

**Supplementary Table S1.** Body area of leaf beetles and hole area.

Image #	Leaf beetle species	Beetle body length (mm)	Beetle body area ( $\text{mm}^2$ )	Hole area ( $\text{mm}^2$ )	Date	Location
1	<i>Orthaltica</i> sp.	1.67	1.33	0.30	6/15/2012	China
2	<i>Chaetocnema</i> sp.	1.72	1.41	0.35	11/23/2013	Bolivia
3	<i>Chaetocnema</i> sp.	2.1	1.39	0.31	6/15/2012	China
4	<i>Chaetocnema</i> sp.	2.1	2.05	0.24	6/15/2012	China
5	<i>Xuthea</i> sp.	2.1	1.50	0.43	6/14/2012	China
6	<i>Longitarsus</i> sp.	2.43	3.33	2.64	6/15/2012	China
7	<i>Diosyphraea</i> sp.	2.6	2.48	1.62	11/26/2013	Bolivia
8	<i>Diosyphraea</i> sp.	2.65	2.84	2.02	11/26/2013	Bolivia
9	<i>Diosyphraea</i> sp.	2.65	4.32	1.76	11/26/2013	Bolivia
10	<i>Chanealtica cuevas</i>	3	3.86	1.12	11/27/2013	Bolivia
11	<i>Chanealtica cuevas</i>	3	4.22	1.06	11/27/2013	Bolivia
12	<i>Chanealtica cuevas</i>	3	3.30	2.53	11/27/2013	Bolivia
13	<i>Chanealtica cuevas</i>	3	3.99	1.84	11/28/2013	Bolivia
14	<i>Trachytetra lewisi</i>	3.4	5.02	0.70	6/13/2012	China
15	<i>Chaetocnema</i> sp.	3.4	6.71	2.82	6/15/2012	China
16	<i>Podagrion</i> sp.	3.45	5.24	0.64	6/15/2012	China
17	<i>Diphaulaca</i> sp.	4.1	6.03	5.16	12/12/2013	Bolivia
18	<i>Systena</i> sp.	4.27	5.09	4.61	11/25/2013	Bolivia
19	<i>Neolema</i> sp.	5.27	10.06	4.94	11/28/2013	Bolivia
20	<i>Physimerus</i> sp.	6.18	12.26	4.72	11/25/2013	Bolivia
21	<i>Sphaeroderma</i> sp.	6.29	17.26	7.57	6/14/2012	China
22	<i>Xuthea</i> sp.	6.37	13.93	6.70	6/14/2012	China
23	Galerucine	7.2	17.45	14.94	6/9/2012	China
24	<i>Eumolpinae</i>	8	23.00	20.92	11/25/2013	Bolivia
25	<i>Asphaera</i> sp.	8.72	36.23	12.30	11/25/2013	Bolivia

The sample information and measurements based on 25 photographs of leaf beetles feeding on their host plants (25 leaf beetle individuals, 15 species), as showing in Fig. 2A.

Supplementary Table S2. Computer-simulated predation experiment data.

