



A PHOTOGRAPHIC GUIDE OF THE SPECIES OF THE **GORRINGE BANK**



PROJECT
dgp_{on}
Direção-Geral de Política do Mar

EUROPEAN UNION
eeea grants

CCMAR | OCEANA Protecting the
World's Oceans

Front cover: Bathymetric contours of the Gorringe Bank derived from data from the European Marine Observation and Data Network (EMODnet): <http://portal.emodnet-bathymetry.eu/>

RECOMMENDED CITATION

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MEDIA

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World's Oceans



AUTHOR'S NOTE

This guide was initially developed as a tool for helping in the identification of species recorded in video imagery during our Remote Operated Vehicle (ROV) surveys in the summit of the Gorringe Bank. Therefore, all the images contained in this guide were acquired from high-definition video taken by the vehicle imaging systems. There are, of course, many more species present in the seamounts, but those contained in this guide were either the most commonly seen in our surveys or those of a more conspicuous appearance and whose image quality would allow a better taxonomic identification.

There is an inherent difficulty with species identification based on images and we made an effort to identify each organism to the lowest taxonomic level possible. However some species are far more challenging, and proper identification cannot be done based on images alone and has to be conducted in laboratory conditions. These species, most belonging to the Porifera, were left unassigned but were still kept in this book as an evidence of the existing biodiversity.

We hope to keep this guide updated, as images of new species and a better taxonomic information about observed species becomes available.

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FOREWORD



RICARDO AGUILAR

DIRECTOR OF PROJECTS AND RESEARCH
OCEANA

Ever since I first became aware of the existence of the Gorringe Bank it has been a priority in my list of places to study. Luckily, I have been able to visit the area on several occasions and to witness its wealth with my own eyes.

There are very few places in the world where you can see such interesting, diverse ecosystems and with such a wide bathymetric range. The seamounts are home to both shallow photophilic habitats and great abyssal darkness, to communities of kelp and calcareous algae and also to communities of corals, gorgonians, hydrocorals and sponge aggregations. It is an oasis of life in the middle of the Atlantic Ocean that gives rise to both endemism and also makes it into a place of passage for highly migratory species, including birds, sharks and marine mammals. The use of submarine robots and other methods of sampling have allowed us not only to discover the biodiversity but also to observe the behaviour and distribution of a number of little known species. These include small brave fish that had to cope with something as strange as an ROV in their midst, lobsters feeding among the extensive beds of oysters, and Mediterranean gorgonians covering the slopes of these Atlantic peaks.

The waters and sea beds of the Gorringe bank are home to as many species and communities as questions, which makes them especially appealing to any researcher. For this reason, this guide plays a fundamental role, opening a window to the understanding of the ecosystems of seamounts and the importance of their conservation.



JORGE M.S. GONÇALVES

RESEARCHER
CENTRE OF MARINE SCIENCES

I heard about the Gorringe Bank for the first time at school when I was told that it was most probably the region of the epicenter of the strong earthquake that destroyed Lisbon and the coastal cities of the Algarve in 1755. Later on, in the 90s I watched in Sagres (SW of Portugal) the landing of tons of scabbard fish that were caught in this well-known fishing bank by the local longline fishery community. And it was because of a regional NGO – Atlântico Selvagem (AS, Faro) that I became aware of one the best features of this magnificent underwater mountain: its unique biodiversity. From 1998 till now I have collaborated in 7 campaigns organized by AS – (1998-2000, 2003), the University Lusófona (2006), University of Hamburg (2009) and Oceana (2011-2012) helping with the fish identification.

The information collected by visual census (scuba diving, video transects, ROV) allowed us to document an oasis of marine life in the middle of the Ocean, with species and habitats not expected at 125 nautical miles from land such as kelps forests and mael beds. Deeper we could observe extraordinary coral gardens and sponge aggregations that were already proposed by OCEANA to be part of the OSPAR priority habitats. We found that most of the fish species were related to the Mediterranean, the Portuguese mainland and to the Macaronesia (Azores, Madeira and Canarias) coasts suggesting that the summit of these seamount may have acted and still act as ‘stepping stones’ for the dispersal of coastal species. During these scientific cruises several endemic species were identified and the presence of several priority habitats and species motivated the Portuguese environmental agency (ICNF) to propose this seamount as a new Marine Protected Area (Site of Community Importance –SCI) under the NATURA 2000 network. This guide is the contribution of several scientists to promote the knowledge of the marine biodiversity of this outstanding seamount as a tool to promote environmental awareness and the conservation of our oceans.



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GORRINGE BANK

Discovered in 1875 by the U.S.S. Gettysburg, the Gorringe ridge (originally known as Gorringe Bank)¹ is an underwater mountain located around 270 Km WSW of cape São Vicente (Portugal) and is composed of two distinctive peaks: the Gettysburg and the Ormonde. These seamounts rise above the surrounding Tagus and Horseshoe abyssal plains at more than 5000 metres depth to less than 40 metres below the ocean surface, making the summit of both seamounts moderately accessible, even to scuba divers^{2,3}.

GEOLOGY

The Gorringe Bank is positioned where the African and Euro-Asiatic plates converge and collide and near to the epicenter of the 1755 Lisbon earthquake. While most seamounts are considered extinct volcanoes, Gettysburg and Ormonde are thought to be uplifted oceanic crust and mantle, originated by seafloor spreading during the genesis of the Atlantic Ocean⁴.

The Gorringe bank is mainly composed of serpentinites, gabbros and basalts often covered by sedimentary layers⁵.

BIOLOGY

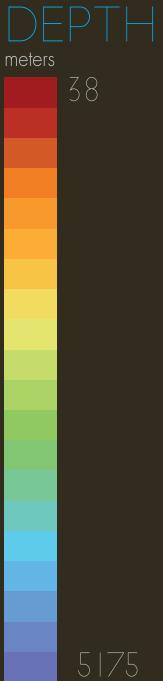
The Gorringe bank is regarded as a hot-spot of biodiversity. There are currently 862 species recorded⁶, including marine mammals and reptiles as well as species protected by the Habitats Directive. Because these seamounts rise from the abyssal plains to the photic zone, a wide range of habitats is present⁷, from kelp forest at the top, to cold water coral gardens and sponge dominated communities as the depth increases. Some of the habitats present are also listed in the OSPAR convention.

GORRINGE BANK AS A SCI

In 2015 the Gorringe Bank was proposed as Site of Community Importance becoming part of the Natura 2000 network in the marine environment⁸.

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3D digital model of the Gorringe Bank generated from data from the European Marine Observation and Data Network (EMODnet): <http://portal.emodnet-bathymetry.eu/>
vertical exaggeration: 14 x

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EXPLORING THE SUMMIT

The Gorringe bank has been the subject of a few scientific expeditions, the majority focusing in the geology and sismology, and only few were able to gather biological information using trawls and dredges.

It was only in the late 90's, that a small team of researchers, using scuba diving, conducted the first visual assessment of

the marine life at these seamounts. Since then the seamounts have been visited in rare occasions, and while limited to the first metres of the summit of the seamounts, some additional information was added to our limited knowledge of the biology of the Gorringe bank.

In August 2011 and October 2012, Oceana devoted two oceanic expeditions

to visit the Gorringe Bank. Equiped with a Remote Operated Vehicle (ROV), the aim was to explore and document the ecosystems at the summit of the seamounts down to 550 metres depth. The team accomplished 20 dives along both seamounts, recording almost 40 hours of video at the bottom that revealed the wide range of habitats and species present.

HOW TO USE THIS GUIDE

Authority
who first published a description and name for this taxon

Higher taxonomic ranks

Image(s)
the best image(s) acquired from high-definition video that would allow a proper taxonomic identification and future comparisons with similar specimens

Scientific name

the lowest taxonomic level we could achieve based on our current knowledge

• ***Antipathella subpinnata***

• (Ellis & Solander, 1786)

Class: Anthozoa
Order: Antipatharia
Family: Myriopathidae



Seamount

the seamount(s) where the image(s) of the organism were collected will be highlighted:

G - Gettysburg
O - Ormonde



Cnidaria

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120

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OCHROPHYTA

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010

Desmarestia ligulata

(Stackhouse) J.V.Lamouroux, 1813

Class: Phaeophyceae
Order: Desmarestiales
Family: Desmarestiaceae



OCHROPHYTA

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011

Dictyopteris polypodioides

(A.PDe Candolle) J.V.Lamouroux, 1809

Class: Phaeophyceae
Order: Dictyotales
Family: Dictyotaceae



OCHROPHYTA

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GORRINIE BANK

012

Zonaria tournefortii

(J.V.Lamouroux) Montagne, 1846

Class: Phaeophyceae
Order: Dictyotales
Family: Dictyotaceae



OCHROPHYTA

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Laminaria ochroleuca

Bachelot de la Pylaie, 1824

Class: Phaeophyceae
Order: Laminariales
Family: Laminariaceae



OCHROPHYTA



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014

Carpomitra costata

(Stackhouse) Batters, 1902

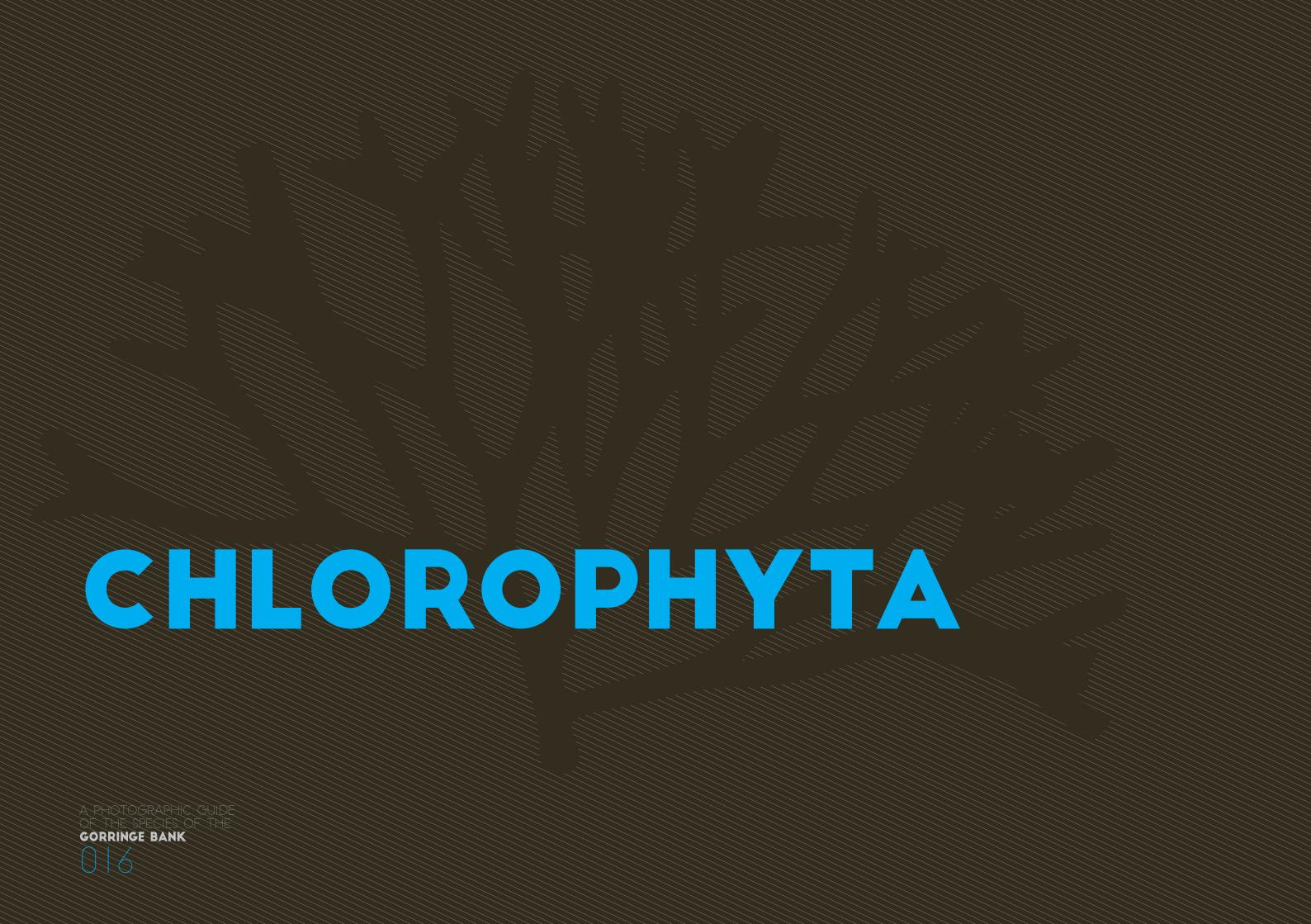
Class: Phaeophyceae
Order: Sporochiales
Family: Sporochnaceae



OCHROPHYTA

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015



CHLOROPHYTA

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016

Codium sp.

