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Supplementary Data

The dynamics of phytobenthos and its main drivers on abrasion platforms with vermetids (Alicante, Southeastern Iberian Peninsula)

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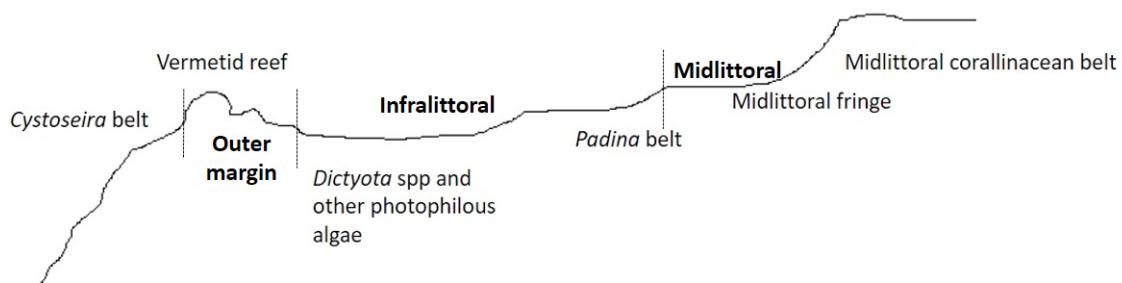


Figure S1: Schematic representation of the main belts found in the abrasion platforms at 10 locations in the Southeastern Iberian Peninsula (according to the present work and Terradas-Fernández, 2014). The outer wall (beyond the outer margin), usually having a significant presence of Fucales and/or articulated Corallinaceae, was not sampled in this study. The main zones were typified following Pérès & Picard (1964).

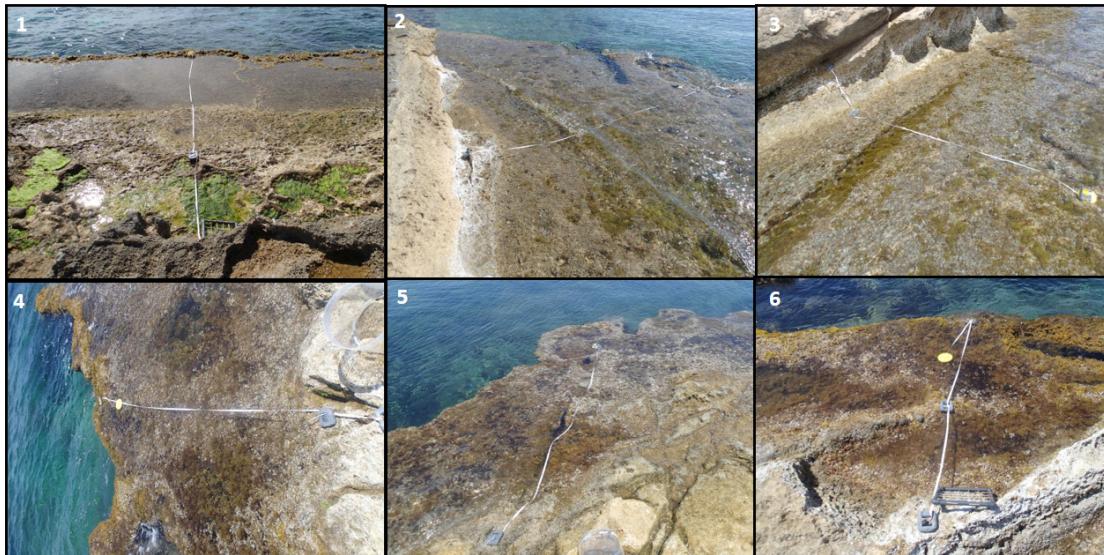


Figure S2: Areas where the six transects were performed. Numbers indicate each specific transect. The first three transects were performed at the Cabo de las Huertas location. The last three transects were performed at Isla de Tabarca. Exact positions of each transect are as follows:

Transect 1: 38.35319° N, 0.42089° W. Transect 2: 38.35340° N, 0.42053° W.
Transect 3: 38.35323° N, 0.42156° W. Transect 4: 38.16701° N, 0.48498° W.
Transect 5: 38.16702° N, 0.48424° W. Transect 6: 38.166990 ° N, 0.48450° W.

Table S1. Taxa found in all the zones studied at Cabo de las Huertas and Isla de Tabarca during an entire year: A, midlittoral; B, infralittoral; C, platform outer margin. Results are shown based on the seasonal average coverage (%). Some taxa were identified at genus or other higher taxonomic levels. Only taxa in bold were quantified. The remainder of taxa were identified in the laboratory from collected samples and adjoined at higher taxonomic categories easier to detect in the field. Standard deviation (σ) is also shown.

SEASON	Midlittoral zone							
	Spring		Summer		Autumn		Winter	
LOCATION	Huertas	Huertas	Huertas	Huertas	Huertas	Huertas	Huertas	Huertas
TAXA	%	σ	%	σ	%	σ	%	σ
<i>Anadyomene stellata</i> (Wulfen) C. Agardh	0	0	0	0	0	0	0	0
<i>Asparagopsis sp - tetrasporophyte</i>	0	0	0	0	0	0	0	0
<i>Ceramium</i> s.l.spp.	0.4	0.8	0	0	0	0	0.1	0.2
<i>Ceramium ciliatum</i> (J.Ellis) Ducluzeau	-	-	-	-	-	-	-	-
<i>Cerithiidae</i>	0.1	0.3	0	0	0.1	0.2	0.1	0.2
<i>Chaetomorpha linum</i> (O.F.Müller) Kützing	0.8	1.7	0	0	0	0	0.1	0.2
<i>Chondria</i> sp.	0.2	0.3	0	0	0	0	0	0
<i>Chondria capillaris</i> (Hudson) M.J.Wynne	0.6	0.8	0.6	1.1	0.2	0.3	0	0
<i>Chthamalus</i> spp.	7.8	3.6	8.5	3.2	5.7	2.1	6.4	2.7
<i>Cladophora</i> spp.	15.1	5.5	8.1	14	6.9	6.7	0.5	0.8
<i>Cladophora dalmatica</i> Kützing	-	-	-	-	-	-	-	-
<i>Cladophora laetevirens</i> (Dillwyn) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora vagabunda</i> (Linnaeus) Hoek			-	-	-	-	-	-
<i>Cladophoropsis membranacea</i> (Hofman Bang ex C.Agardh) Børgesen	0	0	0	0	0	0	0	0
<i>Corallinaceae</i>	23.9	7.4	13.7	11	13	5.2	22.8	2.9
<i>Cystoseira compressa</i> subsp. <i>pustulata</i> (Ercegovic) Verlaque	0	0	0	0	0	0	0	0
<i>Dasya</i> spp.	0	0	0	0	0	0	0	0
<i>Dasya ocellata</i> (Grateloup) Harvey	-	-	-	-	-	-	-	-
<i>Dendropoma lebeche</i> Templado, Richter & Calvo, 2016	5.3	2	1.9	0.2	2.5	2.4	6.9	0.3
<i>Echinolittorina punctata</i> (Gmelin, 1791)	0.1	0.3	0.2	0.3	0	0	0.1	0.2
<i>Ectocarpaceae</i>	0	0	0	0	0	0	0.1	0.2
<i>Ectocarpus fasciculatus</i> Harvey	-	-	-	-	-	-	-	-
<i>Feldmannia irregularis</i> (Kützing) G.Hamel	-	-	-	-	-	-	-	-
<i>Feldmannia mitchelliae</i> (Harvey) H.-S.Kim	-	-	-	-	-	-	-	-
<i>Gelidiales</i>	0	0	0.6	1	0.2	0.2	0.2	0.3
<i>Gelidiella lubrica</i> cf.	-	-	-	-	-	-	-	-
<i>Gelidium pusillum</i> (Stackhouse) Le Jolis	-	-	-	-	-	-	-	-
<i>Herposiphonia secunda</i> (C.Agardh) Ambronn	0	0	0	0	0	0	0	0
<i>Jania</i> spp.	1.7	2.8	14.1	7.2	21	4.5	7	5
<i>Laurencia</i> spp.	0	0	0.1	0.2	1.3	0.6	0	0
<i>Laurencia pyramidalis</i> Bory de Saint-Vincent ex Kützing	-	-	-	-	-	-	-	-
<i>Lophosiphonia</i> s.l.spp.	0	0	0	0	0	0	0.3	0
<i>Lophosiphonia cristata</i> Falkenberg	-	-	-	-	-	-	-	-
<i>Polysiphonia scopulorum</i> Harvey	-	-	-	-	-	-	-	-
<i>Melarhaphe neritoides</i> (Linnaeus, 1758)	0.1	0.1	0	0	0	0	0.2	0.3
<i>Mytilidae</i>	0.1	0.1	0	0	0	0	0.2	0.2

