4. Supplementary tables S2–S7

Table S2. The *p*-values of post-hoc Tukey HSD test of *Coralliophila galea* shell length associated with different host species. Significant pairwise differences are shown in bold script.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. *Acropora palmata*	—											
2. *Agaricia agaricites*	**0.0021**	—										
3. *Agaricia humilis*	**0.0000**	0.0846	—									
4. *Agaricia lamarcki*	0.1614	0.8581	**0.0033**	—								
5. *Colpophyllia natans*	1.0000	**0.0000**	**0.0000**	**0.0017**	—							
6. *Diploria labyrinthiformis*	0.1356	0.8040	**0.0012**	1.0000	**0.0006**	—						
7. *Madracis auretenra*	**0.0001**	0.5374	1.0000	0.0897	**0.0000**	0.0763	—					
8. *Meandrina meandrites*	**0.0002**	0.9905	0.8146	0.2751	**0.0000**	0.1965	0.9133	—				
9. *Orbicella annularis*	0.0561	0.1535	**0.0000**	1.0000	**0.0000**	1.0000	0.0284	**0.0019**	—			
10. *Orbicella faveolata*	**0.0007**	1.0000	0.4196	0.5877	**0.0000**	0.4962	0.7673	1.0000	**0.0305**	—		
11. *Orbicella franksi*	0.8838	**0.0123**	**0.0000**	0.9008	0.5009	0.8614	**0.0014**	**0.0005**	0.5215	**0.0030**	—	
12. *Pseudodiploria clivosa*	0.9979	0.2126	**0.0020**	0.9339	0.9972	0.9202	**0.0107**	0.0505	0.8412	0.1123	1.0000	—
13. *Pseudodiploria strigosa*	**0.0239**	0.8421	**0.0000**	1.0000	**0.0000**	1.0000	0.0970	0.1020	0.9977	0.4431	0.2418	0.6587

Table S3. The *p*-values of post-hoc Tukey HSD test of *Coralliophila caribaea* shell length associated with different host species. Significant pairwise differences are shown in bold script.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. *Antillogorgia* spp.	—								
2. *Eunicea* spp.	0.5899	—							
3. *Gorgonia* spp.	0.2835	**0.0070**	—						
4. *Pseudoplexaura* spp.	0.9927	0.9663	**0.0496**	—					
5. *Colpophyllia natans*	1.0000	0.8172	0.5032	0.9985	—				
6. *Meandrina meandrites*	0.8116	0.0800	0.9996	0.3504	0.9193	—			
7. *Montastraea cavernosa*	0.9795	0.2594	0.9841	0.7151	0.9940	1.0000	—		
8. *Porites astreoides*	**0.0408**	**0.0002**	1.0000	**0.0022**	0.1661	0.9844	0.8660	—	
9. *Porites porites*	0.5511	**0.0039**	0.9819	**0.0461**	0.8710	1.0000	1.0000	0.7599	—
10. *Siderastrea siderea*	0.2008	**0.0003**	0.9963	**0.0036**	0.6514	1.0000	0.9999	0.8723	1.0000