	0	Vol0.0Num0	Vol0.125Num5	Vol0.125Num10	Vol0.125Num100	Vol0.25Num5	Vol0.25Num10	Vol0.25Num100	Vol0.25Num50	Vol0.25Num100	Vol0.5Num5	Vol0.5Num100	Vol0.5Num50	Vol0.5Num100	Vol1.0Num5	Vol1.0Num100	Vol1.0Num50	Vol1.0Num100	Vol2.0Num5	Vol2.0Num10	Vol2.0Num50	Vol2.0Num100	Vol4.0Num5	Vol4.0Num100	Vol4.0Num50	Vol4.0Num100	Vol8.0Num5	Vol8.0Num100	Vol8.0Num50	Vol8.0Num100	
VOL	0	0	0.125	0.125	0.125	0.25	0.25	0.25	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NUM	0	5	10	50	100	5	10	50	5	10	50	5	100	5	100	5	100	5	100	5	100	5	100	5	100	5	100	5	100	5	100
Person 1	0.8523	0.7807	0.8867	0.9153	0.8790	0.9357	0.8580	0.8660	0.1010	0.9130	0.9403	0.8970	0.9183	0.9063	0.1070	0.1040	0.1067	0.1047	0.1130	0.9913	0.7180	0.8043	0.8490	0.8550	0.1020	0.1067	0.9900	0.9263	0.9477		
Person 2	0.7097	1.0123	0.7140	0.9277	0.9850	0.8027	0.9637	0.8130	1.1010	0.9963	1.0027	0.9707	0.9913	1.0382	0.9450	0.9620	0.9337	0.8907	0.7543	0.7730	0.8490	1.0433	0.7443	0.8893	0.7980	0.8540	0.8737	1.0060	1.1273	0.9880	
Person 3	0.6917	0.7780	0.6737	0.7163	0.9957	0.6817	0.8637	0.7750	0.8407	0.7707	1.1910	0.7387	0.8117	0.9433	0.7623	0.8070	0.7157	0.7990	0.8653	0.7787	0.8580	0.8257	0.6667	0.8227	0.8687	0.7893	0.8350	0.7917	0.9880		
Person 4	0.7830	0.8640	1.0133	0.8067	0.9582	0.9490	0.9108	1.0020	0.9460	0.9827	1.1823	0.1030	1.0700	0.8287	1.0270	1.0140	0.8307	1.1037	1.0430	1.2533	1.0433	1.3093	1.1507	1.4147	1.0413	1.0517	1.2505	1.2505	1.2505		
Person 5	0.8307	0.7163	0.1917	0.9367	0.9560	0.9042	1.0333	1.1500	1.0400	0.8983	1.1433	0.9430	1.0567	1.1117	1.0720	0.1003	0.0520	0.0507	0.0777	0.0877	0.7983	0.1750	0.0777	0.0877	0.0877	0.0877	0.0877	0.0877	0.0877	0.0877	0.0877
Person 6	0.8877	0.897	1.1897	0.9367	0.9560	1.0333	1.1500	1.0400	0.8983	1.1433	0.9430	1.0567	1.1117	1.0720	0.1003	0.0520	0.0507	0.0777	0.0877	0.7983	0.1750	0.0777	0.0877	0.0877	0.0877	0.0877	0.0877	0.0877	0.0877	0.0877	
Person 7	1.0160	1.0687	1.1757	1.1583	1.1470	1.0180	0.9173	0.9641	0.9669	0.8100	1.0150	1.0507	1.1163	1.0877	1.0663	1.0147	1.2730	1.1683	1.2023	1.1403	1.1823	0.9947	1.0107	1.2380	0.8913	0.9613	1.1873	1.1873	1.1873		
Person 8	1.7967	0.9707	0.7317	0.9173	0.9617	0.8390	0.6907	1.0767	0.8190	0.8710	0.7953	1.0667	0.9773	0.9477	0.8767	0.9310	0.9287	0.7283	0.8333	1.0017	0.8940	0.7793	0.7763	0.9660	0.8560	1.0180	0.1018	0.1018	0.1018		
Person 9	0.7767	0.8133	0.9387	0.9297	0.7923	0.8573	0.9370	0.9420	0.8440	1.0467	0.7917	0.7200	1.0397	0.8138	0.9643	0.7803	0.9897	1.0617	0.9207	0.7490	1.007	0.8917	0.9077	0.7933	0.9375	0.9375	0.9375	0.9375	0.9375		
Person 10	0.8617	0.7730	0.8870	0.8070	0.10520	0.2070	0.8333	0.8767	0.7803	0.9256	0.9913	0.9413	0.9390	0.8337	0.8500	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563	0.8563
Person 11	0.8010	0.8010	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047	0.9047		
Person 12	0.8120	0.8883	0.8753	0.9100	0.8023	0.9037	0.9753	0.9743	0.8693	0.8417	0.8270	0.8400	0.8297	0.8833	0.9007	0.9290	0.8267	0.8813	0.8463	0.1939	0.8323	0.8663	0.8420	0.8450	0.8767	0.8767	0.8767	0.8767	0.8767		