<i>Neosiphonia sertularioides</i> (Grateloup) K.W.Nam & P.J.Kang	1.3	2.5	0	0	0	0	0.8	0.8
Oscillatoriaceae	0	0	3.1	5.3	0	0	0	0
<i>Lyngbya confervoides</i> C.Agardh ex Gomont	-	-	-	-	-	-	-	-
<i>Padina pavonica</i> (Linnaeus) Thivy	0	0	0	0	0	0	0	0
<i>Palisada</i> spp.	7.1	3.4	7.6	2.5	4.7	2.8	6.3	2.3
<i>Patella</i> spp.	0.3	0.3	0.4	0.2	0.3	0	0.6	0
<i>Phorcus turbinatus</i> (Born, 1778)	0.6	0.9	0	0	0	0	0.2	0.3
Polyplacophora	0.2	0.2	0.2	0.2	0.5	0.4	0.6	0.2
<i>Polysiphonia opaca</i> (C.Agardh) Moris & De Notaris	0.6	0.7	1.9	1.1	0.8	1.2	0.7	0.4
<i>Pseudochlorodesmis furcellata</i> (Zanardini) Børgesen	0	0	0	0	0	0	0	0
<i>Ralfsia verrucosa</i> (Areschoug) Areschoug	0	0	0	0	0	0	0	0
Red thin turf	0	0	0	0	0	0	0	0
<i>Antithamnionella elegans</i> (Berthold) J.H.Price & D.M.John	-	-	-	-	-	-	-	-
<i>Taenioma nanum</i> (Kützing) Papenfuss	-	-	-	-	-	-	-	-
Rivulariaceae	7.8	4.5	7.5	13	4.8	4.4	5.8	3.9
<i>Scytoniphon lomentaria</i> (Lyngbye) Link	0	0	0	0	0	0	0.6	0.6
<i>Sphacelaria</i> spp.	0	0	0	0	0.3	0.5	0	0
<i>Sphacelaria cirrosa</i> (Roth) C.Agardh	-	-	-	-	-	-	-	-
<i>Sphacelaria tribuloides</i> Meneghini	-	-	-	-	-	-	-	-
<i>Spyridia filamentosa</i> (Wulfen) Harvey	0	0	0.6	1	1	1	0	0
Ulva spp.	17.2	12.3	2.6	4.5	0.6	1	19.1	7.2
<i>Ulva compressa</i> Linnaeus	-	-	-	-	-	-	-	-
<i>Ulva polyclada</i> Kraft	-	-	-	-	-	-	-	-
Vermetus spp.	0.5	0.8	0	0	0.1	0.2	0.9	0.7

SEASON	Spring		Summer		Autumn		Winter	
	Tabarca		Tabarca		Tabarca		Tabarca	
	%	σ	%	σ	%	σ	%	σ
LOCATION								
TAXA								
<i>Anadyomene stellata</i> (Wulfen) C.Agardh	0	0	0	0	0	0	0.8	1.2
<i>Asparagopsis</i> sp - tetrasporophyte	0	0	0	0	0	0	2.9	2.5
<i>Ceramium</i> s.l.spp.	0.4	0.7	0.4	0.7	0	0	3.1	1
<i>Ceramium ciliatum</i> (J.Ellis) Ducluzeau	-	-	-	-	-	-	-	-
Cerithiidae	0	0	0	0	0	0	0	0
<i>Chaetomorpha linum</i> (O.F.Müller) Kützing	0	0	0	0	0	0	0	0
<i>Chondria</i> sp.	0	0	0	0	0	0	0	0
<i>Chondria capillaris</i> (Hudson) M.J.Wynne	0	0	0	0	0	0	0.2	0.2
<i>Chthamalus</i> spp.	0	0	0.4	0.7	0	0	1	1.8
Cladophora spp.	2.5	4.4	0.9	1.4	0	0	2.3	1.5
<i>Cladophora vagabunda</i>	-	-	-	-	-	-	-	-
<i>Cladophora dalmatica</i>	-	-	-	-	-	-	-	-
<i>Cladophora laetevirens</i>	-	-	-	-	-	-	-	-
<i>Cladophoropsis membranacea</i> (Hofman Bang ex C.Agardh) Børgesen	0	0	0.4	0.7	0.4	0.7	0	0
Corallinaceae unidentified	16.5	19.6	24.2	3.6	26	11	26.7	4.4
<i>Cystoseira compressa</i> subsp. <i>pustulata</i> (Ercegovic) Verlaque	0	0	0	0	0	0	0.1	0.1

Dasya spp.	0.4	0.7	0	0	0	0	1.4	2.3
<i>Dasya ocellata</i> (Grateloup) Harvey	-	-	-	-	-	-	-	-
Dendropoma lebeche Templado, Richter & Calvo, 2016	1.2	1.2	0.8	1.4	1.7	0.7	12.4	4.7
Echinolittorina punctata (Gmelin, 1791)	0	0	0	0	0	0	0	0
Ectocarpaceae	0	0	0	0	0	0	2.6	4.5
<i>Ectocarpus fasciculatus</i> Harvey	-	-	-	-	-	-	-	-
<i>Feldmannia irregularis</i> (Kützing) G.Hamel	-	-	-	-	-	-	-	-
<i>Feldmannia mitchelliae</i> (Harvey) H.-S.Kim	-	-	-	-	-	-	-	-
Gelidiales	0	0	0.9	0.7	2.5	4.4	1.8	1.6
<i>Gelidiella lubrica</i> cf.	-	-	-	-	-	-	-	-
<i>Gelidium pusillum</i> (Stackhouse) Le Jolis	-	-	-	-	-	-	-	-
Herposiphonia secunda (C.Agardh) Ambronn	0	0	0	0	0	0	2	1.9
Jania spp.	0	0	0	0	0.4	0.7	2.1	2.1
Laurencia spp.	0.4	0.7	0.8	0.7	0.4	0.8	1.5	0.3
<i>Laurencia pyramidalis</i> Bory de Saint-Vincent ex Kützing	-	-	-	-	-	-	-	-
Lophosiphonia s.l.spp.	0	0	0.8	0.7	0	0	0.8	0.6
<i>Lophosiphonia cristata</i> Falkenberg	-	-	-	-	-	-	-	-
<i>Polysiphonia scopulorum</i> Harvey	-	-	-	-	-	-	-	-
Melarhaphe neritoides (Linnaeus, 1758)	0	0	0	0	0	0	0	0
Mytilidae	0	0	0	0	0	0	0	0
Neosiphonia sertularioides (Grateloup) K.W.Nam & P.J.Kang	0	0	0.4	0.7	0	0	1.8	1.7
Oscillatoriaceae	0	0	0	0	0	0	0.1	0.2
<i>Lyngbya confervoides</i> C.Agardh ex Gomont	-	-	-	-	-	-	-	-
Padina pavonica (Linnaeus) Thivy	0	0	0	0	0	0	0.1	0.1
Palisada spp.	0	0	0	0	0	0	2.1	0.5
Patella spp.	1.8	0.7	0.4	0.7	1.7	1.4	4.3	2.5
Phorcus turbinatus (Born, 1778)	0	0	0	0	0	0	0	0
Polyplacophora	0	0	0.9	0.7	0.4	0.8	0	0
Polysiphonia opaca (C.Agardh) Moris & De Notaris	0	0	0	0	0	0	0.9	1.5
Pseudochlorodesmis furcellata (Zanardini) Børgesen	0	0	0	0	0	0	0.7	1.2
Ralfsia verrucosa (Areschoug) Areschoug	0	0	0	0	0	0	0.6	0.8
Red thin turf	0	0	0	0	0	0	0.1	0.1
<i>Antithamnionella elegans</i> (Berthold) J.H.Price & D.M.John	-	-	-	-	-	-	-	-
<i>Taenioma nanum</i> (Kützing) Papenfuss	-	-	-	-	-	-	-	-
Rivulariaceae	5.6	8.1	28.3	12	4.2	2.9	6.3	1.8
Scytoniphon lomentaria (Lyngbye) Link	0	0	0	0	0	0	1	1.8
Sphacelaria spp.	0	0	0	0	0	0	0.6	1.1
<i>Sphacelaria cirrosa</i> (Roth) C.Agardh	-	-	-	-	-	-	-	-
<i>Sphacelaria tribuloides</i> Meneghini	-	-	-	-	-	-	-	-
Spyridia filamentosa (Wulfen) Harvey	0	0	0	0	0	0	0	0
Ulva spp.	2.5	4.3	0	0	0	0	2.1	3.6
<i>Ulva compressa</i> Linnaeus	-	-	-	-	-	-	-	-
<i>Ulva polyclada</i> Kraft	-	-	-	-	-	-	-	-
Vermetus spp.	0	0	0	0	0	0	0	0

