutes.