The following supplement accompanies the article

Patterns and processes of compositional change in a California epibenthic community

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SUPPLEMENT. Expanded methodological and statistical details of studies addressing the patterns and processes of compositional change in a California epibenthic community.

Table S1. Measurement intervals for recruitment data collected in Bodega Harbor (CA) in 2005–09

		Interval				
Year	Season	1 wk	2 wk	3 wk	4 wk	No data
2005	Summer	x				
	Fall					x
2006	Winter		x			
	Spring		x			
	Summer		x			
	Fall		x			
2007	Winter				x	
	Spring	x				
	Summer		x			
	Fall		x			
2008	Winter					x
	Spring					x
	Summer	x				
	Fall		x			
2009	Winter					x
	Spring			x		
	Summer	x				

Table S2. Structural equation model results from 4 alternate models of the effects of temperature on the recruitment of 15 epibenthic species, and of all natives, all non-natives, and all species. Given for each model is the recruitment transformation (Trans.), R^2 for recruitment, and unstandardized path coefficient between temperature (T), chl *a* (C), and/or salinity (S) and recruitment (*R*), along with the coefficient p values

Model	T (temperature only)				CT,ST,CST	CT (chl *a* and temperature)					ST (salinity and temperature)					CST (chl *a*, salinity, and temperature)						
Value	Trans.	R^2	T–*R*	p (T–*R*)	Trans.	R^2	T–*R*	p (T–*R*)	C–*R*	p (C–*R*)	R^2	T–*R*	p (T–*R*)	S–*R*	p (S–*R*)	R^2	T–*R*	p (T–*R*)	C–*R*	p (C–*R*)	S–*R*	p (S–*R*)
All species	Sqrt	0.280	0.603	<.001	Y^0.1	0.580	0.052	<.001	0.372	0.316	0.612	0.037	0.068	–0.041	0.050	0.627	0.030	0.116	0.440	0.261	–0.043	0.013
All native species	Sqrt	0.090	0.323	0.004	Y^0.1	0.438	0.031	0.270	0.309	0.628	0.438	–0.001	0.975	–0.073	0.033	0.443	–0.008	0.846	0.429	0.543	–0.075	0.035
All non-native species	Sqrt	0.432	0.498	<.001	Y^0.1	0.686	0.057	<.001	0.166	0.508	0.683	0.059	<.001	0.000	0.977	0.686	0.057	0.001	0.168	0.505	–0.001	0.930
Bowerbankia gracilis	Y^0.1	0.145	0.080	0.003	Y^0.1	0.367	0.142	<.001	0.540	0.485	0.393	0.122	0.002	–0.057	0.154	0.406	0.112	0.013	0.636	0.403	–0.060	0.168
Bugula neritina	Y^0.1	0.440	0.208	<.001	Sqrt	0.322	0.123	<.001	0.849	0.209	0.318	0.114	<.001	–0.042	0.195	0.347	0.099	<.001	0.923	0.177	–0.046	0.151
***Schizoporella* sp.**	Sqrt	0.288	0.113	<.001	Sqrt	0.311	0.064	<.001	–0.158	0.744	0.317	0.069	0.003	0.014	0.535	0.322	0.072	0.002	–0.182	0.704	0.015	0.494
Watersipora subtorquata	Sqrt	0.435	0.244	<.001	Sqrt	0.774	0.200	<.001	–0.409	0.459	0.781	0.176	<.001	–0.037	0.257	0.783	0.182	<.001	–0.352	0.510	–0.035	0.263
Bugula californica	Y^0.1	0.013	0.001	0.976	Y^0.1	0.083	0.025	0.471	–1.228	0.082	0.020	0.016	0.645	0.014	0.772	0.089	0.036	0.284	–1.260	0.083	0.020	0.663
Botrylloides violaceus	Sqrt	0.435	0.135	<.001	Sqrt	0.557	0.190	<.001	0.540	0.434	0.568	0.174	<.001	–0.046	0.277	0.578	0.164	0.001	0.619	0.369	–0.049	0.249
Botryllus schlosseri	Sqrt	0.335	0.176	<.001	Y^0.1	0.409	0.134	<.001	0.996	0.137	0.389	0.139	0.003	–0.017	0.717	0.413	0.122	0.002	1.032	0.135	–0.022	0.569
Diplosoma listerianum	Sqrt	0.152	0.232	0.040	Y^0.1	0.536	0.082	0.020	–0.596	0.403	0.552	0.101	0.013	0.056	0.175	0.563	0.113	0.004	–0.691	0.351	0.060	0.069
Didemnum vexillum	Sqrt	0.205	0.070	<.001	Sqrt	0.499	0.033	0.141	1.666	<.001	0.285	0.065	0.025	0.019	0.410	0.503	0.038	0.182	1.647	<.001	0.012	0.587
Distaplia occidentalis	Sqrt	0.082	0.303	0.010	Y^0.1	0.361	0.004	0.923	0.661	0.391	0.423	–0.032	0.482	–0.091	0.021	0.440	–0.045	0.407	0.813	0.333	–0.095	0.020
Metridium senile	Y^0.1	0.020	0.012	0.526	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
***Spirorbis* sp.**	Sqrt	0.265	0.045	<.001	Sqrt	0.317	0.024	0.044	0.030	0.896	0.359	0.033	0.032	0.017	0.092	0.359	0.033	0.031	0.002	0.993	0.017	0.091
Barnacles	Sqrt	0.034	–0.004	0.476	Sqrt	0.122	0.008	0.304	–0.179	0.097	0.076	0.007	0.225	0.003	0.743	0.129	0.010	0.120	–0.185	0.083	0.004	0.648
***Obelia* spp.**	Y^0.1	0.050	0.007	0.790	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sponges	Sqrt	0.257	0.026	<.001	Sqrt	0.218	0.020	0.024	–0.164	0.173	0.241	0.024	0.026	0.012	0.088	0.275	0.027	0.012	–0.184	0.127	0.013	0.065