Infralittoral zone

SEASON	Spring		Summer		Autumn		Winter	
	LOCATION		Huertas		Huertas		Huertas	
	TAXA	%	σ	%	σ	%	σ	%
<i>Acanthonyx lunulatus</i> cf.	0	0	0	0	0	0	0	0
<i>Acetabularia acetabulum</i> (Linnaeus) P.C.Silva	0	0	0	0	0	0	0	0
<i>Acrothamnion preissii</i> (Sonder) E.M.Wollaston	0	0	0	0	0	0	0	0
<i>Aiptasia</i> sp.	0	0	0	0	0	0	0.2	0.1
<i>Alsidium corallinum</i> C.Agardh	0	0	0	0	0.2	0.3	0.2	0.3
<i>Amphiroa rigida</i> J.V.Lamouroux	0.1	0.1	0	0	0	0	0.1	0
<i>Asparagopsis</i> sp - tetrasporophyte	0	0	0	0	0	0	0	0
Blenniidae	0	0	0	0	0	0	0	0
<i>Calcinus tubularis</i> (Linnaeus, 1767)	0.2	0.1	0	0.1	0	0	0.1	0
<i>Caulerpa cylindracea</i> Sonder	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2
<i>Caulerpa prolifera</i> (Forsskål) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Ceramium</i> s.l.spp.	0.1	0.1	0.1	0.2	0.1	0.1	0	0
<i>Ceramium codii</i> (H.Richards) Mazoyer	-	-	-	-	-	-	-	-
<i>Ceramium aff. diaphanum</i>	-	-	-	-	-	-	-	-
<i>Ceramium ciliatum</i> (J.Ellis) Ducluzeau	-	-	-	-	-	-	-	-
<i>Ceramium circinatum</i> (Kützing) J.Agardh	-	-	-	-	-	-	-	-
<i>Gayliella flaccida</i> (Harvey ex Kützing) T.O.Cho & L.J.McIvor	-	-	-	-	-	-	-	-
Cerithiidae	0	0	0	0	0	0	0	0.1
<i>Chaetomorpha pachynema</i> (Montagne) Kützing	0	0	0	0	0	0	0	0
<i>Chondria</i> spp.	0	0	0	0	0	0	0	0.1
<i>Chondria capillaris</i> (Hudson) M.J.Wynne	-	-	-	-	-	-	-	-
<i>Chondria dasypylla</i> (Woodward) C.Agardh	-	-	-	-	-	-	-	-
<i>Chthamalus</i> spp.	0	0	0	0	0	0	0	0
<i>Cladophora</i> spp.	0.9	0.9	1.9	1.2	0.2	0.1	0.7	0.2
<i>Cladophora dalmatica</i> Kützing	-	-	-	-	-	-	-	-
<i>Cladophora laetevirens</i> (Dillwyn) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora lehmanniana</i> (Lindenberg) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora nigrescens</i> cf.	-	-	-	-	-	-	-	-
<i>Cladophora prolifera</i> (Roth) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora vagabunda</i> (Linnaeus) Hoek	-	-	-	-	-	-	-	-
<i>Cladophoropsis membranacea</i> (Hofman Bang ex C.Agardh) Børgesen	0	0	0	0	0	0	0	0
<i>Cladosiphon lubricus</i> (Sauvageau) Kylin	0	0.1	0	0	0	0	0	0
<i>Cladostephus spongiosum</i> (Hudson) C.Agardh	0	0	0	0	0	0	0	0
<i>Cliona</i> sp.	0	0	0	0	0	0	0	0
<i>Colpomenia</i> sp.	0	0	0	0	0	0	0	0
<i>Columbella rustica</i> (Linnaeus, 1758)	0	0.1	0	0	0	0.1	0.1	0.1
<i>Conus</i> sp.	0	0	0	0	0	0	0	0
Corallinaceae unidentified	3.6	1.9	0.6	0.2	3.2	1.4	6.1	2.2
<i>Cystoseira algeriensis</i> Feldmann	0.1	0.1	0	0	0	0	0.1	0.1
<i>Cystoseira amentacea</i> (C.Agardh) Bory de Saint-Vincent	0	0	0	0	0	0	0.1	0.1
<i>Cystoseira compressa</i> subsp. <i>pustulata</i> (Ercegovic) Verlaque	9.2	5.2	0	0.1	0	0	2.6	0.9