Table S4. Pairwise comparisons of *Coralliophila galea* shell shape associated with different host species, based on landmark data. Above the diagonal, mean distance between groups in principal component space, below diagonal uncorrected *p*-values. All *p*-values are uncorrected for multiple comparisons. The *p*-values in bold script were significant after Bonferroni correction ($n = 66$). To calculate pairwise comparisons, the full model (Table 5) was compared against a reduced model without the factor host species. All *p*-values are based on 10,000 permutations.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. *Acropora palmata*	—	0.0627	0.0676	0.0512	0.0443	0.0581	0.0556	0.0492	0.0653	0.0339	0.0898	0.0466
2. *Agaricia agaricites*	0.0218	—	0.0196	0.0355	0.0299	0.0229	0.0378	0.0305	0.0276	0.0495	0.0577	0.0324
3. *Agaricia humilis*	0.0314	0.1747	—	0.0408	0.0336	0.0251	0.0324	0.0328	0.0233	0.0510	0.0564	0.0347
4. *Agaricia lamarcki*	0.1256	**0.0003**	0.0020	—	0.0366	0.0344	0.0366	0.0208	0.0360	0.0375	0.0740	0.0289
5. *Colpophyllia natans*	0.2270	0.9782	0.9910	0.5136	—	0.0298	0.0363	0.0318	0.0409	0.0340	0.0675	0.0306
6. *Diploria labyrinthiformis*	0.0673	0.1697	0.3092	0.0169	0.9410	—	0.0339	0.0237	0.0283	0.0415	0.0637	0.0254
7. *Meandrina meandrites*	0.1530	**0.0001**	**0.0004**	0.0034	0.9456	0.0103	—	0.0271	0.0233	0.0441	0.0583	0.0282
8. *Orbicella annularis*	0.1469	**0.0001**	**0.0001**	0.1036	0.8627	0.0621	**0.0005**	—	0.0246	0.0334	0.0644	0.0128
9. *Orbicella faveolata*	0.0271	0.0010	0.0636	0.0051	0.7418	0.0810	0.0234	0.0038	—	0.0518	0.0544	0.0267
10. *Orbicella franksi*	0.6728	**0.0001**	0.0030	0.0160	0.2899	0.0154	0.0107	0.0203	**0.0004**	—	0.0862	0.0337
11. *Pseudodiploria clivosa*	0.0143	0.2529	0.3849	0.0354	0.1164	0.1520	0.2988	0.1010	0.4015	0.0053	—	0.0639
12. *Pseudodiploria strigosa*	0.2626	**0.0001**	**0.0002**	0.0059	0.9520	0.0541	**0.0005**	0.1003	0.0016	0.0455	0.1222	—

Table S5. Pairwise comparisons of *Coralliophila caribaea* shell shape associated with different host species, based on landmark data. Above the diagional, mean distance between groups in principal component space, below diagonal uncorrected *p*-values. All *p*-values are uncorrected for multiple comparisons. The *p*-values in bold script were significant after Bonferroni correction ($n = 45$). To calculate pairwise comparisons, the full model (Table 5) was compared against a reduced model without the factor host species. All *p*-values are based on 10,000 permutations.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. *Antillogorgia* spp.	—	0.0714	0.0589	0.0777	0.0679	0.1151	0.0560	0.1102	0.0505	0.0592
2. *Eunicea* spp.	0.4257	—	0.0775	0.0412	0.0817	0.0765	0.0538	0.1364	0.0532	0.0447
3. *Pseudoplexaura* spp.	0.2177	0.1358	—	0.0883	0.0877	0.1380	0.0595	0.1403	0.0673	0.0705
4. *Colpophyllia natans*	0.0902	0.9576	0.0022	—	0.0714	0.0681	0.0465	0.1262	0.0587	0.0477
5. *Meandrina meandrites*	0.7977	0.7503	0.3415	0.7158	—	0.0967	0.0653	0.0754	0.0448	0.0721
6. *Montastraea cavernosa*	0.0132	0.4623	**0.0001**	0.3617	0.3856	—	0.0937	0.1408	0.0872	0.0805
7. *Porites astreoides*	0.5223	0.8711	0.1929	0.7186	0.7550	0.0607	—	0.1245	0.0444	0.0318
8. *Porites furcata*	0.1784	0.1101	0.0308	0.0853	0.8305	0.0551	0.0682	—	0.1032	0.1304
9. *Porites porites*	0.4803	0.7868	0.0119	0.1784	0.9614	0.0575	0.4751	0.1425	—	0.0410
10. *Siderastrea siderea*	0.1584	0.9079	**0.0002**	0.3027	0.4921	0.0659	0.7761	0.0293	0.1051	—