Stackhouse, 1797

Class: Ulvophyceae
Order: Bryopsidales
Family: Codiaceae



CHLOROPHYTA

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017

Valonia macrophysa

Kützing, 1843

Class: Ulvophyceae
Order: Siphonocladales
Family: Valoniaceae



CHLOROPHYTA

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018

RHODOPHYTA

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019

Acrosymphyton purpuriferum

(J.Agardh) Sjöstedt, 1926

Class: Florideophyceae

Order: Acrosymphytales

Family: Acrosymphytaceae



RHODOPHYTA

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020

Lithothamnion coralliooides

(P.L.Crouan & H.M.Crouan) P.L.Crouan & H.M.Crouan, 1867

Class: Florideophyceae
Order: Corallinales
Family: Corallinaceae



RHODOPHYTA

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021

Lithophyllum stictaeforme

(J.E. Areschoug) Hauck, 1877

Class: Florideophyceae

Order: Corallinales

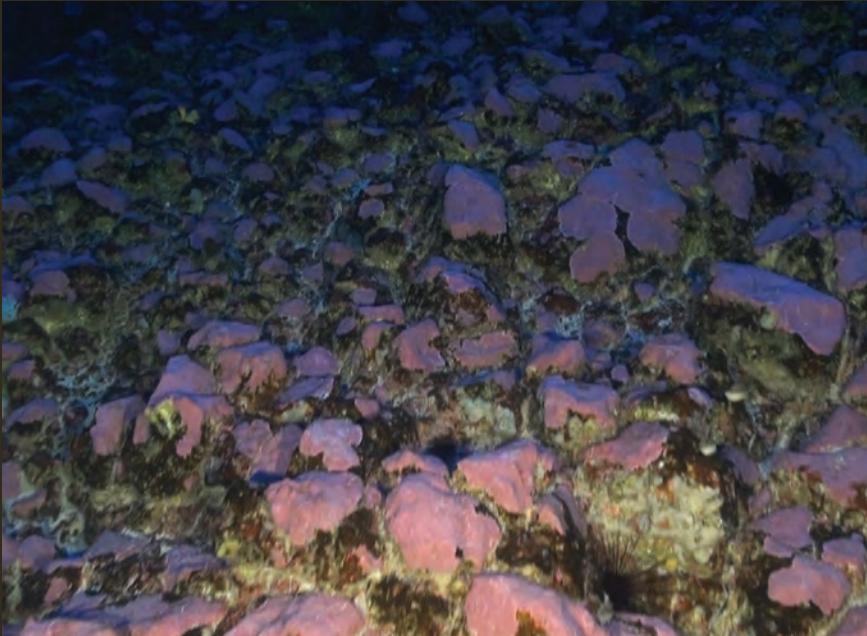
Family: Corallinaceae



Lithophyllum incrustans

Philippi, 1837

Class: Florideophyceae
Order: Corallinales
Family: Corallinaceae



RHODOPHYTA

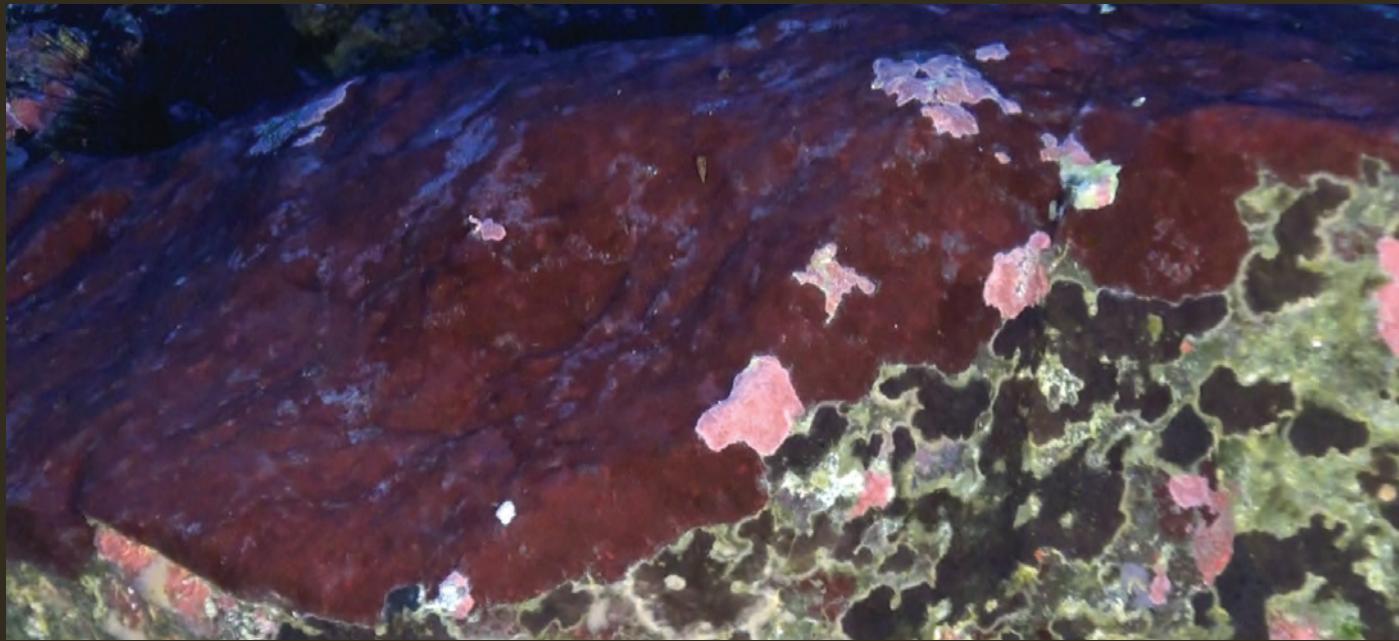
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023

Cruoria sp.

Fries, 1835

Class: Florideophyceae
Order: Gigartinales
Family: Cruoriaceae



Callophyllis laciniata

(Hudson) Kützing, 1843

Class: Florideophyceae
Order: Gigartinales
Family: Kallymeniaceae



RHODOPHYTA

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GORRIGE BANK

025

Kallymenia cf. reniformis

(Turner) J.Agardh, 1842

Class: Florideophyceae
Order: Gigartinales
Family: Kallymeniaceae



Palmaria palmata

(Linnaeus) Weber & Mohr, 1805

Class: Florideophyceae
Order: Palmariales
Family: Palmariacae



RHODOPHYTA

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GORRIGE BANK

027

Peyssonnelia rubra

(Greville) J.Agardh, 1851

Class: Florideophyceae
Order: Peyssonneliales
Family: Peyssonneliaceæ



RHODOPHYTA

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OF THE SPECIES OF THE
GORRANGE BANK

028

Plocamium cartilagineum

(Linnaeus) P.S.Dixon, 1967

Class: Florideophyceae
Order: Plocamiales
Family: Plocamiaceae



RHODOPHYTA

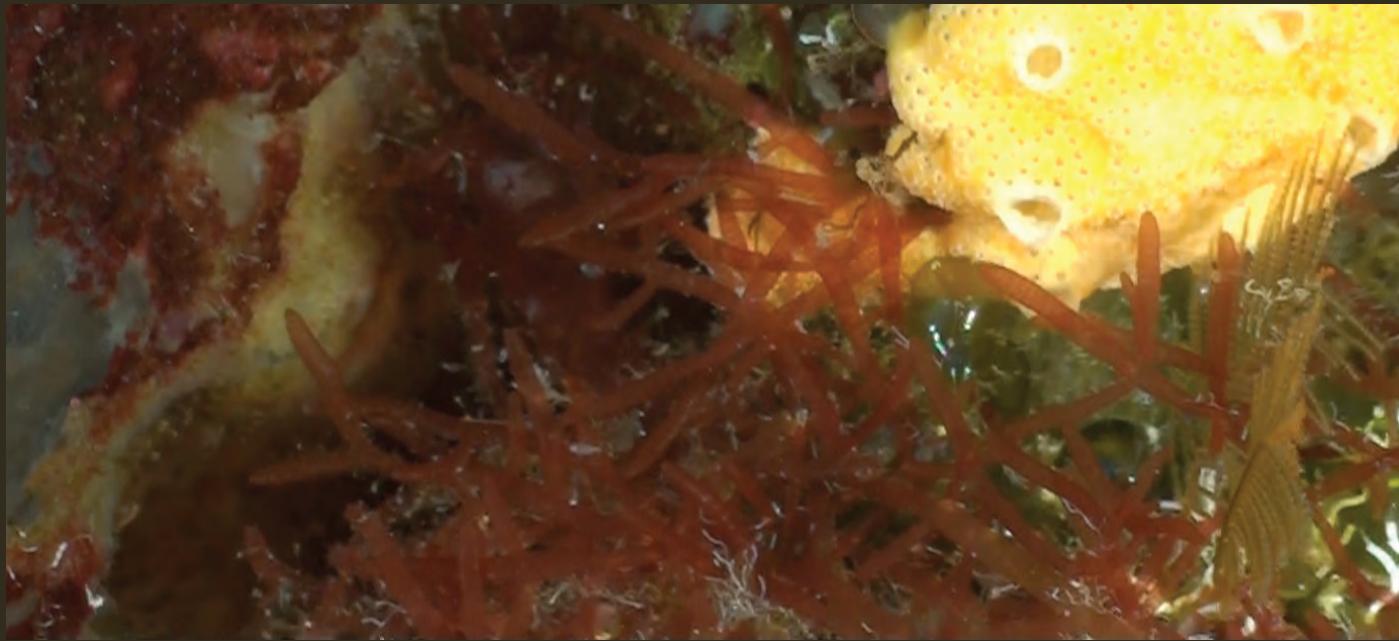
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GORRIGE BANK

029

Champia parvula

(C.Agardh) Harvey, 1853

Class: Florideophyceae
Order: Rhodymeniales
Family: Champiaceae



RHODOPHYTA

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GORRINGE BANK

030

Rhodymenia pseudopalmata

(J.V.Lamouroux) P.C.Silva, 1952

Class: Florideophyceae
Order: Rhodymeniales
Family: Rhodymeniaceae



RHODOPHYTA

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GORRINGE BANK

031

FORAMINIFERA

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GORRINÉ BANK

032

Miniacina miniacea

(Pallas, 1766)

Class: Globothalamia
Order: Rotaliida
Family: Homotrematidae



FORAMINIFERA

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OF THE SPECIES OF THE
GORRIGE BANK

033

PORIFERA

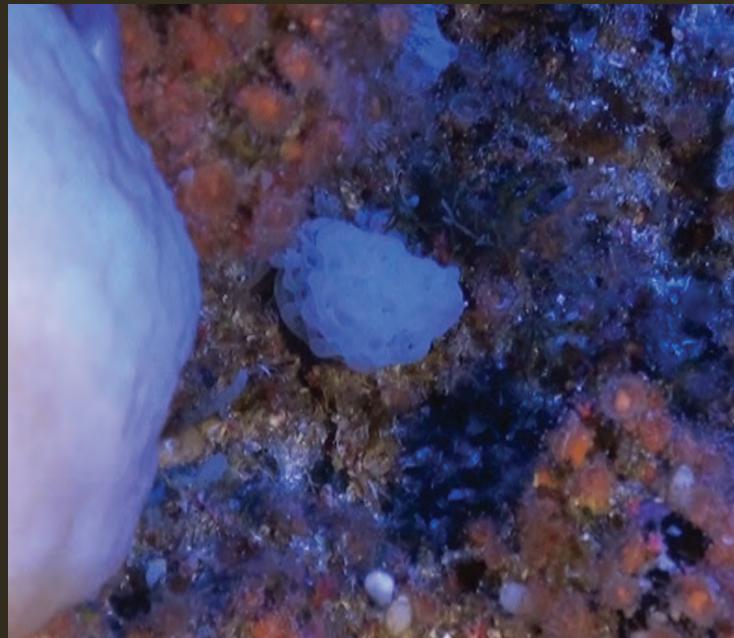
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GORRINGE BANK

034

Clathrina clathrus

(Schmidt, 1864)

Class: Calcarea
Order: Clathrinida
Family: Clathrinidae



PORIFERA

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GORRIGE BANK

035

Sycon sp.