<i>Dasycladus vermicularis</i> (Scopoli) Krasser	0.2	0.1	0	0	0.1	0	0.2	0.1
<i>Dasya</i> spp.	0	0	0	0	0	0	0	0
<i>Dasya hutchinsiae</i> Harvey	-	-	-	-	-	-	-	-
<i>Dasya ocellata</i> (Grateloup) Harvey	-	-	-	-	-	-	-	-
<i>Dasya rigidula</i> (Kützing) Ardisson	-	-	-	-	-	-	-	-
<i>Dendropoma lebeche</i> Templado, Richter & Calvo, 2016	0.1	0.3	0	0	0	0	0.2	0.3
<i>Dictyota</i> spp.	20.7	7.3	0.4	0.4	10.5	6.6	19	1.5
<i>Dictyota fasciola</i> (Roth) J.V.Lamouroux	-	-	-	-	-	-	-	-
<i>Dictyota mediterranea</i> (Schiffner) G.Furnari	-	-	-	-	-	-	-	-
<i>Dictyota spiralis</i> Montagne	-	-	-	-	-	-	-	-
<i>Echinolittorina punctata</i> (Gmelin, 1791)	0	0	0	0	0	0	0	0
<i>Ectocarpaceae</i>	0	0	0	0	0	0	1.1	1.5
<i>Acinetospora crinita</i> (Carmichael) Sauvageau	-	-	-	-	-	-	-	-
<i>Ectocarpus fasciculatus</i> cf.	-	-	-	-	-	-	-	-
<i>Feldmannia irregularis</i> (Kützing) G.Hamel	-	-	-	-	-	-	-	-
<i>Feldmannia mitchelliae</i> cf.	-	-	-	-	-	-	-	-
<i>Feldmannia paradoxa</i> (Montagne) G.Hamel	-	-	-	-	-	-	-	-
<i>Ellisolandia elongata</i> (J.Ellis & Solander) K.R.Hind & G.W.Saunders	0	0	0	0	0	0	0	0
<i>Elyisia timida</i> (Risso, 1818)	0	0	0	0	0	0	0	0
<i>Eriphia verrucosa</i> (Forskål, 1775)	0	0	0	0	0	0	0	0
<i>Gastroclonium clavatum</i> (Roth) Ardisson	0	0	0	0	0	0	0	0
<i>Gelidiales</i>	0	0	0	0	0	0	0	0
<i>Gelidiella lubrica</i> cf.	-	-	-	-	-	-	-	-
<i>Gelidium pusillum</i> (Stackhouse) Le Jolis	-	-	-	-	-	-	-	-
<i>Halimeda tuna</i> (J.Ellis & Solander) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Halopteris scoparia</i> (Linnaeus) Sauvageau	1.7	0.7	0	0.1	0	0	1.4	1.1
<i>Herposiphonia secunda</i> (C.Agardh) Ambron	0.1	0.2	0	0	0	0	0	0
<i>Hildenbrandia</i> sp.	0	0	0	0	0	0	0	0
<i>Hypnea musciformis</i> (Wulfen) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Jania</i> spp.	3.9	3.2	33.1	19.8	35.9	7.6	20	12.8
<i>Laurencia pyramidalis</i> Bory ex Kützing	0	0	0	0	0	0	0	0
<i>Laurencia</i> sp.	0.1	0.3	0.1	0	0	0.1	0	0
<i>Liagora</i> sp.	0	0	0	0	0	0	0	0
<i>Liagora viscida</i> (Forsskål) C.Agardh	0	0	0	0	0	0	0	0
<i>Lophosiphonia</i> s.l.spp.	0.1	0.3	0.2	0.3	0	0.1	0.1	0.1
<i>Lophosiphonia cristata</i> Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia obscura</i> (C.Agardh) Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia reptabunda</i> (Suhr) Kylin	-	-	-	-	-	-	-	-
<i>Polysiphonia scopulorum</i> Harvey	-	-	-	-	-	-	-	-
<i>Myriactula</i> sp.	0	0	0	0	0	0	0	0
<i>Mytilidae</i>	0	0	0	0	0	0	0	0
<i>Neosiphonia ferulacea</i> (Suhr ex J.Agardh) S.M.Guimarães & M.T.Fujii	0	0	0	0	0	0	0	0
<i>Neosiphonia sertularioides</i> (Grateloup) K.W.Nam & P.J.Kang	0	0	0	0	0	0	0	0
<i>Oscillatoriaceae</i>	0.2	0.3	0	0	0	0	0.8	0.9

<i>Blennothrix lyngbyacea</i> (Kützing ex Gomont) Anagnostidis & Komárek	-	-	-	-	-	-	-	-	-
<i>Lyngbya</i> spp.	-	-	-	-	-	-	-	-	-
<i>Pachygrapsus marmoratus</i> (Fabricius, 1787)	0	0	0	0	0	0	0	0	0
<i>Padina pavonica</i> (Linnaeus) Thivy	45.2	8	19.2	12.9	22.9	1.9	31	10.1	
<i>Palisada</i> spp.	1.7	0.8	0.1	0.1	0.5	0.5	1.7	0.9	
<i>Palisada tenerrima</i> (Cremades) Serio, Cormaci, G.Furnari & Boisset	-	-	-	-	-	-	-	-	-
<i>Patella</i> sp.	0	0	0	0	0	0	0.1	0.1	
<i>Phaeophila dendroides</i> (P.L.Crouan & H.M.Crouan)	0	0	0	0	0	0	0	0	
Batters									
<i>Polysiphonia opaca</i> (C.Agardh) Moris & De Notaris	0	0	0	0	0	0	0.1	0.1	
<i>Pseudochlorodesmis furcellata</i> (Zanardini) Børgesen	0	0	0	0	0	0	0	0	
Red thin turf	0	0	0	0	0	0	0	0.1	
<i>Acrochaetium</i> sp.	-	-	-	-	-	-	-	-	-
<i>Anithamnion cruciatum</i> (C.Agardh) Nägeli	-	-	-	-	-	-	-	-	-
<i>Erythrotrichia carnea</i> (Dillwyn) J.Agardh	-	-	-	-	-	-	-	-	-
<i>Spermothamnion</i> spp.	-	-	-	-	-	-	-	-	-
Rivulariaceae	0.1	0.1	0.1	0.2	0.1	0.1	0	0	
<i>Sabellla</i> sp.	0	0	0	0	0	0	0	0	
<i>Scytosiphon lomentaria</i> (Lyngbye) Link	0	0	0	0	0	0	0.1	0.1	
<i>Siphonocladus pusillus</i> (C.Agardh ex Kützing) Hauck	0	0	0	0	0	0	0	0	
<i>Sphacelaria</i> spp.	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.3	
<i>Sphacelaria cirrosa</i> (Roth) C.Agardh	-	-	-	-	-	-	-	-	-
<i>Sphacelaria rigidula</i> Kützing	-	-	-	-	-	-	-	-	-
<i>Sphacelaria tribuloides</i> Meneghini	-	-	-	-	-	-	-	-	-
<i>Spyridia filamentosa</i> (Wulfen) Harvey	0.4	0.6	0.7	0.8	0	0	0.1	0	
<i>Stramonita haemastoma</i> (Linnaeus, 1767)	0	0	0	0	0	0	0	0	
<i>Symploca</i> sp.	0	0	0	0	0	0	0	0	
<i>Ulva</i> spp.	0.3	0.5	0	0	0	0	0.6	0.9	
<i>Ulva compressa</i> Linnaeus	-	-	-	-	-	-	-	-	-
<i>Ulva polyclada</i> Kraft	-	-	-	-	-	-	-	-	-
<i>Ulva prolifera</i> cf.	-	-	-	-	-	-	-	-	-
<i>Valonia utricularis</i> (Roth) C.Agardh	0	0	0	0	0	0	0	0	
<i>Vermetus</i> spp.	2.5	1	0.4	0.1	1.6	1.1	2.2	0.5	

SEASON	Spring		Summer		Autumn		Winter	
	LOCATION	Tabarca	LOCATION	Tabarca	LOCATION	Tabarca	LOCATION	Tabarca
TAXA	%	σ	%	σ	%	σ	%	σ
<i>Acanthonyx lunulatus</i> cf.	0	0	0	0	0	0	0	0
<i>Acetabularia acetabulum</i> (Linnaeus) P.C.Silva	1.3	1	0	0	0	0	0	0
<i>Acrothamnion preissii</i> (Sonder) E.M.Wollaston	0	0	0	0	0	0	0	0
<i>Aiptasia</i> sp.	0	0.1	0	0	0	0	0	0
<i>Alsidium corallinum</i> C.Agardh	0	0	0	0	0	0	0	0
<i>Amphiroa rigida</i> J.V.Lamouroux	0	0	0	0	0	0.1	0	0
<i>Asparagopsis</i> sp - tetrasporophyte	0	0	0	0	0	0	0.2	0.2
Blenniidae	0	0	0	0	0	0.1	0	0

