

Supplementary Material:

Table S1. Details of the sampling, host plant and number of wasps collected.

Locality	Coordinates	Host plant	Collecting method	No. of wasps	
				Fem ale	Male
Guangdong Eco-Engineering Polytechnic (GEEP)	23°11'58" N	<i>E. urophylla</i>	reared from galls	1014	33
	113°22'35" E	<i>E. urophylla</i>	direct catch	15	0
Xiaoguwei Island (XI)	23°4'0" N 113°22'41" E	<i>E. urophylla</i>	reared from galls	107	2
		<i>E. grandis</i> × <i>E. urophylla</i>	reared from galls	47	0
		<i>E. urophylla</i>	reared from galls	4	0
South China Botanical Garden (SCBG)	23°10'52" N	<i>E. tereticornis</i>	reared from galls	4	0
	113°21'28" E		reared from galls	15	0
Huolushan Forest Park (HFP)	23°10'39" N	<i>E. grandis</i>	reared from galls	15	0
	113°22'56" E	<i>E. urophylla</i>	reared from galls	7	0

Table S2. Interspecific pairwise distance of *Ophelimus* species based on 28S sequences (%).

Species	1	2	3	4	5
1 <i>O. bipolaris</i>		1.9	0.5–0.7	2.5	2.5
2 <i>O. eucalypti</i> "Maid"			1.3–1.5	1	1
3 <i>O. eucalypti</i> "Trans"				2–2.2	2–2.2
4 <i>O. maskelli</i>					0.3–1.7
5 <i>O. mediterraneus</i>					

Table S3. Interspecific pairwise distance of *Ophelimus* species based on COI sequences (%).

Species	1	2	3	4
1 <i>O. bipolaris</i>		16.1–18.4	9.3–18.1	7.7
2 <i>O. maskelli</i>			7.5–28.6	9.7–26.9
3 <i>O. mediterraneus</i>				8.4–8.9
4 <i>O. migdanorum</i>				

Table S4. Summarized data of body measurements (in mm) and best ratios of *O. bipolaris*.

Character	female												male							
	3 setae (n=8)				4 setae (n=24)				5 setae (n=9)				3 setae (n=14)				4 setae (n=13)			
	min	max	mean	SD	min	max	mean	SD	min	max	mean	SD	min	max	mean	SD	min	max	mean	SD
BL	1.1	1.6	1.29	0.178	1.2	1.8	1.52	0.184	1.32	1	1.58	0.157	1	1.2	1.1	0.06	1.01	1.2	1.11	0.07
MvL	0.194	0.214	0.206	0.008	0.198	0.22	0.212	0.005	0.212	0.219	0.214	0.002	0.194	0.21	0.204	0.007	0.195	0.21	0.203	0.006
StvL	0.11	0.12	0.113	0.003	0.101	0.128	0.116	0.007	0.113	0.124	0.119	0.003	0.11	0.115	0.112	0.002	0.11	0.115	0.112	0.002
PmvL	0.037	0.049	0.041	0.004	0.04	0.051	0.046	0.003	0.042	0.051	0.048	0.003	0.036	0.042	0.039	0.002	0.036	0.042	0.039	0.002
MetL	0.022	0.027	0.024	0.002	0.023	0.029	0.026	0.002	0.022	0.029	0.026	0.002	0.023	0.026	0.024	0.001	0.023	0.027	0.024	0.001
PpL	0.046	0.052	0.05	0.002	0.049	0.058	0.052	0.003	0.049	0.057	0.052	0.003	0.048	0.052	0.05	0.001	0.047	0.052	0.05	0.001
Best Ratios																				
MvL/StvL	1.764	1.875	1.82	0.046	1.719	1.96	1.828	0.071	1.766	1.876	1.8	0.033	1.764	1.875	1.816	0.037	1.772	1.842	1.814	0.024
PmvL/StvL	0.336	0.408	0.36	0.022	0.368	0.413	0.395	0.012	0.372	0.413	0.4	0.016	0.327	0.368	0.35	0.014	0.327	0.368	0.346	0.013
PpL/MetL	1.96	2.174	2.091	0.074	1.857	2.167	2.026	0.104	1.857	2.227	2.022	0.112	1.962	2.174	2.088	0.064	1.926	2.217	2.056	0.084

Note: BL=body length; MvL=marginal vein length; StvL=stigmatal vein length; PmvL=postmarginal vein length; MetL=metascutellum length; PpL=propodeum length.