Risso, 1827

Class: Calcarea
Order: Leucosolenida
Family: Sycettidae



Demospongiae

Sollas, 1885

Class: Demospongiae

Order:

Family:



PORIFERA

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037

Phakellia ventilabrum

(Linnaeus, 1767)

Class: Demospongiae
Order: Axinellida
Family: Axinellidae



Thymosia guernei

Topsent, 1895

Class: Demospongiae
Order: Chondrillida
Family: Chondrillidae



PORIFERA

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039

Aplysilla rosea

(Barrois, 1876)

Class: Demospongiae
Order: Dendroceratida
Family: Darwinellidae



PORIFERA

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040

Dysidea fragilis

(Montagu, 1814)

Class: Demospongiae
Order: Dictyoceratida
Family: Dysideidae



PORIFERA

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GORRIGE BANK

041

Pleraplysilla spinifera

(Schulze, 1879)

Class: Demospongiae
Order: Dictyoceratida
Family: Dysideidae



Haplosclerida

Topsent, 1928

Class: Demospongiae
Order: Haplosclerida
Family:



PORIFERA

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043

Cladocroce fibrosa

(Topsent, 1890)

Class: Demospongiae
Order: Haplosclerida
Family: Chalinidae



Haliclona sp.

Grant, 1836

Class: Demospongiae
Order: Haplosclerida
Family: Chalinidae



PORIFERA

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045

Haliclona sp.

Grant, 1836

Class: Demospongiae
Order: Haplosclerida
Family: Chalinidae



PORIFERA

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GORRINGE BANK

046

Haliclona sp.

Grant, 1836

Class: Demospongiae
Order: Haplosclerida
Family: Chalinidae



PORIFERA

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GORRINGE BANK

047

Haliclona implexa

(Schmidt, 1868)

Class: Demospongiae
Order: Haplosclerida
Family: Chalinidae



Haliclona magna

(Vacelet, 1969)

Class: Demospongiae
Order: Haplosclerida
Family: Chalinidae



PORIFERA

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GORRINGE BANK

049

Petrosia sp.

Vosmaer, 1885

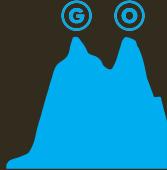
Class: Demospongiae
Order: Haplosclerida
Family: Petrosiidae



Oceanapia sp.

Norman, 1869

Class: Demospongiae
Order: Haplosclerida
Family: Phloeodictyidae



PORIFERA

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051

Hymedesmia curvichela

Lundbeck, 1910

Class: Demospongiae
Order: Poecilosclerida
Family: Hymedesmiidae



Latrunculia citharistae

Vacelet, 1969

Class: Demospongiae
Order: Poecilosclerida
Family: Latrunculidae



PORIFERA

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053

Antho dichotoma

(Linnaeus, 1767)

Class: Demospongiae
Order: Poecilosclerida
Family: Microcionidae



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054

Podospongia lovenii

Barboza du Bocage, 1869

Class: Demospongiae
Order: Poecilosclerida
Family: Podospongidae



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055

Axinyssa digitata

(Cabioch, 1968)

Class: Demospongiae
Order: Suberitida
Family: Halichondriidae



Spongisorites sp.

Topsent, 1896

Class: Demospongiae
Order: Suberitida
Family: Halichondriidae



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057

Topsentia sp.

Berg, 1899

Class: Demospongiae
Order: Suberitida
Family: Halichondriidae



Topsentia pachastrelloides

(Topsent, 1892)

Class: Demospongiae
Order: Suberitida
Family: Halichondriidae



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059

Stylocordyla sp.

Thomson, 1873

Class: Demospongiae
Order: Suberitida
Family: Stylocordylidae



Stylocordyla pellita

(Topsent, 1904)

Class: Demospongiae
Order: Suberitida
Family: Stylocordylidae



Aaptos aaptos (deep water white morph)

(Schmidt, 1864)

Class: Demospongiae
Order: Suberitida
Family: Suberitidae



Aaptos aaptos (shallow water yellow morph)

(Schmidt, 1864)

Class: Demospongiae
Order: Suberitida
Family: Suberitidae



PORIFERA

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063

Leiodermatium pfeifferae

(Carter, 1873)

Class: Demospongiae
Order: Tetractinellida
Family: Azoricidae



PORIFERA

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064

Neophrissospongia nolitangere

(Schmidt, 1870)

Class: Demospongiae
Order: Tetractinellida
Family: Corallistidae



PORIFERA

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065

Erylus deficiens

Topsent, 1927

Class: Demospongiae
Order: Tetractinellida
Family: Geodiidae



Geodia sp.

Lamarck, 1815

Class: Demospongiae
Order: Tetractinellida
Family: Geodiidae



PORIFERA

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067

Geodia cf. megastrella

Carter, 1876

Class: Demospongiae
Order: Tetractinellida
Family: Geodiidae



PORIFERA

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068

Macandrewia azorica

Gray, 1859

Class: Demospongiae
Order: Tetractinellida
Family: Macandrewiidae



PORIFERA

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GORRINGE BANK

069

Characella pachastrelloides

(Carter, 1876)

Class: Demospongiae
Order: Tetractinellida
Family: Pachastrellidae



PORIFERA



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070

Pachastrella monilifera

Schmidt, 1868

Class: Demospongiae
Order: Tetractinellida
Family: Pachastrellidae



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Thenea schmidti

Sollas, 1886

Class: Demospongiae
Order: Tetractinellida
Family: Theneidae



Poecillastra compressa (orange morph)

(Bowerbank, 1866)

Class: Demospongiae
Order: Tetractinellida
Family: Vulcanellidae



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073

Poecillastra compressa (white morph)

(Bowerbank, 1866)

Class: Demospongiae
Order: Tetractinellida
Family: Vulcanellidae



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074

Asconema setubalense

Kent, 1870

Class: Hexactinellida
Order: Lyssacinida
Family: Rossellidae



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GORRIGE BANK

075

Sympagella delauzei

Boury-Esnault, Vacelet, Reiswig & Chevaldonné, 2014

Class: Hexactinellida
Order: Lyssacinida
Family: Rossellidae



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076

Farrea sp.

Bowerbank, 1862

Class: Hexactinellida
Order: Hexactinosida
Family: Farreidae



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077

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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GORGON BANK

079

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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GORRINGE BANK

080

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRIGE BANK

081

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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082

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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083

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRINGE BANK

084

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRINGE BANK

085

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA



Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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087

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRINGE BANK

088

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

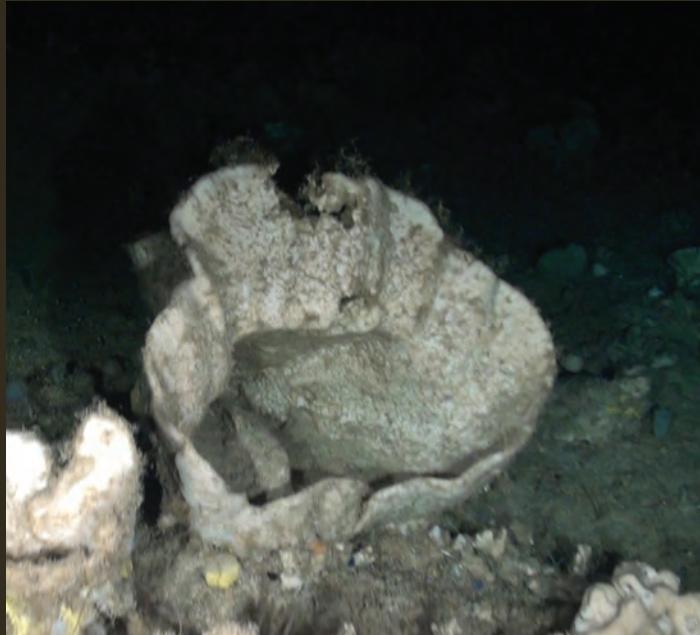
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GORRIGE BANK

089

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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091

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRINGE BANK

092

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRIGE BANK

093

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



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GORRINGE BANK

094

Porifera (unassigned)

Grant, 1836

Class:
Order:
Family:



PORIFERA

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095

CTENOPHORA

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GORRINGE BANK

096

Bolinopsis infundibulum

(O.F. Müller, 1776)

Class: Tentaculata

Order: Lobata

Family: Bolinopsidae



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097

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098

Adamsia palliata

(Müller, 1776)

Class: Anthozoa
Order: Actiniaria
Family: Hormathiidae



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099

Rolandia cf. coralloides

de Lacaze Duthiers, 1900

Class: Anthozoa
Order: Alcyonacea
Family: Clavulariidae



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| 100

Alcyonium acaule

Pallas, 1766

Class: Anthozoa
Order: Alcyonacea
Family: Alcyoniidae



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Ellisella paraplexauroides

Stiasny, 1936

Class: Anthozoa
Order: Alcyonacea
Family: Ellisellidae



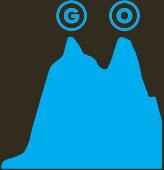
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Nicella granifera

(Kölliker, 1865)

Class: Anthozoa
Order: Alcyonacea
Family: Ellisellidae



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GORRINGE BANK

103

Viminella flagellum

(Johnson, 1863)

Class: Anthozoa
Order: Alcyonacea
Family: Ellisellidae



Eunicella sp.