<i>Calcinus tubularis</i> (Linnaeus, 1767)	0	0	0	0	0	0	0	0
<i>Caulerpa cylindracea</i> Sonder	1	0.9	0	0.1	1	0.5	0.5	0.2
<i>Caulerpa prolifera</i> (Forsskål) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Ceramium</i> s.l.spp.	0.2	0.4	0	0	0.1	0.1	0.2	0.2
<i>Ceramium codii</i> (H.Richards) Mazoyer	-	-	-	-	-	-	-	-
<i>Ceramium aff. diaphanum</i>	-	-	-	-	-	-	-	-
<i>Ceramium ciliatum</i> (J.Ellis) Ducluzeau	-	-	-	-	-	-	-	-
<i>Ceramium circinatum</i> (Kützing) J.Agardh	-	-	-	-	-	-	-	-
<i>Gayliella flaccida</i> (Harvey ex Kützing) T.O.Cho & L.J.McIvor	-	-	-	-	-	-	-	-
<i>Cerithiidae</i>	0	0	0	0	0	0	0	0
<i>Chaetomorpha pachynema</i> (Montagne) Kützing	0	0	0	0	0	0	0.1	0.1
<i>Chondria</i> spp.	0.4	0.9	0	0	0	0	0	0.1
<i>Chondria capillaris</i> (Hudson) M.J.Wynne	-	-	-	-	-	-	-	-
<i>Chondria dasyphylla</i> (Woodward) C.Agardh	-	-	-	-	-	-	-	-
<i>Chthamalus</i> spp.	0	0	0	0	0	0	0	0
<i>Cladophora</i> spp.	0	0	0.2	0.3	0.1	0.1	0	0
<i>Cladophora dalmatica</i> Kützing	-	-	-	-	-	-	-	-
<i>Cladophora laetevirens</i> (Dillwyn) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora lehmanniana</i> (Lindenberg) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora nigrescens</i> cf.	-	-	-	-	-	-	-	-
<i>Cladophora prolifera</i> (Roth) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora vagabunda</i> (Linnaeus) Hoek	-	-	-	-	-	-	-	-
<i>Cladophoropsis membranacea</i> (Hofman Bang ex C.Agardh) Børgesen	0	0	0	0	0.2	0.3	0	0.1
<i>Cladosiphon lubricus</i> (Sauvageau) Kylin	0	0	0	0	0	0	0	0
<i>Cladostephus spongiosum</i> (Hudson) C.Agardh	0	0.1	0	0	0	0	0	0
<i>Cliona</i> sp.	0	0	0	0	0	0	0	0
<i>Colpomenia</i> sp.	0	0	0	0	0	0	0	0
<i>Columbella rustica</i> (Linnaeus, 1758)	0	0	0	0	0	0	0	0
<i>Conus</i> sp.	0	0	0	0	0	0	0	0
<i>Corallinaceae</i> unidentified	2.7	1.9	1.5	1.2	6.2	3.8	3	1
<i>Cystoseira algeriensis</i> Feldmann	0	0	0	0	0	0	0	0
<i>Cystoseira amentacea</i> (C.Agardh) Bory de Saint-Vincent	0.1	0.3	0	0	0	0	0.2	0.4
<i>Cystoseira compressa</i> subsp. <i>pustulata</i> (Ercegovic) Verlaque	12.5	5.6	0.1	0.1	0	0	2.8	3.5
<i>Dasycladus vermicularis</i> (Scopoli) Krasser	3	1.9	0.3	0.1	3.1	1.5	1.9	0.8
<i>Dasya</i> spp.	0	0	0	0	0	0	0.1	0.1
<i>Dasya hutchinsiae</i> Harvey	-	-	-	-	-	-	-	-
<i>Dasya ocellata</i> (Grateloup) Harvey	-	-	-	-	-	-	-	-
<i>Dasya rigidula</i> (Kützing) Ardissoni	-	-	-	-	-	-	-	-
<i>Dendropoma lebeche</i> Templado, Richter & Calvo 2016	0.2	0.3	0	0.1	0.4	0.3	0.6	0.1
<i>Dictyota</i> spp.	23.1	9.6	0.1	0.2	7.1	4	20	1.6
<i>Dictyota fasciola</i> (Roth) J.V.Lamouroux	-	-	-	-	-	-	-	-
<i>Dictyota mediterranea</i> (Schiffner) G.Furnari	-	-	-	-	-	-	-	-
<i>Dictyota spiralis</i> Montagne	-	-	-	-	-	-	-	-

<i>Echinolittorina punctata</i> (Gmelin, 1791)	0	0	0	0	0	0	0	0
Ectocarpaceae	0	0	0	0	0	0	0.3	0.5
<i>Acinetospora crinita</i> (Carmichael) Sauvageau	-	-	-	-	-	-	-	-
<i>Ectocarpus fasciculatus</i> cf.	-	-	-	-	-	-	-	-
<i>Feldmannia irregularis</i> (Kützing) G.Hamel	-	-	-	-	-	-	-	-
<i>Feldmannia mitchelliae</i> cf.	-	-	-	-	-	-	-	-
<i>Feldmannia paradoxa</i> (Montagne) G.Hamel	-	-	-	-	-	-	-	-
Ellisolandia elongata (J.Ellis & Solander) K.R.Hind & G.W.Saunders	0	0	0	0	0.1	0.1	0	0
Elysia timida (Risso, 1818)	0	0	0	0	0	0	0	0
Eriphia verrucosa (Forskål, 1775)	0	0	0	0	0	0	0	0
Gastroclonium clavatum (Roth) Ardissoné	0	0	0	0	0	0	0	0
Gelidiales	0.4	0.7	0	0	0.3	0.3	0	0
<i>Gelidiella lubrica</i> cf.	-	-	-	-	-	-	-	-
<i>Gelidium pusillum</i> (Stackhouse) Le Jolis	-	-	-	-	-	-	-	-
Halimeda tuna (J.Ellis & Solander) J.V.Lamouroux	0	0	0	0	0	0	0	0
Halopteris scoparia (Linnaeus) Sauvageau	22.6	5.5	10.7	17.7	0.1	0.1	8.8	6.1
Herposiphonia secunda (C.Agardh) Ambronn	0	0	0.1	0.1	0.5	0	0.5	0.4
Hildenbrandia sp.	0	0	0	0	0	0	0	0
Hypnea musciformis (Wulfen) J.V.Lamouroux	0	0	0	0	0	0	0	0
Jania spp.	13.2	6.6	62	18.7	59.6	5.3	58	18.6
Laurencia pyramidalis Bory ex Kützing	3.3	5.2	0	0	0	0	0.2	0.1
Laurencia sp.	0.5	0.9	0	0.1	0.1	0.1	0.3	0
Liagora sp.	0.1	0.3	0	0	0	0	0	0
Liagora viscida (Forsskål) C.Agardh	0	0	0	0	0	0	0	0
Lophosiphonia s.l.spp.	0	0	0	0	0	0	0	0.1
<i>Lophosiphonia cristata</i> Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia obscura</i> (C.Agardh) Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia reptabunda</i> (Suhr) Kylin	-	-	-	-	-	-	-	-
<i>Polysiphonia scopolorum</i> Harvey	-	-	-	-	-	-	-	-
Myriactula sp.	0	0	0	0	0	0	0	0
Mytilidae	0	0	0	0	0	0	0	0
Neosiphonia ferulacea (Suhr ex J.Agardh) S.M.Guimarães & M.T.Fujii	0	0	0	0	0	0	0	0
Neosiphonia sertularioides (Grateloup) K.W.Nam & P.J.Kang	0	0	0	0	0	0	0	0.1
Oscillatoriaceae	0	0	0	0	0.1	0.2	0	0
<i>Blennothrix lyngbyacea</i> (Kützing ex Gomont) Anagnostidis & Komárek	-	-	-	-	-	-	-	-
<i>Lyngbya</i> spp.	-	-	-	-	-	-	-	-
Pachygrapsus marmoratus (Fabricius, 1787)	0	0	0	0	0	0	0	0
Padina pavonica (Linnaeus) Thivy	26.5	10	18.3	6.8	5	3.5	12	2.8
Palisada spp.	0	0	0	0	0	0	0	0
<i>Palisada tenerrima</i> (Cremades) Serio, Cormaci, G.Furnari & Boisset	-	-	-	-	-	-	-	-
Patella sp.	0	0	0	0	0	0	0	0

