

## Online Supplement

S1. Number of shells collected from seagrass beds and interspersed sand-flats from 13 sites in Swan. Bat Gra+ = live adult *B. australis* with attached dense fronds of the coarsely branched red alga *Gracilaria Comosa*. Bat Gra- = live adult *B. australis* without *G. comosa*, Bat Small = *B. australis* recruits with shell length less than 1,3 cm, Bat Empty = empty shells of adult *B. australis*, Bat Hermit = shells of adult *B. australis* occupied by hermit crabs, Bedeva = adult *Bedeva paiva*, Nassarius = adult *Nassarius pauperatus*.

Habitat\Site	1	2	3	4	5	6	7	8	9	10	12	13	Total
Seagrass Bat Empty	51		10	20	20	20	20	20	20	20	20	20	241
Seagrass Bat Gra+	52		10	10	20	20	20	20	20	20	21	20	233
Seagrass Bat Gra-	220		10	20	20	20	20	20	20	20	20	20	410
Seagrass-Bat Hermit	50		10	20	20	20	20	20	20	20	20	20	240
Seagrass-Bat Small	45		8								28		81
Seagrass-Bedeva	65		10	20	20			20	20	10	19	20	204
Seagrass-Nassarius	66		11	20	20	20	20	20	30	30	20	30	287
Sand Bat Empty	50	10	10	20	20	20	20	20	20	20	20	20	250
Sand Bat Gra-	50	10	10	20	20	20	20	20	20	20	20	20	250
Sand Bat Gra+	50	10	10	20	20	20	20	20	20	16	17	20	243
Sand Bat Hermit	50	10	10	20	20	20	20	20	20	20	20	20	250
Sand Bat Small	45										20		65
Sand Bedeva	51	10		20	21			20	16	20	20	16	194
Sand Nassarius	50	10	10	20	20	20	20	26	24	34	20	24	278
<b>Total</b>	<b>895</b>	<b>60</b>	<b>119</b>	<b>230</b>	<b>241</b>	<b>200</b>	<b>200</b>	<b>246</b>	<b>250</b>	<b>250</b>	<b>285</b>	<b>250</b>	<b>3226</b>

S2. Permanova analysis testing for effects of habitat (ha) and shell type (Sn) on taxonomic richness and density of solitary and modular epibionts (999 permutations, Euclidian distance, Log x+1 transformed data).

<b>Source</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>Pseudo-F</b>	<b>P(perm)</b>	<b>Unique perms</b>
ha	1	7.2953E-2	7.2953E-2	0.26601	0.597	995
Sn	6	43.757	7.2928	26.592	0.001	999
haxSn	6	1.0036	0.16727	0.60992	0.731	998
Res	138	37.846	0.27425			
Total	151	82.862				

S3. Pair-wise comparison test following Permanova (S2). Results are shown graphically in figure 2.