Verrill, 1869

Class: Anthozoa
Order: Alcyonacea
Family: Gorgoniidae



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GORRONGE BANK

105

Eunicella verrucosa

(Pallas, 1766)

Class: Anthozoa
Order: Alcyonacea
Family: Gorgoniidae



Nidaliidae

Gray, 1869

Class: Anthozoa
Order: Alcyonacea
Family: Nidaliidae



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GORRINGE BANK

Nidaliidae

Gray, 1869

Class: Anthozoa
Order: Alcyonacea
Family: Nidaliidae



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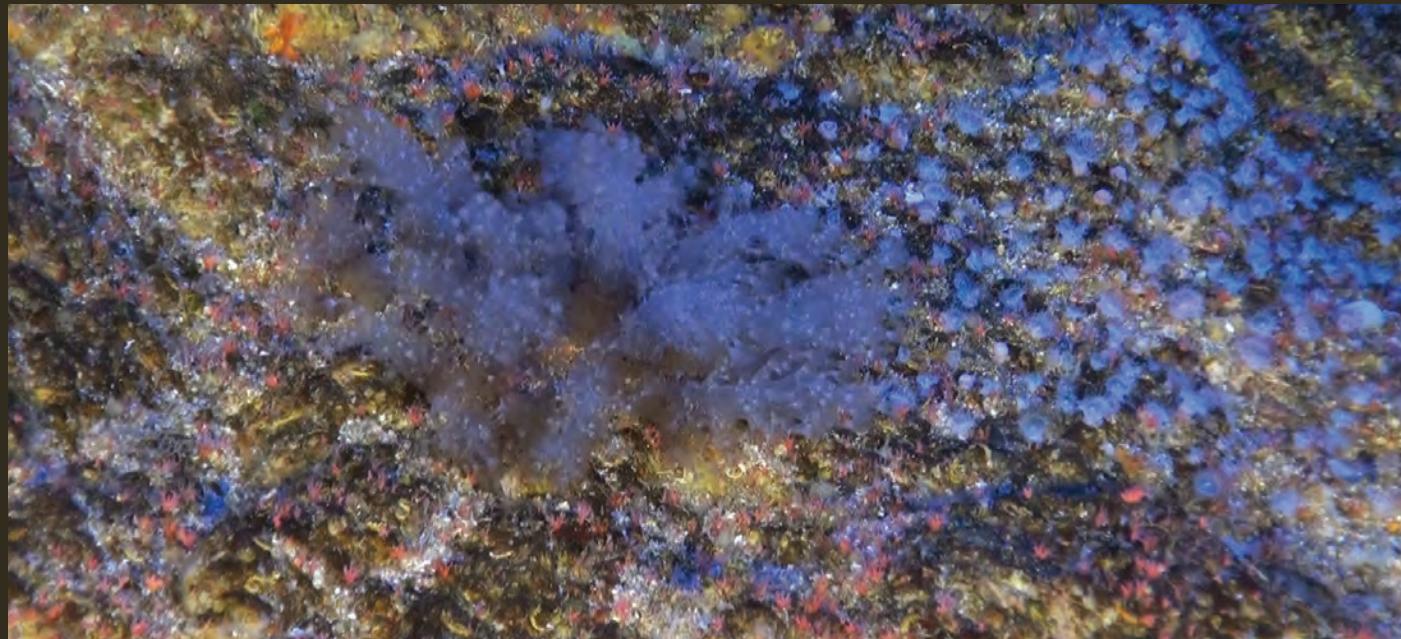
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GORRINGE BANK

108

Paralcyonium cf. spinulosum

Delle Chiaje, 1822

Class: Anthozoa
Order: Alcyonacea
Family: Paralcyoniidae



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GORRIGE BANK

Bebryce cf. mollis

Philippi, 1842

Class: Anthozoa
Order: Alcyonacea
Family: Plexauridae



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GORRINGE BANK

| 10

Paramuricea clavata

(Risso, 1826)

Class: Anthozoa
Order: Alcyonacea
Family: Plexauridae



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GORRINGE BANK



Paramuricea sp.

Koelliker, 1865

Class: Anthozoa
Order: Alcyonacea
Family: Plexauridae



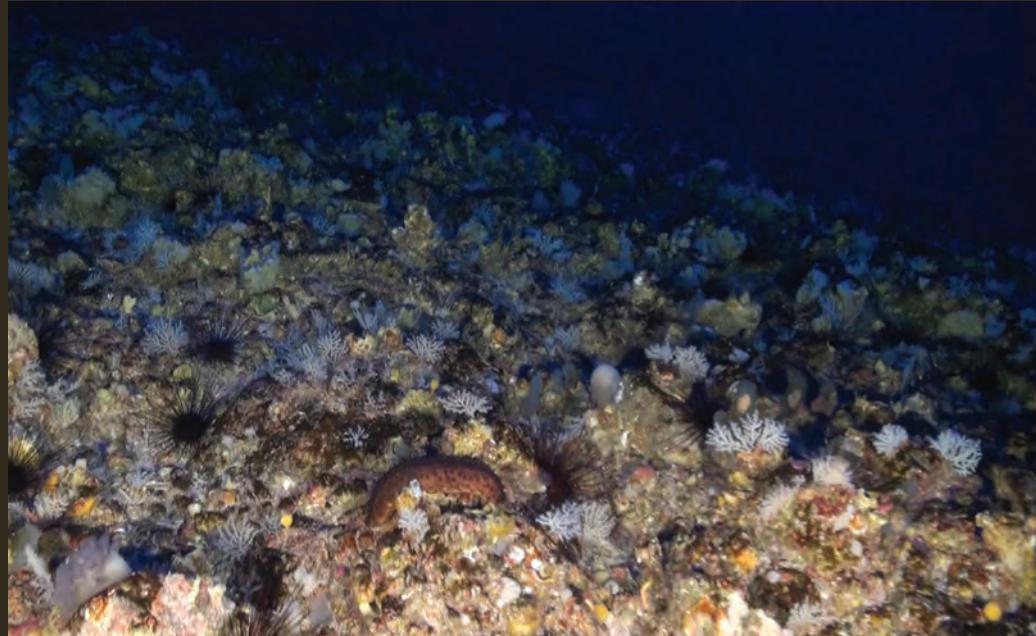
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Villogorgia bebrycoides

(Koch, 1887)

Class: Anthozoa
Order: Alcyonacea
Family: Plexauridae



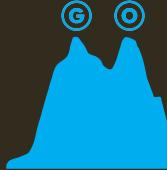
Cnidaria

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Callogorgia verticillata

(Pallas, 1766)

Class: Anthozoa
Order: Alcyonacea
Family: Primnidae



Candidella cf. imbricata

(Johnson, 1862)

Class: Anthozoa
Order: Alcyonacea
Family: Primnidae



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Narella sp.

Gray, 1870

Class: Anthozoa
Order: Alcyonacea
Family: Primnidae



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| 16

Paracalyptrophora josephinae

(Lindström, 1877)

Class: Anthozoa
Order: Alcyonacea
Family: Primnidae



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Primnoidae

Milne Edwards, 1857

Class: Anthozoa
Order: Alcyonacea
Family: Primnidae



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| 18

Antipathes furcata

Gray, 1857

Class: Anthozoa
Order: Antipatharia
Family: Antipathidae



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Stichopathes cf. gravieri

Molodtsova, 2006

Class: Anthozoa
Order: Antipatharia
Family: Antipathidae



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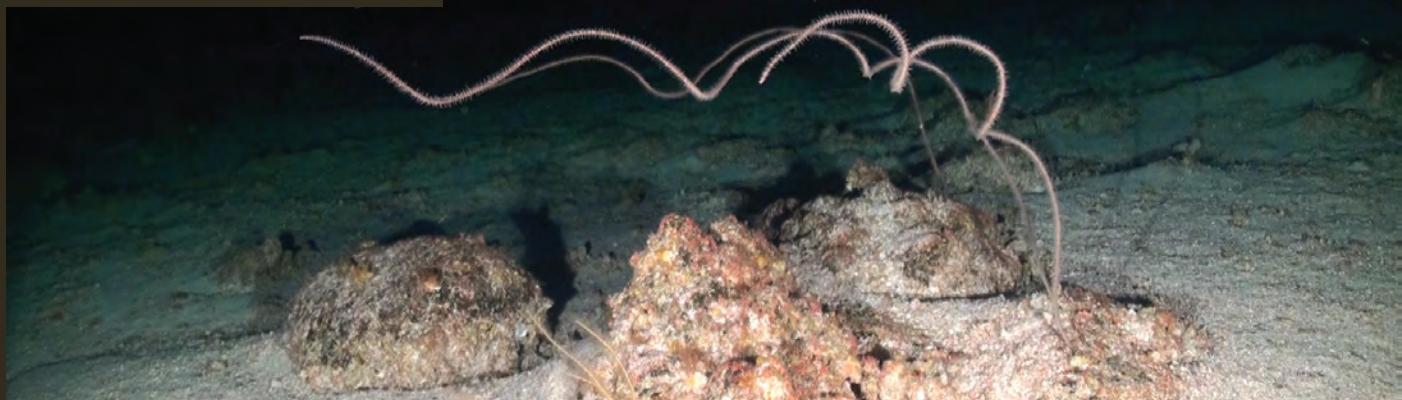
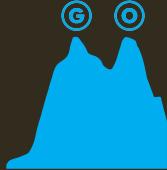
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| 20

Stichopathes sp.

Brook, 1889

Class: Anthozoa
Order: Antipatharia
Family: Antipathidae



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Aphanipathes sp.

Brook, 1889

Class: Anthozoa
Order: Antipatharia
Family: Aphanipathidae



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GORRANGE BANK

| 22

Aphanipathes sp.

Brook, 1889

Class: Anthozoa
Order: Antipatharia
Family: Aphanipathidae



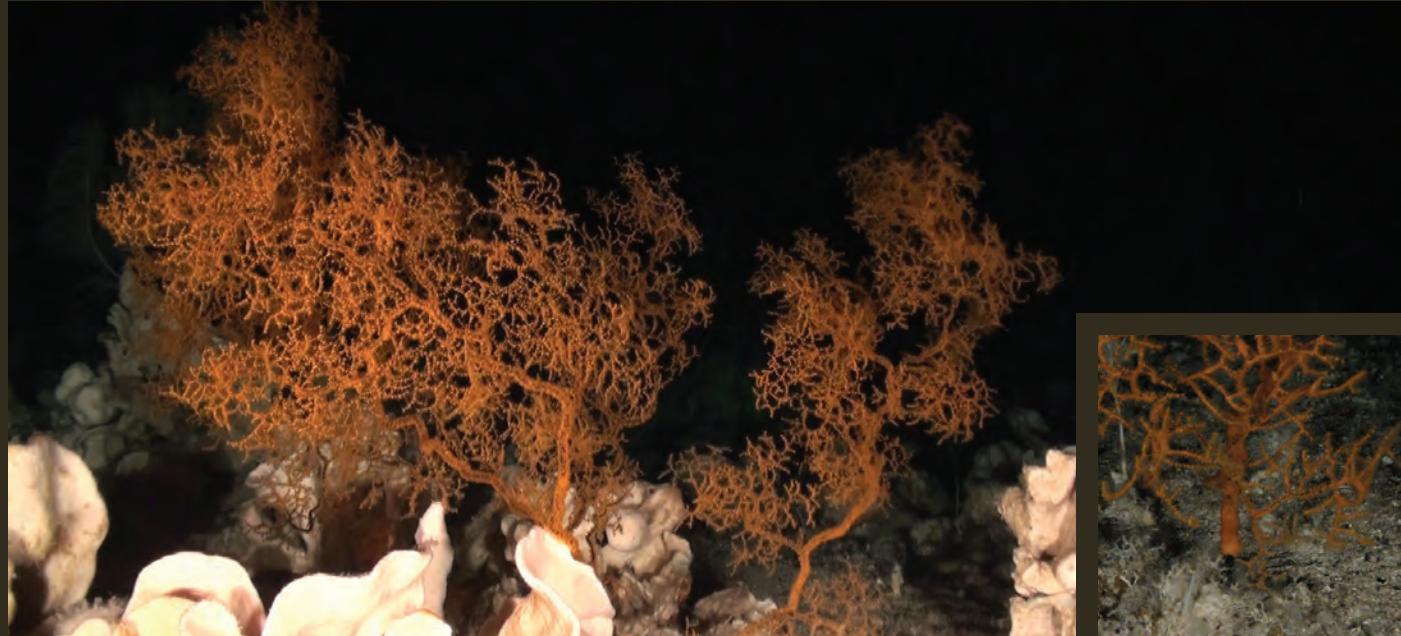
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Leiopathes sp.

Haime, 1849

Class: Anthozoa
Order: Antipatharia
Family: Leiopathidae



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| 24

Antipathella subpinnata

(Ellis & Solander, 1786)

Class: Anthozoa
Order: Antipatharia
Family: Myriopathidae



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GORRINGE BANK

| 25

Antipathella cf. wollastoni

(Gray, 1857)

Class: Anthozoa
Order: Antipatharia
Family: Myriopathidae



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| 26

Tanacetipathes sp.

Class: Anthozoa
Order: Antipatharia
Family: Myriopathidae



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Ceriantharia

Perrier, 1893

Class: Anthozoa
Order: Ceriantharia
Family:



Corynactis viridis

Allman, 1846

Class: Anthozoa
Order: Corallimorpharia
Family: Corallimorphidae



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Funiculina cf. quadrangularis

(Pallas, 1766)

Class: Anthozoa
Order: Pennatulacea
Family: Funiculinidae



Pennatula sp.