<i>Phaeophila dendroides</i> (P.L.Crouan & H.M.Crouan) Batters	0	0	0	0	0	0	0	0
<i>Polysiphonia opaca</i> (C.Agardh) Moris & De Notaris	0	0	0	0	0	0.1	0	0
<i>Pseudochlorodesmis furcellata</i> (Zanardini) Børgesen	0	0	0	0	0	0	0	0
Red thin turf	0	0	0	0	0	0	0	0
<i>Acrochaetium</i> sp.	-	-	-	-	-	-	-	-
<i>Antithamnion cruciatum</i> (C.Agardh) Nägeli	-	-	-	-	-	-	-	-
<i>Erythrotrichia carnea</i> (Dillwyn) J.Agardh	-	-	-	-	-	-	-	-
<i>Spermothamnion</i> spp.	-	-	-	-	-	-	-	-
Rivulariaceae	0.2	0.4	0	0	0.1	0.1	0.2	0.2
<i>Sabella</i> sp.	0	0	0	0	0	0	0	0
<i>Scytoniphon lomentaria</i> (Lyngbye) Link	0	0	0	0	0	0	0	0.1
<i>Siphonocladus pusillus</i> (C.Agardh ex Kützing) Hauck	0	0	0	0	0	0	0	0
Sphaelaria spp.	0.2	0.2	0.1	0.1	0	0	0.4	0.6
<i>Sphaelaria cirrosa</i> (Roth) C.Agardh	-	-	-	-	-	-	-	-
<i>Sphaelaria rigidula</i> Kützing	-	-	-	-	-	-	-	-
<i>Sphaelaria tribuloides</i> Meneghini	-	-	-	-	-	-	-	-
<i>Spyridia filamentosa</i> (Wulfen) Harvey	0.3	0.5	0.1	0.1	0	0	2.2	0.1
<i>Stramonita haemastoma</i> (Linnaeus, 1767)	0	0	0	0	0	0	0	0.1
Symploca sp.	3.2	3.8	0	0.1	0	0	0	0.1
Ulva spp.	0	0	0	0	0	0	0	0
<i>Ulva compressa</i> Linnaeus	-	-	-	-	-	-	-	-
<i>Ulva polyclada</i> Kraft	-	-	-	-	-	-	-	-
<i>Ulva prolifera</i> cf.	-	-	-	-	-	-	-	-
<i>Valonia utricularis</i> (Roth) C.Agardh	0	0	0	0	0	0	0	0
Vermetus spp.	0	0.1	0	0	0	0	0.2	0.3

Outer margin

SEASON	Spring		Summer		Autumn		Winter	
	Huertas		Huertas		Huertas		Huertas	
	%	σ	%	σ	%	σ	%	σ
<i>Acetabularia acetabulum</i> (Linnaeus) P.C.Silva	0	0	0	0	0	0	0	0
<i>Amphiroa rigida</i> J.V.Lamouroux	0.3	0.5	0	0	0	0	0.3	0.5
<i>Anadyomene stellata</i> (Wulfen) C.Agardh	0	0	0	0	0	0	0	0
<i>Asparagopsis</i> sp - <i>tetrasporophyte</i>	0	0	0	0	0	0	0	0
<i>Calcinus tubularis</i> (Linnaeus, 1767)	0.3	0.5	0	0	0.3	0.5	0	0
<i>Caulerpa cylindracea</i> Sonder	0.8	0.9	0.3	0.5	0.6	0.5	0.3	0.5
Ceramium s.l.spp.	0.6	0.9	0	0	0	0	0.3	0.5
<i>Ceramium codii</i> (H.Richards) Mazoyer	-	-	-	-	-	-	-	-
<i>Ceramium aff. diaphanum</i>	-	-	-	-	-	-	-	-
<i>Gayliella flaccida</i> (Harvey ex Kützing) T.O.Cho & L.J.McIvor	-	-	-	-	-	-	-	-
<i>Chaetomorpha pachynema</i> (Montagne) Kützing	0	0	0	0	0	0	0.3	0.5
<i>Chondracanthus acicularis</i> (Roth) Fredericq	0.1	0.2	0	0	0	0	0	0

<i>Chondria boryana</i> (De Notaris ex J.Agardh) De Toni	0.1	0.2	1.7	2.9	0	0	0.3	0.5
<i>Chondria</i> sp.	0.6	0.5	0	0	0	0	0	0
<i>Cladophora</i> spp.	1.7	2.9	0.6	0.5	0	0	0.3	0.5
<i>Cladophora dalmatica</i> Kützing	-	-	-	-	-	-	-	-
<i>Cladophora laetevirens</i> (Dillwyn) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora lehmanniana</i> (Lindenberg) Kützing	-	-	-	-	-	-	-	-
<i>Cladosiphon lubricus</i> (Sauvageau) Kylin	0	0	0	0	0	0	0	0
<i>Cladostephus spongiosum</i> (Hudson) C.Agardh	0.1	0.2	1.7	2.9	0	0	0	0
<i>Colpomenia</i> sp.	0.1	0.2	0	0	0	0	0	0
Corallinaceae unidentified	14.2	4.2	7.5	5.8	11.1	5.9	17.8	12
<i>Cystoseira algeriensis</i> Feldmann	3.3	2.9	0	0	0	0	5.8	6.3
<i>Cystoseira amentacea</i> (C.Agardh) Bory de Saint-Vincent	0	0	0	0	0	0	2.2	2.4
<i>Cystoseira compressa</i> subsp. <i>pustulata</i> (Ercegovic) Verlaque	18.8	7.8	0	0	0.3	0.5	6.7	7.6
<i>Dasycladus vermicularis</i> (Scopoli) Krasser	0	0	0	0	0	0	0	0
<i>Dasya</i> spp.	0	0	0	0	0	0	0	0
<i>Dasya hutchinsiae</i> Harvey	-	-	-	-	-	-	-	-
<i>Dasya ocellata</i> (Grateloup) Harvey	-	-	-	-	-	-	-	-
<i>Dendropoma lebeche</i> Templado, Richter & Calvo, 2016	5.4	4.6	0	0	5.8	10.1	6.9	3.4
<i>Dictyota</i> spp.	4.2	1.4	0.3	0.5	3.6	2.4	10.3	3.8
<i>Dictyota fasciola</i> (Roth) J.V.Lamouroux	-	-	-	-	-	-	-	-
<i>Dictyota spiralis</i> Montagne	-	-	-	-	-	-	-	-
Ectocarpaceae	0	0	0	0	0	0	13.3	14
<i>Acinetospora crinita</i> (Carmichael) Sauvageau	-	-	-	-	-	-	-	-
<i>Feldmannia irregularis</i> (Kützing) G.Hamel	-	-	-	-	-	-	-	-
<i>Feldmannia lebelii</i> (J.E. Areschoug ex P.L.Crouan & H.M.Crouan) G.Hamel	-	-	-	-	-	-	-	-
<i>Ellisolandia elongata</i> (J.Ellis & Solander) K.R.Hind & G.W.Saunders	6.4	6.3	0.6	0.5	0	0	8.6	6.7
<i>Gastroclonium clavatum</i> (Roth) Ardisson	0.4	0.4	0	0	0	0	2.2	2.4
Gelidiales	0	0	0	0	0	0	0	0
<i>Gelidiella lubrica</i> cf.	-	-	-	-	-	-	-	-
<i>Gelidium pusillum</i> (Stackhouse) Le Jolis	-	-	-	-	-	-	-	-
<i>Halimeda tuna</i> (J.Ellis & Solander) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Halopteris scoparia</i> (Linnaeus) Sauvageau	0	0	0	0	0	0	0	0
<i>Herposiphonia secunda</i> (C.Agardh) Ambronn	0.3	0.5	0	0	0.3	0.5	0	0
<i>Hildenbrandia</i> sp.	0	0	0	0	0.3	0.5	0.3	0.5
<i>Hypnea musciformis</i> (Wulfen) J.V.Lamouroux	1.7	2.9	7.5	4.3	5.8	6.3	0	0
<i>Jania</i> spp.	3.6	5.5	47	19.7	40.6	4.6	23.1	8.1
<i>Laurencia obtusa</i> (Hudson) J.V.Lamouroux	0.1	0.3	0	0	0	0	0	0
<i>Laurencia pyramidalis</i> Bory ex Kützing	1.6	2.1	0	0	0	0	0	0
<i>Laurencia</i> sp.	2	3.4	0	0	1.9	2.7	2.5	2.9
<i>Liagora</i> sp.	0	0	0	0	0	0	0	0
<i>Lophosiphonia</i> s.l.spp.	0	0	0	0	0	0	0	0
<i>Lophosiphonia cristata</i> Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia obscura</i> (C.Agardh) Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia reptabunda</i> (Suhr) Kylin	-	-	-	-	-	-	-	-
<i>Polysiphonia scopolorum</i> Harvey	-	-	-	-	-	-	-	-