Fig. S1. Abundance (percent cover ± SE) of non-native and native species after 7 mo of community development on settlement plates ($N = 4$) deployed at Mason's Marina (Boyd's (1972) study site) and Spud Point Marina (study site for contemporary surveys). At each site, 100 cm^2 PVC plastic plates were deployed from June 2006 through January 2007. There was no difference in non-native (*t*-test $p = 0.40$) or native (*t*-test $p = 0.76$) species proportions between the 2 locations, which are <300 m apart in Bodega Harbor

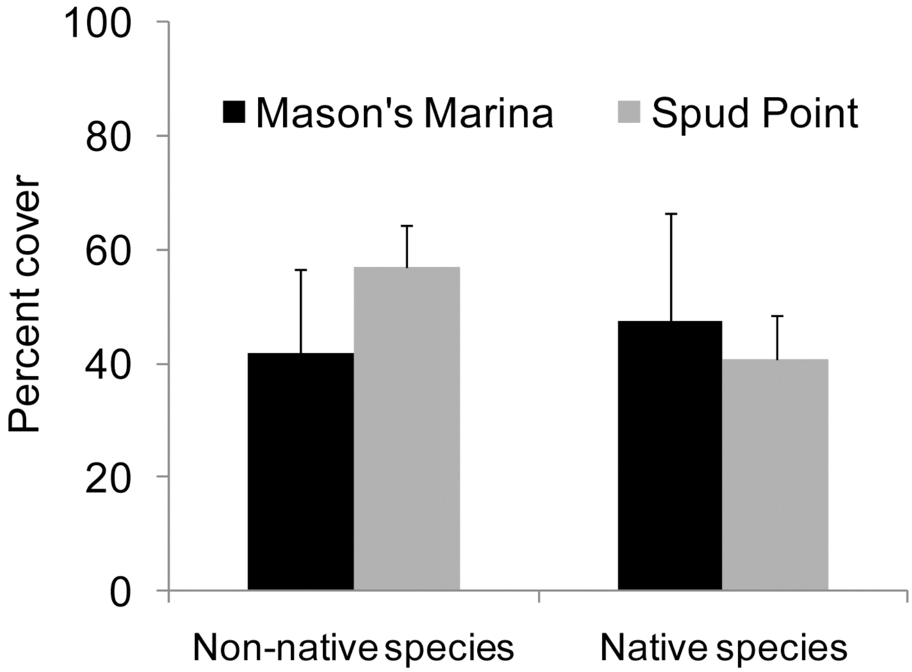