Linnaeus, 1758

Class: Anthozoa
Order: Pennatulacea
Family: Pennatulidae



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Pteroeides cf. spinosum

(Ellis, 1764)

Class: Anthozoa
Order: Pennatulacea
Family: Pennatulidae



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GORRINGE BANK

| 32

Dendrophyllia cornigera

(Lamarck, 1816)

Class: Anthozoa
Order: Scleractinia
Family: Dendrophylliidae



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Flabellum chunii

Marenzeller, 1904

Class: Anthozoa
Order: Scleractinia
Family: Flabellidae



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GORRINGE BANK

| 34

Caryophylliidae

Dana, 1846

Class: Anthozoa
Order: Scleractinia
Family: Caryophylliidae



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Corymorphidae

Allman, 1872

Class: Hydrozoa
Order: Anthoathecata
Family: Corymorphidae



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GORRINGE BANK

| 36

Stylasteridae

Gray, 1847

Class: Hydrozoa
Order: Anthoathecata
Family: Stylasteridae



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Lepidopora sp.

Pourtalès, 1871

Class: Hydrozoa
Order: Anthoathecata
Family: Stylasteridae



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cf. *Ralpharia* sp.

Watson, 1980

Class: Hydrozoa
Order: Anthoathecata
Family: Tubulariidae



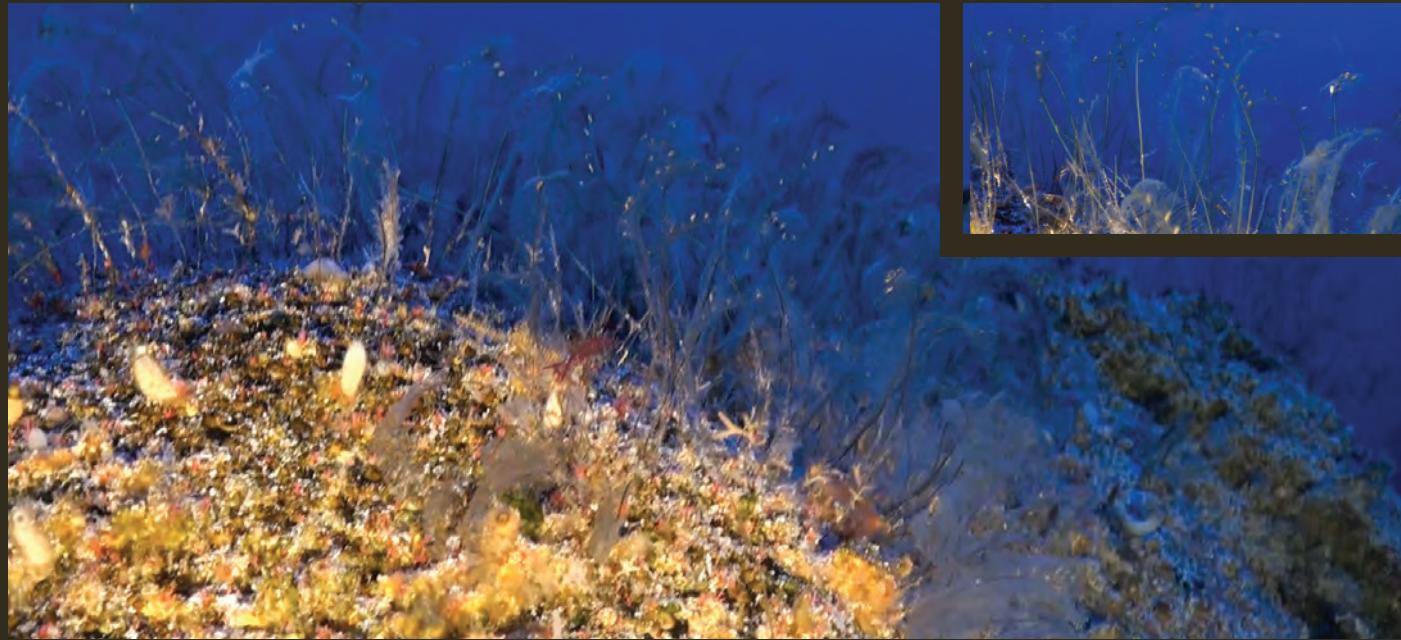
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Aglaophenia sp.

Lamouroux, 1812

Class: Hydrozoa
Order: Leptothecata
Family: Aglaopheniidae



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| 40

Lytocarpia myriophyllum

(Linnaeus, 1758)

Class: Hydrozoa
Order: Leptothecata
Family: Aglaopheniidae



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GORRINGE BANK

| 4 |

Aglaopheniidae

Marktanner-Turneretscher, 1890

Class: Hydrozoa
Order: Leptothecata
Family: Aglaopheniidae



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GORRINGE BANK

|42

Clytia sp.

(Linnaeus, 1767)

Class: Hydrozoa
Order: Leptothecata
Family: Campanularidae



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GORRIGE BANK

| 43

Campanulariidae

Johnston, 1836

Class: Hydrozoa
Order: Leptothecata
Family: Campanulariidae



Campanulariidae

Johnston, 1836

Class: Hydrozoa
Order: Leptothecata
Family: Campanulariidae



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GORRIGE BANK

| 45

Campanulariidae

Johnston, 1836

Class: Hydrozoa
Order: Leptothecata
Family: Campanulariidae



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| 46

Nemertesia antennina

(Linnaeus, 1758)

Class: Hydrozoa
Order: Leptothecata
Family: Plumulariidae



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Nemertesia cf. ramosa

(Lamarck, 1816)

Class: Hydrozoa
Order: Leptothecata
Family: Plumulariidae



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GORRINGE BANK

| 48

Pseudoplumaria sp.

Ramil & Vervoort, 1992

Class: Hydrozoa
Order: Leptothecata
Family: Plumulariidae



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GORRIGE BANK

Plumulariidae

Agassiz, 1862

Class: Hydrozoa
Order: Leptothecata
Family: Plumulariidae



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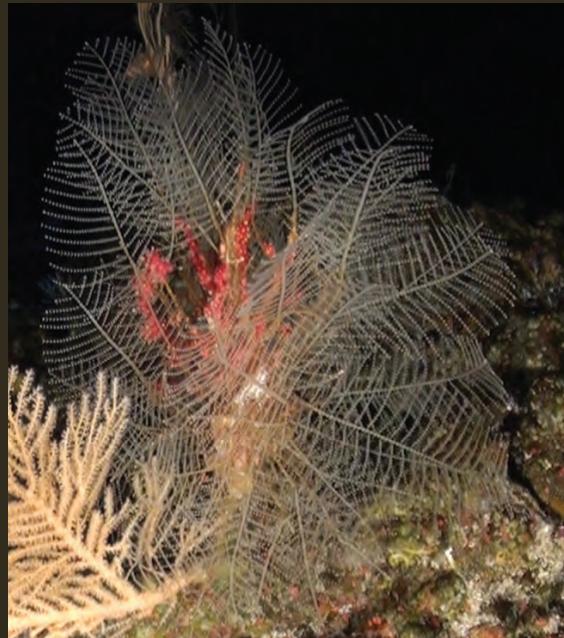
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GORRANGE BANK

| 50

Diphasia sp.

Agassiz, 1862

Class: Hydrozoa
Order: Leptothecata
Family: Sertulariidae



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GORRIGE BANK

Sertularella sp.

Gray, 1848

Class: Hydrozoa
Order: Leptothecata
Family: Sertulariidae



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GORRINGE BANK

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Sertularella sp.

Gray, 1848

Class: Hydrozoa
Order: Leptothecata
Family: Sertulariidae



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Haliscera conica

Vanhöffen, 1902

Class: Hydrozoa
Order: Trachymedusae
Family: Halicreatidae



Halopterididae

Millard, 1962

Class: Hydrozoa
Order: Leptothecata
Family: Halopterididae



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Cnidaria (unassigned)

Verrill, 1865

Class:
Order:
Family:



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GORRINGE BANK

| 56

Cnidaria (unassigned)

Verrill, 1865

Class:
Order:
Family:



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BRYOZOA

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GORRINGE BANK

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Schizomavella spp.

Canu & Bassler, 1917

Class: Gymnolaemata
Order: Cheilostomatida
Family: Bitectiporidae



BRYOZOA

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GORRINGE BANK

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Candidae

d'Orbigny, 1851

Class: Gymnolaemata
Order: Cheilostomatida
Family: Candidae



BRYOZOA

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GORRINGE BANK

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Cellaria sp.

Ellis & Solander, 1786

Class: Gymnolaemata
Order: Cheilostomatida
Family: Cellariidae



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OF THE SPECIES OF THE
GORRINGE BANK

Cellaria sp.

Ellis & Solander, 1786

Class: Gymnolaemata
Order: Cheilostomatida
Family: Cellariidae



Omalosecosa ramulosa

(Linnaeus, 1767)

Class: Gymnolaemata
Order: Cheilostomatida
Family: Celleporidae



BRYOZOA

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Exidmonea atlantica

(Forbes in Johnston, 1847)

Class: Stenolaemata
Order: Cyclostomatida
Family: Tubuliporidae



BRYOZOA

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GORRINGE BANK

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Bryozoa (unassigned)

Class:
Order:
Family:



BRYOZOA

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GORRINGE BANK

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ANNELIDA

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GORRINGE BANK

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Hermodice carunculata

(Pallas, 1766)

Class: Polychaeta
Order: Amphinomida
Family: Amphinomidae



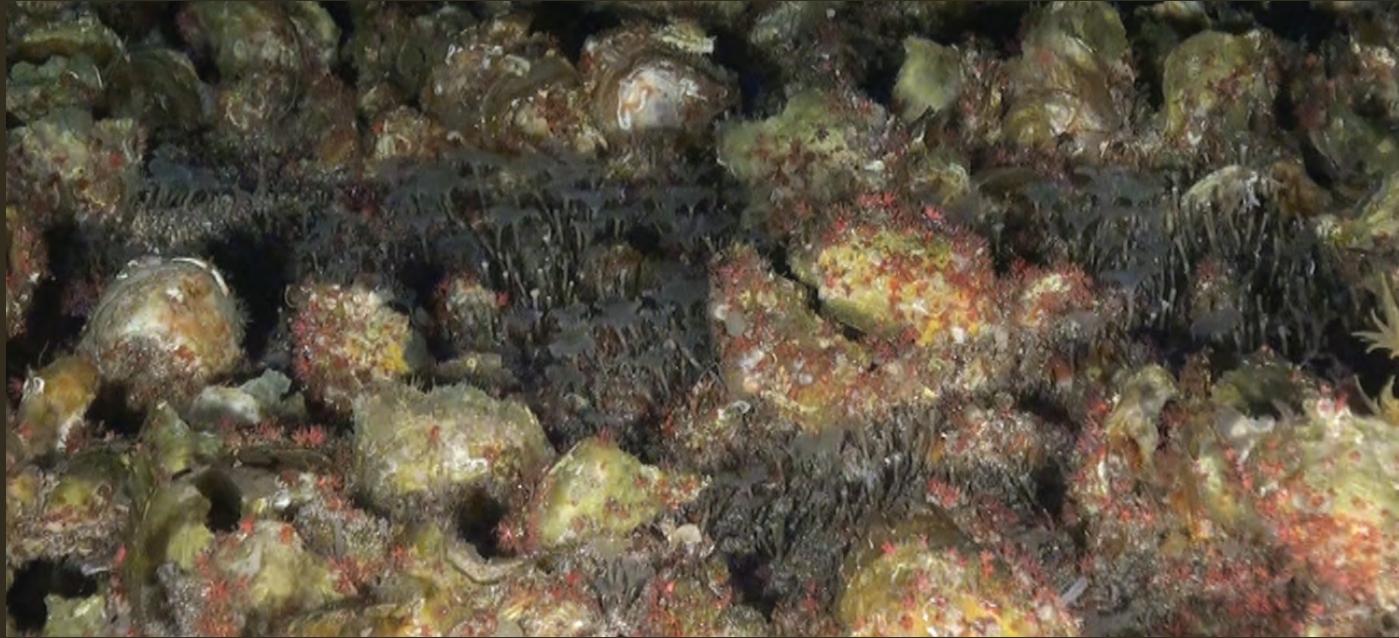
ANNELIDA

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Myxicola aesthetica

(Claparède, 1870)

Class: Polychaeta
Order: Sabellida
Family: Sabellidae



ANNELIDA

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GORRINGE BANK

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Filograna implexa

Berkeley, 1835

Class: Polychaeta
Order: Sabellida
Family: Serpulidae



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Filograna sp.