<i>Myriactula</i> sp.	0	0	0	0	0	0	0	0
<i>Neosiphonia sertularioides</i> (Grateloup) K.W.Nam & P.J.Kang	0	0	0	0	0.3	0.5	0.3	0.5
<i>Padina pavonica</i> (Linnaeus) Thivy	31.7	2.2	11	4.6	6.1	0.5	14.4	8.3
<i>Palisada</i> spp.	7.5	4.3	5	0	0	0	5	0
<i>Palisada tenerrima</i> (Cremades) Serio, Cormaci, G.Furnari & Boisset	-	-	-	-	-	-	-	-
<i>Phaeophila dendroides</i> (P.L.Crouan & H.M.Crouan) Batters	0	0	0	0	0	0	0	0
<i>Polysiphonia opaca</i> (C.Agardh) Moris & De Notaris	0.4	0.4	0.3	0.5	0	0	0.3	0.5
<i>Polysiphonia</i> spp.	0	0	0	0	0	0	0	0
<i>Pseudochlorodesmis furcellata</i> (Zanardini) Børgesen	0	0	0	0	0	0	0	0
Red thin turf	0	0	0	0	0	0	0	0
<i>Acrochaetium</i> sp.	-	-	-	-	-	-	-	-
<i>Antithamnion cruciatum</i> (C.Agardh) Nägeli	-	-	-	-	-	-	-	-
<i>Erythrotrichia carnea</i> (Dillwyn) J.Agardh	-	-	-	-	-	-	-	-
<i>Spermothamnion</i> spp.	-	-	-	-	-	-	-	-
<i>Rhodophyllum divaricata</i> (Stackhouse) Papenfuss	0	0	0	0	0	0	0	0
Rivulariaceae	0	0	0	0	0	0	0	0
<i>Scytoniphon lomentaria</i> (Lyngbye) Link	0	0	0	0	0	0	0.3	0.5
<i>Siphonocladus pusillus</i> (C.Agardh ex Kützing) Hauck	0	0	0	0	0	0	0	0
<i>Sphaerelaria</i> spp.	0.2	0.3	0	0	1.1	1.4	0.3	0.5
<i>Sphaerelaria cirrosa</i> (Roth) C.Agardh	-	-	-	-	-	-	-	-
<i>Sphaerelaria rigidula</i> Kützing	-	-	-	-	-	-	-	-
<i>Sphaerelaria tribuloides</i> Meneghini	-	-	-	-	-	-	-	-
<i>Spyridia filamentosa</i> (Wulfen) Harvey	1.7	2.9	3.3	2.9	0	0	0.3	0.5
<i>Stramonita haemastoma</i> (Linnaeus, 1767)	0	0	0.3	0.5	0	0	0	0
<i>Symploca</i> sp.	0	0	0	0	0	0	0	0
<i>Ulva</i> spp.	0	0	0	0	0	0	1.7	2.9
<i>Ulva compressa</i> Linnaeus	-	-	-	-	-	-	-	-
<i>Ulva polyclada</i> Kraft	-	-	-	-	-	-	-	-
<i>Vermetus</i> spp.	1.7	2.9	0.8	0	6.9	2.7	2.5	2.9

SEASON	Spring		Summer		Autumn		Winter	
	Tabarca		Tabarca		Tabarca		Tabarca	
	%	σ	%	σ	%	σ	%	σ
<i>Acetabularia acetabulum</i> (Linnaeus) P.C.Silva	0.6	0.4	0	0	0	0	0	0
<i>Amphiroa rigida</i> J.V.Lamouroux	0.4	0.5	0	0	0.6	1	0.3	0.5
<i>Anadyomene stellata</i> (Wulfen) C.Agardh	0	0	0	0	0.3	0.5	0	0
<i>Asparagopsis</i> sp - tetrasporophyte	0	0	0	0	0.1	0	0.1	0
<i>Calcinus tubularis</i> (Linnaeus, 1767)	0	0	0	0	0	0	0	0
<i>Caulerpa cylindracea</i> Sonder	0.9	0.7	0	0	1.1	0.5	1.1	1
<i>Ceramium</i> s.l.spp.	0.5	0.9	0	0	0	0	0.9	1
<i>Ceramium codii</i> (H.Richards) Mazoyer	-	-	-	-	-	-	-	-
<i>Ceramium</i> aff. <i>diaphanum</i>	-	-	-	-	-	-	-	-
<i>Gayliella flaccida</i> (Harvey ex Kützing) T.O.Cho & L.J.McIvor	-	-	-	-	-	-	-	-
<i>Chaetomorpha pachynema</i> (Montagne) Kützing	0	0	0	0	0	0	0	0
<i>Chondracanthus acicularis</i> (Roth) Fredericq	0	0	0	0	0	0	0.3	0.5