Person 13	0.8500	0.8697	0.7783	0.8866	0.8793	0.8627	0.8203	0.9120	0.8367	0.8663	1.0080	0.7393	0.8510	0.7380	0.8407	0.8550	0.9570	0.9310	0.8843	0.9330	0.8257	0.8747	0.8443	1.0513	0.9533	0.8460	0.8353	0.8297	0.8297	0.8297	0.8297
Person 14	0.7987	0.7880	0.8317	0.8660	0.8793	0.8627	0.8203	0.9120	0.8367	0.8663	1.0080	0.7393	0.8510	0.7380	0.8407	0.8550	0.9570	0.9310	0.8843	0.9330	0.8257	0.8747	0.8443	1.0513	0.9533	0.8460	0.8353	0.8297	0.8297	0.8297	
Person 15	0.7640	0.7930	0.7647	0.7643	0.8880	0.8557	0.9020	0.8247	0.8357	0.8760	1.0767	0.9203	1.0007	0.8313	0.9327	0.8773	0.7217	0.7330	0.8533	0.8247	0.7607	0.8717	0.8888	0.7653	0.9523	0.7253	0.8330	0.8297	0.8297	0.8297	
Person 16	0.7577	0.7223	0.8517	0.8970	0.8970	0.8517	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970		
Person 17	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700			
Person 18	0.7657	0.8167	1.0057	0.7757	0.7983	0.8500	0.9240	0.9512	0.9344	0.8657	1.0287	0.9483	1.0857	0.7063	1.0257	1.0383	0.7717	0.7493	0.8173	0.8343	0.7233	0.9505	1.0253	0.8043	0.8320	0.9700	0.8817	0.9407	0.8780	0.8543	0.8780
Person 19	0.7817	0.8567	0.7900	0.8263	0.8697	0.8417	0.8713	0.8883	0.9330	0.8783	0.9447	0.8083	1.0590	0.9596	0.8890	1.0203	0.8270	0.9103	0.8587	0.9077	0.8283	0.9497	0.8780	0.8543	0.8780	0.8780	0.8780	0.8780	0.8780		
Person 20	0.7895	0.9197	0.8660	0.8650	0.8997	0.8210	0.7787	0.9163	0.8510	0.9110	0.8373	0.9887	0.9793	0.8227	0.9610	0.9567	1.0033	0.7467	0.8393	0.8280	0.8373	0.8123	0.8393	0.8299	0.8600	0.9577	1.0040	0.8660	0.8433	0.8433	0.8433
Person 21	0.8187	0.7293	0.7950	0.9366	0.8623	0.7447	0.8400	0.9427	0.9955	0.9857	0.9523	1.0217	0.9520	0.9898	0.8552	0.8700	0.7413	0.9097	0.8788	0.8243	0.9310	0.8967	0.8310	0.8773	0.9307	0.9234	0.8773	0.8773	0.8773	0.8773	
Person 22	0.6770	0.677	0.6897	0.7433	0.8813	0.8930	0.7433	0.9700	0.7170	0.7400	0.7123	0.8887	0.9360	0.7210	0.6913	0.8697	0.8917	0.7765	0.8033	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	
Person 23	0.6770	0.677	0.6897	0.7433	0.8813	0.8930	0.7433	0.9700	0.7170	0.7400	0.7123	0.8887	0.9360	0.7210	0.6913	0.8697	0.8917	0.7765	0.8033	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677	0.8677		
Person 24	0.6890	0.7510	0.8083	0.8477	0.8177	0.8355	0.8707	0.9657	1.0323	0.9943	0.8837	0.7850	0.8123	0.8753	1.0757	0.9523	0.8043	0.9980	0.8550	0.8103	0.8473	0.8707	0.9480	0.8867	1.0397	0.8380	0.9347	0.7947	0.8330	0.8330	0.8330
Person 25	0.8273	0.7120	0.8900	0.7833	0.9560	0.9003	0.8423	0.9617	0.8627	0.7557	0.7960	0.7710	0.9955	0.8573	0.9663	0.9390	1.0150	0.8100	0.8590	0.9487	0.8280	0.8230	0.8853	0.8793	0.8810	0.8573	0.8143	0.8537	0.8537	0.8537	
Person 26	1.0068	1.0550	1.1200	1.0042	0.9010	1.0087	1.0597	0.9047	1.0123	1.0323	0.9707	1.1140	1.1053	1.0273	1.0577	1.0053	1.0043	1.1094	1.0387	1.0487	1.0710	0.9686	1.0170	1.1530	1.0687	1.1427	0.9618	1.0507	1.0693	1.0693	
Person 27	0.8626	0.8463	0.7963	0.8060	0.9887	0.9953	0.7560	0.9867	0.8690	0.7900	1.1577	0.8583	0.7977	0.9753	0.9130	0.9803	0.9510	0.8907	0.8343	0.9487	0.8970	0.9141	0.9898	1.0730	1.0886	1.0886	1.0886	1.0886	1.0886		
Person 28	0.7293	0.7717																													

**Supplementary Movie S1.** Feeding time lapse video of *Altica cirsicola* in 2 hr, time speed up 350 times.