Berkeley, 1835

Class: Polychaeta
Order: Sabellida
Family: Serpulidae



ANNELIDA

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Lanice spp.

Malmgren, 1866

Class: Polychaeta
Order: Terebellida
Family: Terebellidae



ANNELIDA

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ARTHROPODA

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Cancer bellianus

Johnson, 1861

Class: Malacostraca
Order: Decapoda
Family: Cancridae



ARTHROPODA

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GORRIGE BANK

Homola barbata

(Fabricius, 1793)

Class: Malacostraca
Order: Decapoda
Family: Homolidae



Paromola cuvieri

(Risso, 1816)

Class: Malacostraca
Order: Decapoda
Family: Homolidae



Majidae

Samouelle, 1819

Class: Malacostraca
Order: Decapoda
Family: Majidae



Anamathia rissoana

(Roux, 1828)

Class: Malacostraca
Order: Decapoda
Family: Epialtidae



ARTHROPODA

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OF THE SPECIES OF THE
GORRINGE BANK

Bathynectes maravigna

(Prestandrea, 1839)

Class: Malacostraca
Order: Decapoda
Family: Polybidae



Palinurus elephas

(Fabricius, 1787)

Class: Malacostraca
Order: Decapoda
Family: Palinuridae



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Scyllarus arctus

(Linnaeus, 1758)

Class: Malacostraca
Order: Decapoda
Family: Scyllaridae



ARTHROPODA

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GORRIGE BANK

| 180

Munida spp.

Leach, 1820

Class: Malacostraca
Order: Decapoda
Family: Munididae



Pagurus excavatus

(Herbst, 1791)

Class: Malacostraca

Order: Decapoda

Family: Paguridae



Pagurus prideaux

Leach, 1815

Class: Malacostraca
Order: Decapoda
Family: Paguridae



Aristeus antennatus

(Risso, 1826)

Class: Malacostraca
Order: Decapoda
Family: Aristeidae



ARTHROPODA

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GORRINGE BANK

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Plesionika edwardsii

(Brandt, 1851)

Class: Malacostraca
Order: Decapoda
Family: Pandalidae



ARTHROPODA

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OF THE SPECIES OF THE
GORRINGE BANK

| 85

Plesionika martia

(A. Milne-Edwards, 1883)

Class: Malacostraca
Order: Decapoda
Family: Pandalidae



Plesionika williamsi

Forest, 1964

Class: Malacostraca
Order: Decapoda
Family: Pandalidae



ARTHROPODA

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GORRIGE BANK

Anomura

MacLeay, 1838

Class: Malacostraca
Order: Decapoda
Family:



BRACHIOPODA

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OF THE SPECIES OF THE
GORRINGE BANK

| 189

Gryphus vitreus

(Born, 1778)

Class: Rhynchonellata
Order: Terebratulida
Family: Terebratulidae



MOLLUSCA

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GORRINGE BANK

| 9 |

Neopycnodonte cochlear

(Poli, 1795)

Class: Bivalvia
Order: Ostreida
Family: Gryphaeidae



MOLLUSCA

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GORRINGE BANK

| 192

Neopycnodonte zibrowii

Gofas, Salas & Taviani, 2009

Class: Bivalvia
Order: Ostreida
Family: Gryphaeidae



MOLLUSCA

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GORRINGE BANK

Pteria hirundo

(Linnaeus, 1758)

Class: Bivalvia
Order: Pterioida
Family: Pteriidae



Eledone cf. moschata

(Lamarck, 1798)

Class: Cephalopoda
Order: Octopoda
Family: Eledonidae



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GORRIGE BANK

| 95

Octopus salutii

Vérany, 1836

Class: Cephalopoda
Order: Octopoda
Family: Octopodidae



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OF THE SPECIES OF THE
GORRINGE BANK

| 196

Octopus vulgaris

Cuvier, 1797

Class: Cephalopoda
Order: Octopoda
Family: Octopodidae



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OF THE SPECIES OF THE
GORRINÉ BANK

| 97

Scaeurgus unicirrus

(Delle Chiaje [in de Féussac & d'Orbigny], 1841)

Class: Cephalopoda
Order: Octopoda
Family: Octopodidae



Sepia orbignyana

Férussac, 1826

Class: Cephalopoda
Order: Sepiida
Family: Sepiidae



Pseudosimnia carnea

(Poiret, 1789)

Class: Gastropoda
Order: Littorinimorpha
Family: Ovulidae



Charonia lampas

(Linnaeus, 1758)

Class: Gastropoda
Order: Littorinimorpha
Family: Ranellidae



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GORRINGE BANK

201

Ranella olearium

(Linnaeus, 1758)

Class: Gastropoda
Order: Littorinimorpha
Family: Ranellidae



Eudolium bairdii

(Verrill & S. Smith [in Verrill], 1881)

Class: Gastropoda
Order: Littorinimorpha
Family: Tonnidae



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GORRIGE BANK

203

cf. Colus sp.

Röding, 1798

Class: Gastropoda
Order: Neogastropoda
Family: Buccinidae



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GORRINGE BANK

204

Fusinus sp.

Rafinesque, 1815

Class: Gastropoda
Order: Neogastropoda
Family: Fasciolariidae



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GORRIGE BANK

205

Coralliophila sp. 1

H. Adams & A. Adams, 1853

Class: Gastropoda
Order: Neogastropoda
Family: Muricidae



Coralliophila sp. 2

H. Adams & A. Adams, 1853

Class: Gastropoda
Order: Neogastropoda
Family: Muricidae



MOLLUSCA

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GORRIGE BANK

207

Felimare picta

(Schultz in Philippi, 1836)

Class: Gastropoda
Order: Nudibranchia
Family: Chromodorididae



Chromodorididae

Bergh, 1891

Class: Gastropoda
Order: Nudibranchia
Family: Chromodorididae



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GORRIGE BANK

209

Nudibranchia

Cuvier, 1817

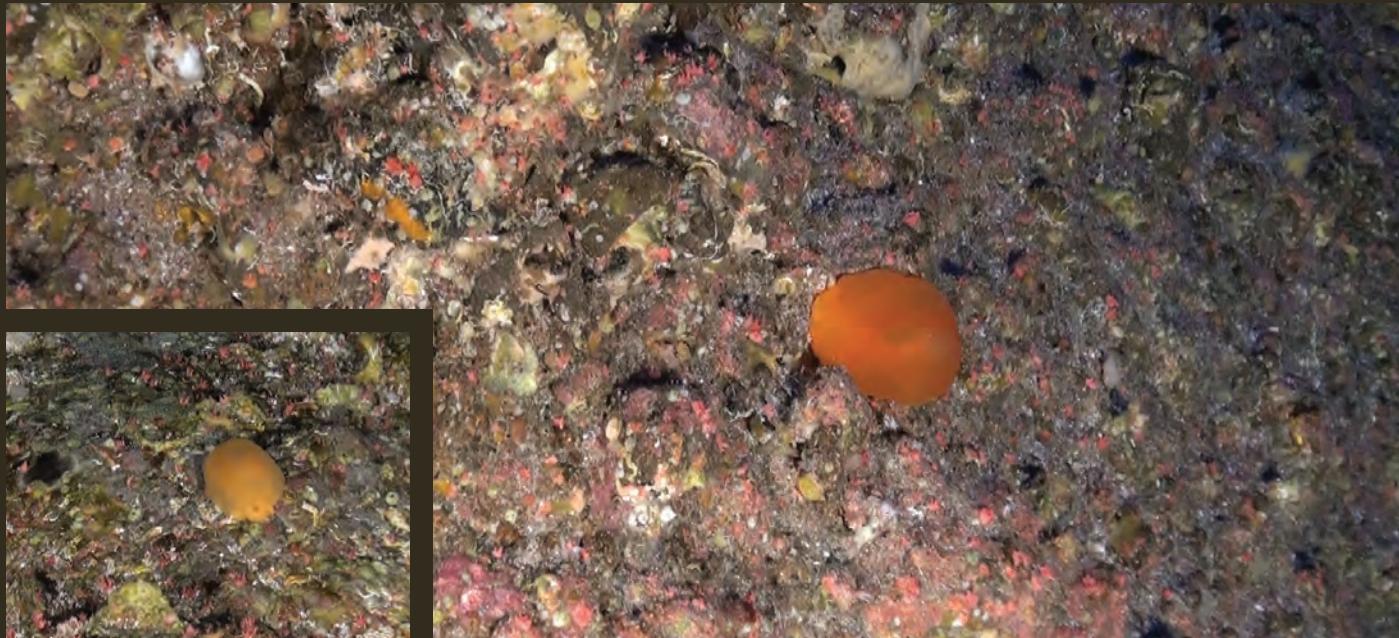
Class: Gastropoda
Order: Nudibranchia
Family:



Berthellina edwardsi

(Vayssi  re, 1896)

Class: Gastropoda
Order: Pleurobranchomorpha
Family: Pleurobranchidae



MOLLUSCA

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OF THE SPECIES OF THE
GORRINGE BANK

211

Calliostoma cf. conulus

(Linnaeus, 1758)

Class: Gastropoda

Order:

Family: Calliostomatidae



Calliostoma sp. 1

Swainson, 1840

Class: Gastropoda

Order:

Family: Calliostomatidae



Calliostoma sp.2

Swainson, 1840

Class: Gastropoda

Order:

Family: Calliostomatidae



Calliostoma sp.3

Swainson, 1840

Class: Gastropoda

Order:

Family: Calliostomatidae



MOLLUSCA

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OF THE SPECIES OF THE
GORRIGE BANK

215

Calliostoma sp.4

Swainson, 1840

Class: Gastropoda

Order:

Family: Calliostomatidae



MOLLUSCA

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OF THE SPECIES OF THE
GORRINGE BANK

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ECHINODERMATA

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GORRIGE BANK

217

Coronaster volsellatus

(Sladen, 1889)

Class: Asteroidea
Order: Forcipulatida
Family: Asteriidae



Coscinasterias tenuispina

(Lamarck, 1816)

Class: Asteroidea
Order: Forcipulatida
Family: Asteriidae



ECHINODERMATA

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OF THE SPECIES OF THE
GORRONG BANK

Anseropoda placenta

(Pennant, 1777)

Class: Asteroidea
Order: Valvatida
Family: Asterinidae



Chaetaster longipes

(Retzius, 1805)

Class: Asteroidea
Order: Valvatida
Family: Chaetasteridae



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OF THE SPECIES OF THE
GORRIGE BANK

221

Hacelia attenuata

Gray, 1840

Class: Asteroidea
Order: Valvatida
Family: Ophidiasteridae



Hacelia superba

H.L. Clark, 1921

Class: Asteroidea
Order: Valvatida
Family: Ophidiasteridae



ECHINODERMATA

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OF THE SPECIES OF THE
GORRONG BANK

223

cf. Sclerasterias contorta

(Perrier, 1881)

Class: Asteroidea
Order: Forcipulatida
Family: Asteriidae



Asteroidea

de Blainville, 1830

Class: Asteroidea

Order:

Family:



ECHINODERMATA

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OF THE SPECIES OF THE
GORRIGE BANK

225

Leptometra celtica

(M'Andrew & Barrett, 1857)

Class: Crinoidea
Order: Comatulida
Family: Antedonidae



Poliometra sp.