<b>Figure 2a</b>				<b>Unique</b>
<b>Groups</b>	<b>Groups</b>	<b>t</b>	<b>P(perm)</b>	<b>perms</b>
Bat Empty	Bat Gra-	0.21206	0.837	999
Bat Empty	Bat Gra+	91.155	<b>0.001</b>	997
Bat Empty	Bat Hermit	25.925	<b>0.015</b>	997
Bat Empty	Bat Small	45.081	<b>0.001</b>	994
Bat Empty	Bedeva	31.123	<b>0.004</b>	997
Bat Empty	Nassarious	80.137	<b>0.001</b>	996
Bat Gra-	Bat Gra+	84.063	<b>0.001</b>	996
Bat Gra-	Bat Hermit	22.773	<b>0.03</b>	998
Bat Gra-	Bat Small	43.554	<b>0.001</b>	997
Bat Gra-	Bedeva	31.741	<b>0.003</b>	998
Bat Gra-	Nassarious	78.486	<b>0.001</b>	998
Bat Gra+	Bat Hermit	61.868	<b>0.001</b>	995
Bat Gra+	Bat Small	13.235	<b>0.001</b>	999
Bat Gra+	Bedeva	13.051	<b>0.001</b>	997
Bat Gra+	Nassarious	21.114	<b>0.001</b>	995
Bat Hermit	Bat Small	63.278	<b>0.001</b>	996
Bat Hermit	Bedeva	56.871	<b>0.001</b>	995
Bat Hermit	Nassarious	11.095	<b>0.001</b>	998
Bat Small	Bedeva	25.075	<b>0.023</b>	998
Bat Small	Nassarious	0.24149	0.795	996
Bedeva	Nassarious	44.279	<b>0.001</b>	995
<b>Figure 2b</b>				<b>Unique</b>
<b>Groups</b>	<b>Groups</b>	<b>t</b>	<b>P(perm)</b>	<b>perms</b>
Bat Empty	Bat Gra-	10.699	0.301	998
Bat Empty	Bat Gra+	47.729	<b>0.001</b>	996
Bat Empty	Bat Hermit	1.851	0.07	999
Bat Empty	Bat Small	41.877	<b>0.001</b>	998
Bat Empty	Bedeva	19.369	0.058	998
Bat Empty	Nassarious	93.081	<b>0.001</b>	996
Bat Gra-	Bat Gra+	52.799	<b>0.001</b>	998
Bat Gra-	Bat Hermit	25.949	<b>0.014</b>	994
Bat Gra-	Bat Small	2.7	<b>0.01</b>	998
Bat Gra-	Bedeva	0.92407	0.383	999
Bat Gra-	Nassarious	6.844	<b>0.001</b>	992
Bat Gra+	Bat Hermit	18.296	0.068	995
Bat Gra+	Bat Small	81.439	<b>0.001</b>	994
Bat Gra+	Bedeva	55.915	<b>0.001</b>	995
Bat Gra+	Nassarious	15.325	<b>0.001</b>	995
Bat Hermit	Bat Small	40.457	<b>0.001</b>	999
Bat Hermit	Bedeva	31.116	<b>0.003</b>	995

Bat Hermit	Nassarious	91.028	<b>0.001</b>	996
Bat Small	Bedeva	16.319	0.127	997
Bat Small	Nassarious	2.094	<b>0.043</b>	999
Bedeva	Nassarious	47.677	<b>0.001</b>	994

<b>Figure 2c</b>				<b>Unique</b>
<b>Groups</b>	<b>Groups</b>	<b>t</b>	<b>P(perm)</b>	<b>perms</b>
Bat Empty	Bat Gra-	0.94988	0.313	995
Bat Empty	Bat Gra+	1.6618	0.092	993
Bat Empty	Bat Hermit	2.5282	<b>0.009</b>	997
Bat Empty	Bat Small	2.4679	<b>0.019</b>	997
Bat Empty	Bedeva	0.86094	0.367	995
Bat Empty	Nassarious	9.0458E-2	0.917	996
Bat Gra-	Bat Gra+	0.7929	0.424	998
Bat Gra-	Bat Hermit	1.691	0.088	995
Bat Gra-	Bat Small	3.4948	<b>0.006</b>	997
Bat Gra-	Bedeva	1.8988	0.079	993
Bat Gra-	Nassarious	0.77918	0.443	998
Bat Gra+	Bat Hermit	0.80146	0.44	998
Bat Gra+	Bat Small	3.9415	<b>0.002</b>	998
Bat Gra+	Bedeva	2.596	<b>0.012</b>	996
Bat Gra+	Nassarious	1.4382	0.138	996
Bat Hermit	Bat Small	5.17	<b>0.001</b>	996
Bat Hermit	Bedeva	3.6236	<b>0.001</b>	996
Bat Hermit	Nassarious	2.2001	<b>0.031</b>	995
Bat Small	Bedeva	1.9611	0.091	997
Bat Small	Nassarious	2.275	<b>0.028</b>	999
Bedeva	Nassarious	0.88041	0.383	998