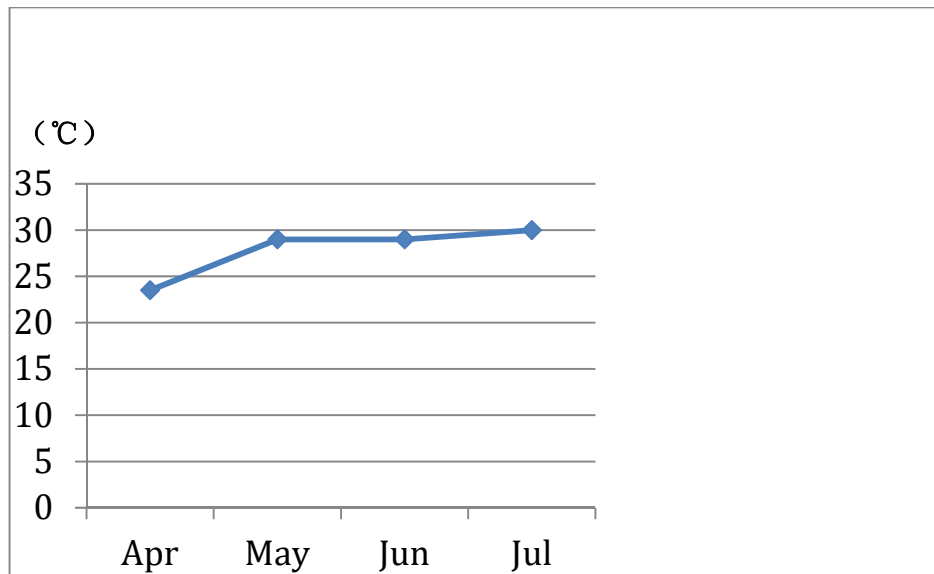


Figure S1. Average temperatures of Guangzhou from April to July, 2021.
(Data from China Meteorological Data Service Center.)

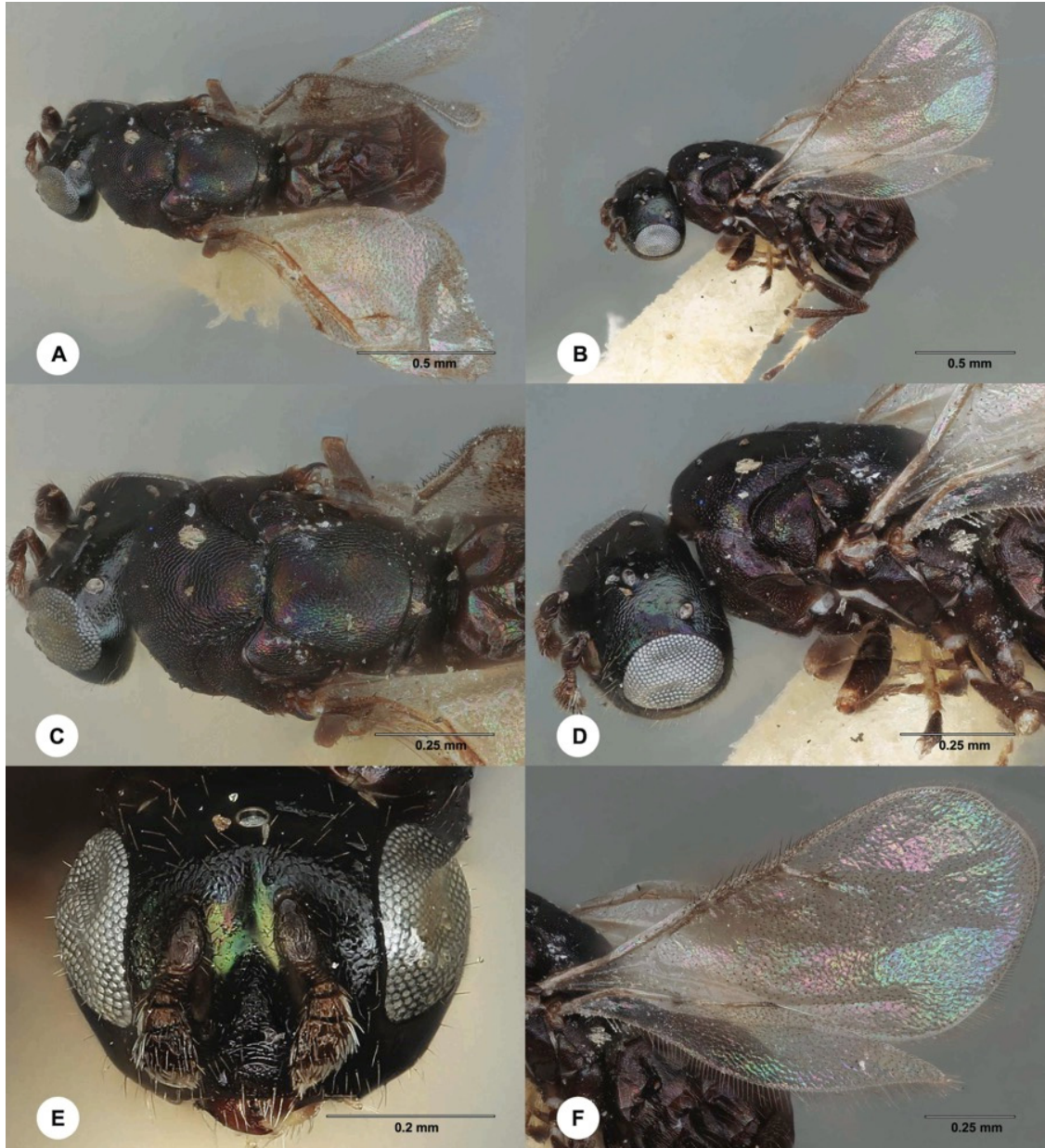


Figure S2. *Rhicnopeltella eucalyptis* Gahan, holotype, female **A** Habitus, dorsal view **B** Habitus, lateral view **C** Head and mesosoma, dorsal view **D** Head and mesosoma, lateral view **E** Head, anterior view **F** Wings. (Images are used with permission from NMNH.)