AH Clark, 1923

Class: Crinoidea
Order: Comatulida
Family: Antedonidae



ECHINODERMATA

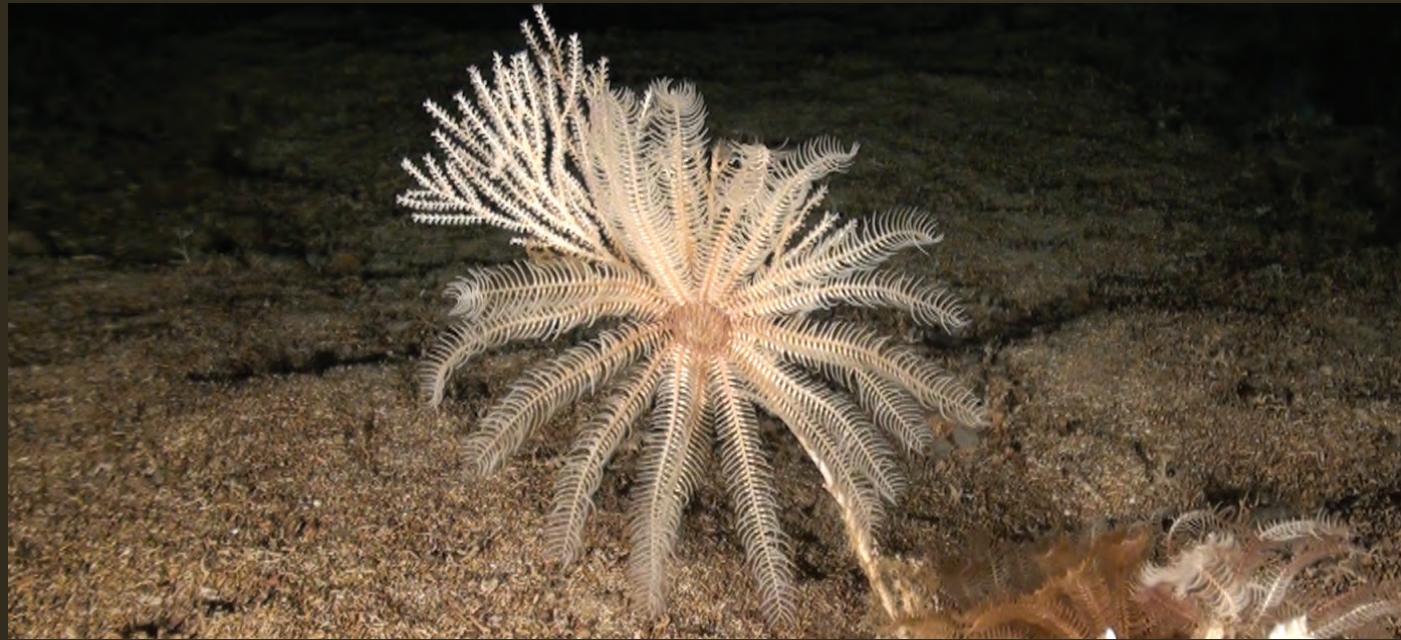
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GORRINGE BANK

227

Neocomatella sp.

AH Clark, 1909

Class: Crinoidea
Order: Comatulida
Family: Comatulidae



Koehlermetra sp.

AH Clark, 1950

Class: Crinoidea
Order: Comatulida
Family: Thalassometridae



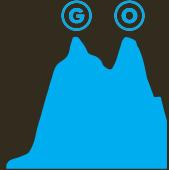
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OF THE SPECIES OF THE
GORRINGE BANK

229

Crinoidea

Class: Crinoidea
Order:
Family:



Crinoidea

Class: Crinoidea
Order:
Family:



ECHINODERMATA

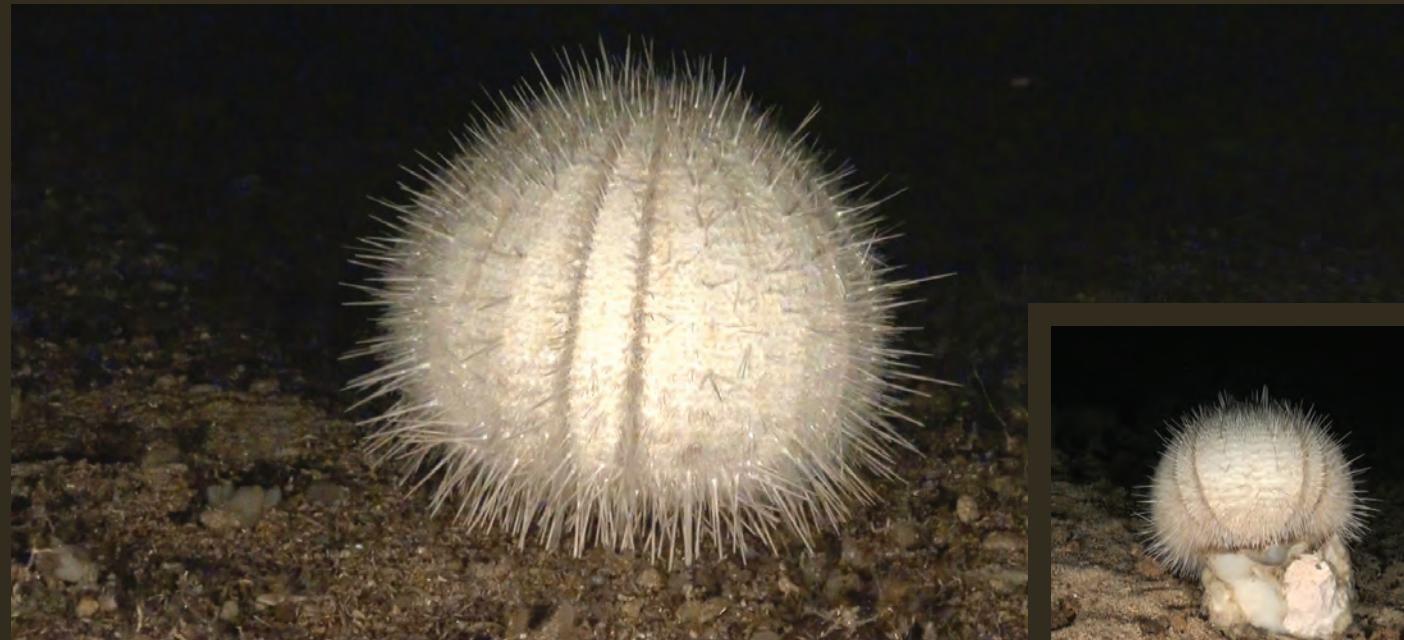
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GORRIGE BANK

231

Echinus melo

Lamarck, 1816

Class: Echinoidea
Order: Camarodonta
Family: Echinidae



Sphaerechinus granularis

(Lamarck, 1816)

Class: Echinoidea
Order: Camarodonta
Family: Toxopneustidae



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GORRIGE BANK

233

Cidaris cidaris

(Linnaeus, 1758)

Class: Echinoidea
Order: Cidaroida
Family: Cidaridae



Centrostephanus longispinus

(Philippi, 1845)

Class: Echinoidea
Order: Diadematoida
Family: Diadematidae



ECHINODERMATA

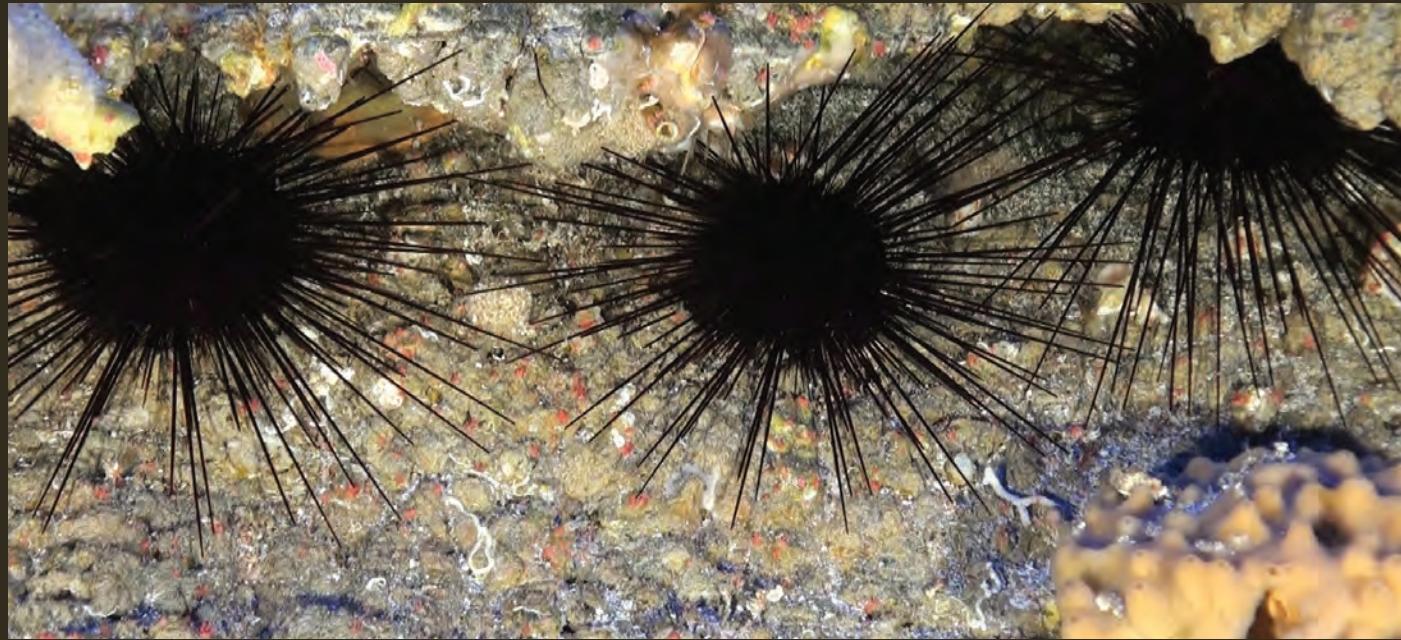
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GORRONGE BANK

235

Diadema africanum

Rodríguez, Hernández, Clemente & Coppard, 2013

Class: Echinoidea
Order: Diadematoida
Family: Diadematidae



Holothuria sp.