Table S6. Comparison of allometry within *Coralliophila galea*. In the top diagonal, the first value is the distance between slopes of shell length in principal component space (i.e. the amount of change per unit of growth), the second value is correlation between slope vectors (i.e. the direction of change in shell length). In the bottom diagonal, *p*-values of these two comparisons are shown (again, first *p*-value for the distance between slopes, second *p*-value for the correlation between slopes). All *p*-values are uncorrected for multiple comparisons. The *p*-values in bold script were significant after Bonferroni correction ($n = 45$). To calculate pairwise comparisons, the full model (Table 5) was compared against a reduced model without the interaction between host species and shell length. All *p*-values are based on 10,000 permutations.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. *Agaricia agaricites*	—	0.0075	0.0088	0.0095	0.0092	0.0062	0.0049	0.0049	0.0070	0.0051
	—	0.7345	−0.0404	−0.3484	0.3958	0.4563	0.7473	0.6988	0.5300	0.7675
2. *Agaricia humilis*	0.1913	—	0.0121	0.0141	0.0117	0.0097	0.0086	0.0100	0.0116	0.0092
	0.7373	—	0.0206	−0.5146	0.3427	0.4424	0.6041	0.4073	0.2609	0.5559
3. *Agaricia lamarcki*	**0.0008**	0.0012	—	0.0053	0.0075	0.0041	0.0071	0.0067	0.0068	0.0096
	0.0001	0.0139	—	0.5420	0.6165	0.7333	0.4266	0.3628	0.5373	0.0570
4. *Colpophyllia natans*	**0.0001**	**0.0001**	0.4487	—	0.0092	0.0063	0.0088	0.0070	0.0079	0.0101
	0.0001	**0.0001**	0.2025	—	0.3405	0.2515	0.0217	0.2282	0.3074	−0.1306
5. *Diploria labyrinthiformis*	0.0129	0.0139	0.2454	0.0293	—	0.0067	0.0064	0.0063	0.0056	0.0093
	0.0777	0.2060	0.5269	0.0946	—	0.7364	0.7409	0.7673	0.8119	0.4489
6. *Meandrina meandrites*	0.0268	0.0187	0.8481	0.0653	0.3121	—	0.0047	0.0043	0.0059	0.0069
	0.0094	0.1701	0.5636	0.0056	0.7275	—	0.7627	0.7262	0.6598	0.5240
7. *Orbicella annularis*	0.0085	0.0180	0.0048	**0.0001**	0.2049	0.0809	—	0.0037	0.0042	0.0042
	0.0343	0.2656	0.0155	**0.0001**	0.5384	0.1728	—	0.8657	0.8484	0.8542
8. *Orbicella faveolata*	0.2619	0.0168	0.1294	0.0161	0.5120	0.6807	0.5741	—	0.0047	0.0049
	0.2091	0.1582	0.0386	0.0017	0.8443	0.4430	0.6907	—	0.8039	0.7970
9. *Orbicella franksi*	0.0776	0.0078	0.2806	0.0551	0.8384	0.3812	0.7341	0.8374	—	0.0073
	0.1294	0.1032	0.2834	0.0461	0.9550	0.4404	0.8176	0.8802	—	0.5735
10. *Pseudodiploria strigosa*	0.0624	0.0224	**0.0001**	**0.0001**	0.0103	0.0051	0.0804	0.3188	0.0539	—
	0.2398	0.2934	**0.0009**	**0.0001**	0.1137	0.0240	0.3534	0.5881	0.1991	—

Table S7. Comparison of allometry within *Coralliophila caribaea*. In the top diagional, the first value is the distance between slopes of shell length in principal component space (i.e. the amount of change per unit of growth), the second value is correlation between slope vectors (i.e. the direction of change in shell length). In the bottom diagonal, *p*-values of these two comparisons are shown (again, first *p*-value for the distance between slopes, second *p*-value for the correlation between slopes). All *p*-values are uncorrected for multiple comparisons. The *p*-values in bold script were significant after Bonferroni correction ($n = 3$). To calculate pairwise comparisons, the full model (Table 5) was compared against a reduced model without the interaction between host species and shell length. All *p*-values are based on 10,000 permutations.

	1.	2.	3.
1. *Pseudoplexaura* spp.	—	0.0110	0.0087
	—	0.4419	−0.3287
2. *Porites porites*	0.4658	—	0.0123
	0.7390	—	0.1877
3. *Siderastrea siderea*	0.2943	0.1155	—
	0.0165	0.2387	—