Fig. S2. Abundance (percent cover ± SE) of (A) non-native and native species, and (B) individual species after 3 mo of community development on 100 cm^2 settlement plates (N = 4) composed of 2 substrata: masonite and PVC plastic. There was no difference between substrata in species composition (see Methods) or in abundances of native and non-native species (t-test $p > 0.2$). Furthermore, natives tended to be more abundant on PVC, which contrasts with the expected pattern of abundance if their observed decline was driven by differential recruitment between settlement substrata

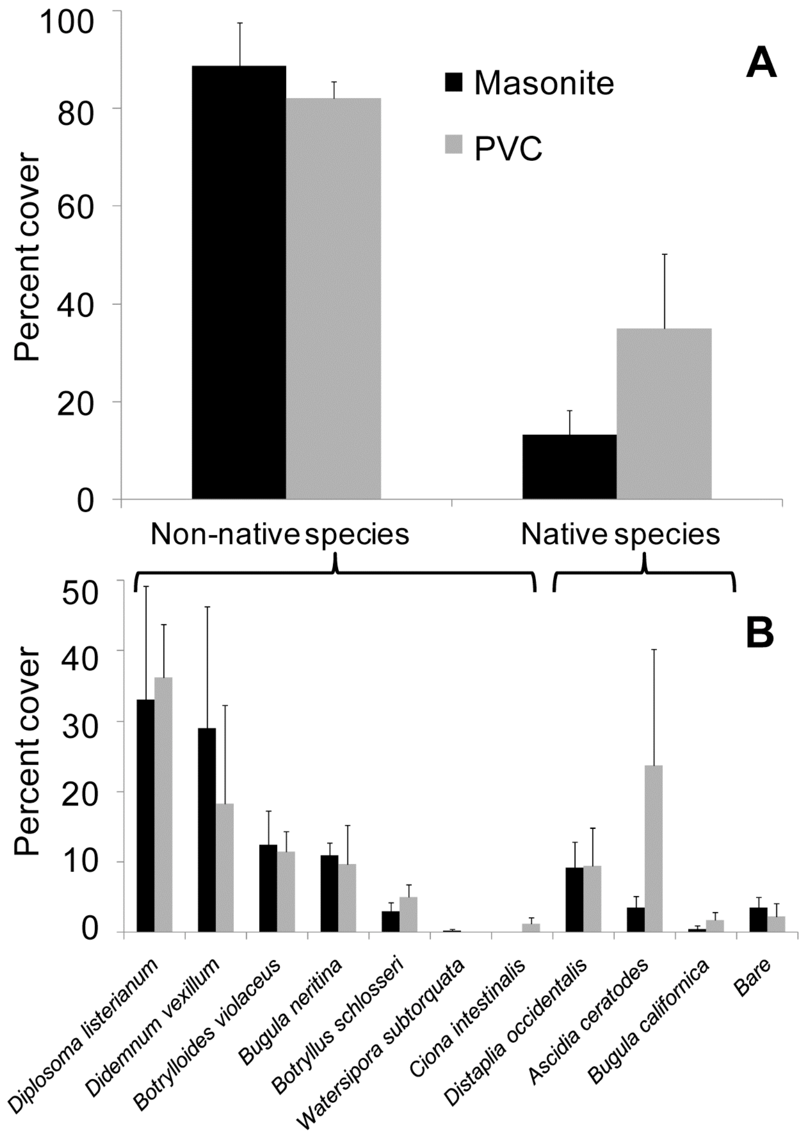

Fig. S3. Sampling timelines for recruitment, temperature, and water (for salinity and chl *a* measurements) from May 2005 to September 2009