Linnaeus, 1767

Class: Holothuroidea
Order: Aspidochirota
Family: Holothuriidae



ECHINODERMATA

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GORRONG BANK

237

Holothuria forskali

Delle Chiaje, 1823

Class: Holothuroidea
Order: Aspidochirota
Family: Holothuriidae



Holothuria lentiginosa

Marenzeller von, 1892

Class: Holothuroidea
Order: Aspidochirota
Family: Holothuriidae



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OF THE SPECIES OF THE
GORINGE BANK

239

Ophiuroidea

Gray, 1840

Class: Ophiuroidea

Order:

Family:



CHORDATA

ASCIIDIACEA

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OF THE SPECIES OF THE
GORRIGE BANK

241

Ascidia mentula

Müller, 1776

Class: Ascidiacea
Order: Phlebobranchia
Family: Asciidae



Ascidia conchilega

Muller, 1776

Class: Asciidae
Order: Phlebobranchia
Family: Asidiidae



Diazona violacea

Savigny, 1816

Class: Ascidiacea
Order: Phlebobranchia
Family: Diazonidae



Asciidiacea (unassigned)

Nielsen, 1995

Class: Asciidiacea

Order:

Family:



Asciidiacea (unassigned)

Nielsen, 1995

Class: Asciidiacea

Order:

Family:



Asciidiacea (unassigned)

Nielsen, 1995

Class: Asciidiacea

Order:

Family:



CHORDATA

ACTINOPTERI

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OF THE SPECIES OF THE
GORRINGE BANK

248

Muraena helena

Linnaeus, 1758

Class: Actinopteri
Order: Anguilliformes
Family: Muraenidae



Conger conger

(Linnaeus, 1758)

Class: Actinopteri
Order: Anguilliformes
Family: Congridae



CHORDATA ACTINOPTERI



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GORRINGE BANK

250

Aulopus filamentosus

(Bloch, 1792)

Class: Actinopteri
Order: Aulopiformes
Family: Aulopidae



CHORDATA ACTINOPTERI

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OF THE SPECIES OF THE
GORRINGE BANK

Chlorophthalmus agassizi

Bonaparte, 1840

Class: Actinopteri
Order: Aulopiformes
Family: Chlorophthalmidae



Gephyroberyx darwinii

(Johnson, 1866)

Class: Actinopteri
Order: Beryciformes
Family: Trachichthyidae



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OF THE SPECIES OF THE
GORRINGE BANK

253

Gadiculus argenteus

Guichenot, 1850

Class: Actinopteri
Order: Gadiformes
Family: Gadidae



Coelorinchus caelorhincus

(Risso, 1810)

Class: Actinopteri
Order: Gadiformes
Family: Macrouridae



Hymenocephalus italicus

Giglioli, 1884

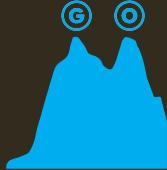
Class: Actinopteri
Order: Gadiformes
Family: Macrouridae



Malacocephalus laevis

(Lowe, 1843)

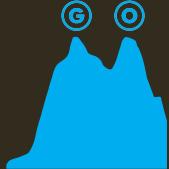
Class: Actinopteri
Order: Gadiformes
Family: Macrouridae



Nezumia sclerorhynchus

(Valenciennes, 1838)

Class: Actinopteri
Order: Gadiformes
Family: Macrouridae



Laemonema yarrellii

(Lowe, 1838)

Class: Actinopteri
Order: Gadiformes
Family: Moridae



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GORRIGE BANK

259

Physiculus dalwigki

Kaup, 1858

Class: Actinopteri
Order: Gadiformes
Family: Moridae



Phycis phycis

(Linnaeus, 1766)

Class: Actinopteri
Order: Gadiformes
Family: Phycidae



Chaunax pictus

Lowe, 1846

Class: Actinopteri
Order: Lophiiformes
Family: Chaunacidae



Lophius budegassa

Spinola, 1807

Class: Actinopteri
Order: Lophiiformes
Family: Lophiidae



CHORDATA ACTINOPTERI

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GORRIGE BANK

263

Notoscopelus sp.

Günther, 1864

Class: Actinopteri
Order: Myctophiformes
Family: Myctophidae



Benthocometes robustus

(Goode & Bean, 1886)

Class: Actinopteri
Order: Ophidiiformes
Family: Ophidiidae



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OF THE SPECIES OF THE
GORRIGE BANK

265

Ammodytidae

Bonaparte, 1835

Class: Actinopteri
Order: Perciformes
Family: Ammodytidae



Callanthias ruber

(Rafinesque, 1810)

Class: Actinopteri
Order: Perciformes
Family: Callanthiidae



Callionymus spp.

Linnaeus, 1758

Class: Actinopteri
Order: Perciformes
Family: Callionymidae



Synchiropus phaeton

(Günther, 1861)

Class: Actinopteri
Order: Perciformes
Family: Callionymidae



Antigonia capros

Lowe, 1843

Class: Actinopteri
Order: Perciformes
Family: Caproidae



CHORDATA ACTINOPTERI



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OF THE SPECIES OF THE
GORRINGE BANK

270

Capros aper

(Linnaeus, 1758)

Class: Actinopteri
Order: Perciformes
Family: Caproidae



Seriola rivoliana

Valenciennes, 1833

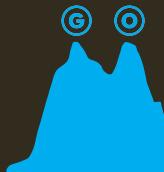
Class: Actinopteri
Order: Perciformes
Family: Carangidae



Trachurus sp.

Rafinesque, 1810

Class: Actinopteri
Order: Perciformes
Family: Carangidae



CHORDATA ACTINOPTERI

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GORINGE BANK

275

Centrodraco acanthopoma

(Regan, 1904)

Class: Actinopteri
Order: Perciformes
Family: Draconettidae



Epigonus sp.

Rafinesque, 1810

Class: Actinopteri
Order: Perciformes
Family: Epigonidae



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GORINGE BANK

275

Kyphosus sectatrix

(Linnaeus, 1758)

Class: Actinopteri
Order: Perciformes
Family: Kyphosidae



Acantholabrus palloni

(Risso, 1810)

Class: Actinopteri
Order: Perciformes
Family: Labridae



Centrolabrus trutta

(Lowe, 1834)

Class: Actinopteri
Order: Perciformes
Family: Labridae



CHORDATA ACTINOPTERI



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GORRONGE BANK

278

Coris julis

(Linnaeus, 1758)

Class: Actinopteri
Order: Perciformes
Family: Labridae



Labrus bergylta

Ascanius, 1767

Class: Actinopteri
Order: Perciformes
Family: Labridae



Lappanella fasciata

(Cocco, 1833)

Class: Actinopteri
Order: Perciformes
Family: Labridae



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OF THE SPECIES OF THE
GORRIGE BANK

281

Syphodus mediterraneus

(Linnaeus, 1758)

Class: Actinopteri
Order: Perciformes
Family: Labridae



Mullus surmuletus

Linnaeus, 1758

Class: Actinopteri
Order: Perciformes
Family: Mullidae



A PHOTOGRAPHIC GUIDE
OF THE SPECIES OF THE
GORRINGE BANK

283

Abudefduf luridus

(Cuvier, 1830)

Class: Actinopteri
Order: Perciformes
Family: Pomacentridae



Anthias anthias

(Linnaeus, 1758)

Class: Actinopteri
Order: Perciformes
Family: Serranidae



Serranus atricauda

Günther, 1874

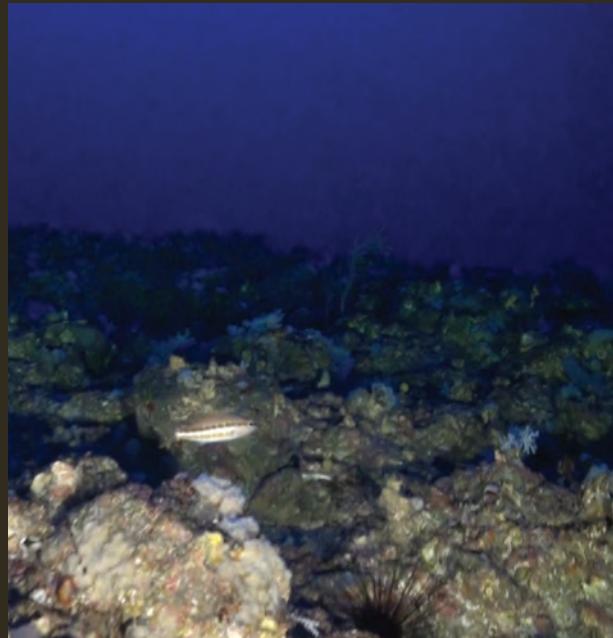
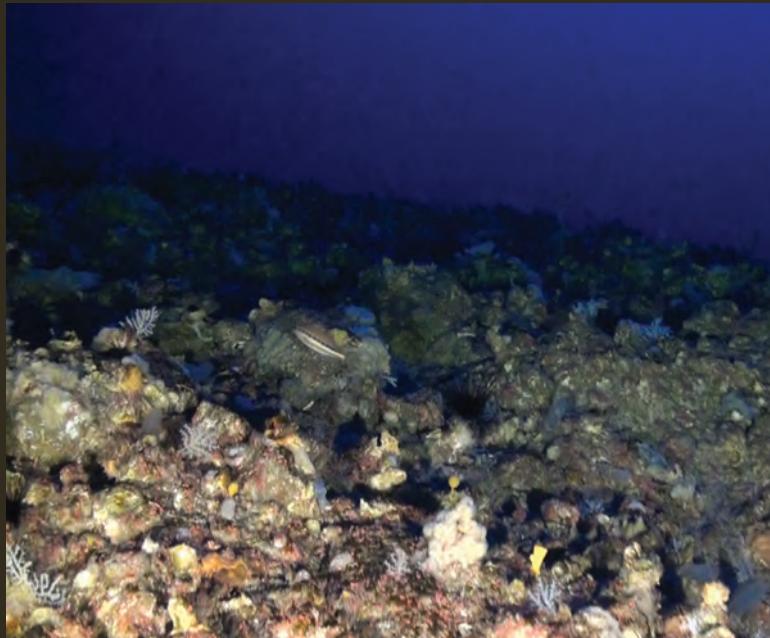
Class: Actinopteri
Order: Perciformes
Family: Serranidae



Serranus cabrilla

(Linnaeus, 1758)

Class: Actinopteri
Order: Perciformes
Family: Serranidae



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OF THE SPECIES OF THE
GORRIGE BANK

287

Sphyraena sp.

Artedi, 1793

Class: Actinopteri
Order: Perciformes
Family: Sphyraenidae



Arnoglossus rueppelii

(Cocco, 1844)

Class: Actinopteri
Order: Pleuronectiformes
Family: Bothidae



Lepidorhombus whiffiagonis

(Walbaum, 1792)

Class: Actinopteri
Order: Pleuronectiformes
Family: Scophthalmidae



Pontinus kuhlii

(Bowdich, 1825)

Class: Actinopteri
Order: Scorpaeniformes
Family: Scorpaenidae



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OF THE SPECIES OF THE
GORRINGE BANK

Scorpaena maderensis

Valenciennes, 1833

Class: Actinopteri
Order: Scorpaeniformes
Family: Scorpaenidae



Scorpaena scrofa

Linnaeus, 1758

Class: Actinopteri
Order: Scorpaeniformes
Family: Scorpaenidae



Scorpaenidae

Risso, 1827

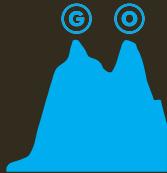
Class: Actinopteri
Order: Scorpaeniformes
Family: Scorpaenidae



Helicolenus dactylopterus

(Delaroche, 1809)

Class: Actinopteri
Order: Scorpaeniformes
Family: Sebastidae



CHORDATA ACTINOPTERI

A PHOTOGRAPHIC GUIDE
OF THE SPECIES OF THE
GORRINGE BANK

295

Setarches guentheri

Johnson, 1862

Class: Actinopteri
Order: Scorpaeniformes
Family: Setarchidae



Chelidonichthys cuculus

(Linnaeus, 1758)

Class: Actinopteri
Order: Scorpaeniformes
Family: Triglidae



Macroramphosus scolopax

(Linnaeus, 1758)

Class: Actinopteri
Order: Syngnathiformes
Family: Centriscidae



Balistes capriscus

Gmelin, 1789

Class: Actinopteri
Order: Tetraodontiformes
Family: Balistidae



Grammicolepis brachiusculus

Poey, 1873

Class: Actinopteri
Order: Zeiformes
Family: Grammicolepididae



CHORDATA ACTINOPTERI



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GORRINGE BANK

300

Cyttopsis rosea

(Lowe, 1843)

Class: Actinopteri
Order: Zeiformes
Family: Parazeniidae



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GORRIGE BANK

301

CHORDATA

ELASMOBRANCHII

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OF THE SPECIES OF THE
GORRINGE BANK

302

Deania profundorum

(Smith & Radcliffe, 1912)

Class: Elasmobranchii
Order: Squeliformes
Family: Centrophoridae



CHORDATA ELASMOBRANCHII

A PHOTOGRAPHIC GUIDE
OF THE SPECIES OF THE
GORRINGE BANK

303

Dipturus oxyrinchus

(Linnaeus, 1758)

Class: Elasmobranchii
Order: Rajiformes
Family: Rajidae



Torpedo marmorata

Risso, 1810

Class: Elasmobranchii
Order: Torpediniformes
Family: Torpedinidae



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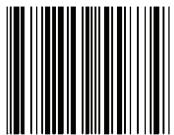
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