<i>Chondria boryana</i> (De Notaris ex J.Agardh) De Toni	0	0	0	0	0	0	0	0
<i>Chondria</i> sp.	0	0	0	0	0	0	0	0
<i>Cladophora</i> spp.	0.2	0.4	0	0	0	0	0	0
<i>Cladophora dalmatica</i> Kützing	-	-	-	-	-	-	-	-
<i>Cladophora laetevirens</i> (Dillwyn) Kützing	-	-	-	-	-	-	-	-
<i>Cladophora lehmanniana</i> (Lindenberg) Kützing	-	-	-	-	-	-	-	-
<i>Cladosiphon lubricus</i> (Sauvageau) Kylin	0	0	0	0	0	0	0	0
<i>Cladostephus spongiosum</i> (Hudson) C.Agardh	2.5	2.9	1.9	2.7	0	0	2	2.7
<i>Colpomenia</i> sp.	0	0	0	0	0	0	0	0
Corallinaceae unidentified	19.2	8.2	5.8	0	14.7	6.7	13.9	7.7
<i>Cystoseira algeriensis</i> Feldmann	0	0	0	0	0	0	0	0
<i>Cystoseira amentacea</i> (C.Agardh) Bory de Saint-Vincent	0	0	0	0	0	0	0	0
<i>Cystoseira compressa</i> subsp. <i>pustulata</i> (Ercegovic) Verlaque	27.7	7.8	0	0	0	0	3.9	5.4
<i>Dasycladus vermicularis</i> (Scopoli) Krasser	0	0	0	0	0	0	0.3	0.5
<i>Dasya</i> spp.	0	0.1	0	0	0	0	0.3	0.5
<i>Dasya hutchinsiae</i> Harvey	-	-	-	-	-	-	-	-
<i>Dasya ocellata</i> (Grateloup) Harvey	-	-	-	-	-	-	-	-
<i>Dendropoma lebeche</i> Templado, Richter & Calvo, 2016	2.9	5.3	0.8	0.8	2	3.4	1.7	2.9
<i>Dictyota</i> spp.	25.8	6.8	0	0	7.2	6.9	18.3	3.8
<i>Dictyota fasciola</i> (Roth) J.V.Lamouroux	-	-	-	-	-	-	-	-
<i>Dictyota spiralis</i> Montagne	-	-	-	-	-	-	-	-
Ectocarpaceae	0	0	0	0	0	0	0.3	0.5
<i>Acinetospora crinita</i> (Carmichael) Sauvageau	-	-	-	-	-	-	-	-
<i>Feldmannia irregularis</i> (Kützing) G.Hamel	-	-	-	-	-	-	-	-
<i>Feldmannia lebelii</i> (J.E. Areschoug ex P.L.Crouan & H.M.Crouan) G.Hamel	-	-	-	-	-	-	-	-
<i>Ellisolandia elongata</i> (J.Ellis & Solander) K.R.Hind & G.W.Saunders	1.3	0.5	0	0	2.2	3.2	2.5	3
<i>Gastroclonium clavatum</i> (Roth) Ardisson	0	0	0	0	0	0	1.7	2.9
Gelidiales	0	0	0	0	0	0	0	0
<i>Gelidiella lubrica</i> cf.	-	-	-	-	-	-	-	-
<i>Gelidium pusillum</i> (Stackhouse) Le Jolis	-	-	-	-	-	-	-	-
<i>Halimeda tuna</i> (J.Ellis & Solander) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Halopteris scoparia</i> (Linnaeus) Sauvageau	0	0	0	0	0	0	0.3	0.5
<i>Herposiphonia secunda</i> (C.Agardh) Ambronn	0.2	0.4	0.3	0.5	0.8	0	0.8	0.8
<i>Hildenbrandia</i> sp.	0	0	0	0	0	0	0	0
<i>Hypnea musciformis</i> (Wulfen) J.V.Lamouroux	1.1	1	0	0	0	0	1.7	2.9
<i>Jania</i> spp.	15.2	12	76	4.8	59.7	4.8	59.7	13
<i>Laurencia obtusa</i> (Hudson) J.V.Lamouroux	0	0	0	0	0	0	0	0
<i>Laurencia pyramidalis</i> Bory ex Kützing	8.1	9.9	0	0	0	0	2	2.7
<i>Laurencia</i> sp.	0	0	0	0	0	0	0.8	0
<i>Liagora</i> sp.	1.3	2.5	0	0	0	0	0	0
<i>Lophosiphonia</i> s.l.spp.	0	0	0	0	0	0	0.3	0.5
<i>Lophosiphonia cristata</i> Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia obscura</i> (C.Agardh) Falkenberg	-	-	-	-	-	-	-	-
<i>Lophosiphonia reptabunda</i> (Suhr) Kylin	-	-	-	-	-	-	-	-
<i>Polysiphonia scopulorum</i> Harvey	-	-	-	-	-	-	-	-

<i>Myriactula</i> sp.	0	0	0	0	0	0	0	0
<i>Neosiphonia sertularioides</i> (Grateloup) K.W.Nam & P.J.Kang	0	0	0	0	0.3	0.5	0.3	0.5
<i>Padina pavonica</i> (Linnaeus) Thivy	17.1	6.8	13	11.8	5.6	4.2	11.7	4.4
<i>Palisada</i> spp.	0	0	0	0	0	0	0	0
<i>Palisada tenerrima</i> (Cremades) Serio, Cormaci, G.Furnari & Boisset	-	-	-	-	-	-	-	-
<i>Phaeophila dendroides</i> (P.L.Crouan & H.M.Crouan) Batters	0	0	0	0	0	0	0	0
<i>Polysiphonia opaca</i> (C.Agardh) Moris & De Notaris	0	0	0	0	0	0	0	0
<i>Polysiphonia</i> spp.	0	0	0	0	0	0	0	0
<i>Pseudochlorodesmis furcellata</i> (Zanardini) Børgesen	0	0	0	0	0	0	0	0
Red thin turf	0.2	0.4	0	0	0	0	0	0
<i>Acrochaetium</i> sp.	-	-	-	-	-	-	-	-
<i>Antithamnion cruciatum</i> (C.Agardh) Nägeli	-	-	-	-	-	-	-	-
<i>Erythrotrichia carnea</i> (Dillwyn) J.Agardh	-	-	-	-	-	-	-	-
<i>Spermothamnion</i> spp.	-	-	-	-	-	-	-	-
<i>Rhodophyllis divaricata</i>	0	0	0	0	0	0	0	0
Rivulariaceae	0.2	0.4	0	0	0	0	0	0
<i>Scytoniphon lomentaria</i> (Lyngbye) Link	0	0	0	0	0	0	0	0
<i>Siphonocladus pusillus</i> (C.Agardh ex Kützing) Hauck	0	0	0	0	0	0	0	0
<i>Sphacelaria</i> spp.	0.7	0.8	0.3	0.5	0	0	0.8	1.4
<i>Sphacelaria cirrosa</i> (Roth) C.Agardh	-	-	-	-	-	-	-	-
<i>Sphacelaria rigidula</i> Kützing	-	-	-	-	-	-	-	-
<i>Sphacelaria tribuloides</i> Meneghini	-	-	-	-	-	-	-	-
<i>Spyridia filamentosa</i> (Wulfen) Harvey	1.7	2.3	0	0	0.6	0.5	8.9	2.7
<i>Stramonita haemastoma</i> (Linnaeus, 1767)	0	0	0	0	0	0	0.3	0.5
<i>Symploca</i> sp.	0	0	0.3	0.5	0	0	0	0
<i>Ulva</i> spp.	0	0	0	0	0	0	0	0
<i>Ulva compressa</i> Linnaeus	-	-	-	-	-	-	-	-
<i>Ulva polyclada</i> Kraft	-	-	-	-	-	-	-	-
<i>Vermetus</i> spp.	0	0	0.3	0.5	0	0	0.6	0.5

Table S2. A. Results of distance-based permutational two-way PERMANOVA comparing α -diversity using *zone* and *season* as fixed factors. B. Results of pairwise analyses. Se, *season*; Z, *zone*; df, degrees of freedom; SS, sums of squares; MS, mean squares; Pseudo-F, pseudo-*F* ratio; t, pseudo-*t* statistic; P(perm), permutation *P*-value

A

PERMANOVA table of results						
Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Se	3	104.46	34.821	45.68	0.001	999
Z	2	43.369	21.685	28.447	0.001	998
Se x Z	6	20.238	3.373	4.425	0.002	998
Res	959	731.02	0.76228			
Total	970	970				

B

Pairwise analysis						
within levels of factor <i>zone</i>	Midlittoral		Infralittoral		Outer margin	
Groups	t	P(perm)	t	P(perm)	t	P(perm)
Spring, Summer	2.881	0.004	11.194	0.001	6.635	0.001
Spring, Autumn	2.898	0.003	8.819	0.001	5.193	0.001
Spring, Winter	0.958	0.322	1.620	0.122	0.042	0.965
Summer, Autumn	0.022	0.987	2.958	0.006	1.963	0.053
Summer, Winter	1.879	0.050	10.030	0.001	6.048	0.001
Autumn, Winter	1.880	0.071	7.497	0.001	4.550	0.001