

**Field Guide to Corals of British Columbia, Canada,  
Alaska, USA, and the eastern North Pacific Ocean  
(Anthozoa: Octocorallia and Hexacorallia) (Hydrozoa:  
Anthoathecata). A complete compilation of coral  
identification for the eastern North Pacific Ocean**

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(Hydrozoa: Anthoathecata)**

*A complete compilation of coral identification for the eastern North Pacific Ocean*

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# Abstract

Wilborn, R.E., Goddard, P., Wilborn, M.M. II (illus.), Best, M., and Rooper, C.N.. 2021. Field Guide to Corals of British Columbia, Canada, Alaska, USA, and the eastern North Pacific Ocean (Anthozoa: Octocorallia and Hexacorallia) (Hydrozoa: Anthoathecata). A complete compilation of coral identifications for the eastern North Pacific Ocean. Can. Tech. Rep. Fish. Aquat. Sci. 3433: xi + 123 p.

This field guide consolidates the current resources for deep-sea coral taxonomic identification. The field guide covers corals distributed in the eastern North Pacific Ocean including species and taxonomic groups from Alaska, British Columbia and international waters managed by the North Pacific Fisheries Commission. The guide is meant to be used by field biologists, fisheries observers and fisher-people working in the deep-sea. The guide includes five Orders, 31 Families and 153 Species of corals that have been documented from the eastern North Pacific waters. It provides links to common database identification numbers (e.g. World Register of Marine Species, GFBio Database, and the RACE bottom trawl survey database). Pictures of specimens, spatial and depth distributions, notes on sample collections and general morphological descriptions are provided for each species or taxonomic grouping.

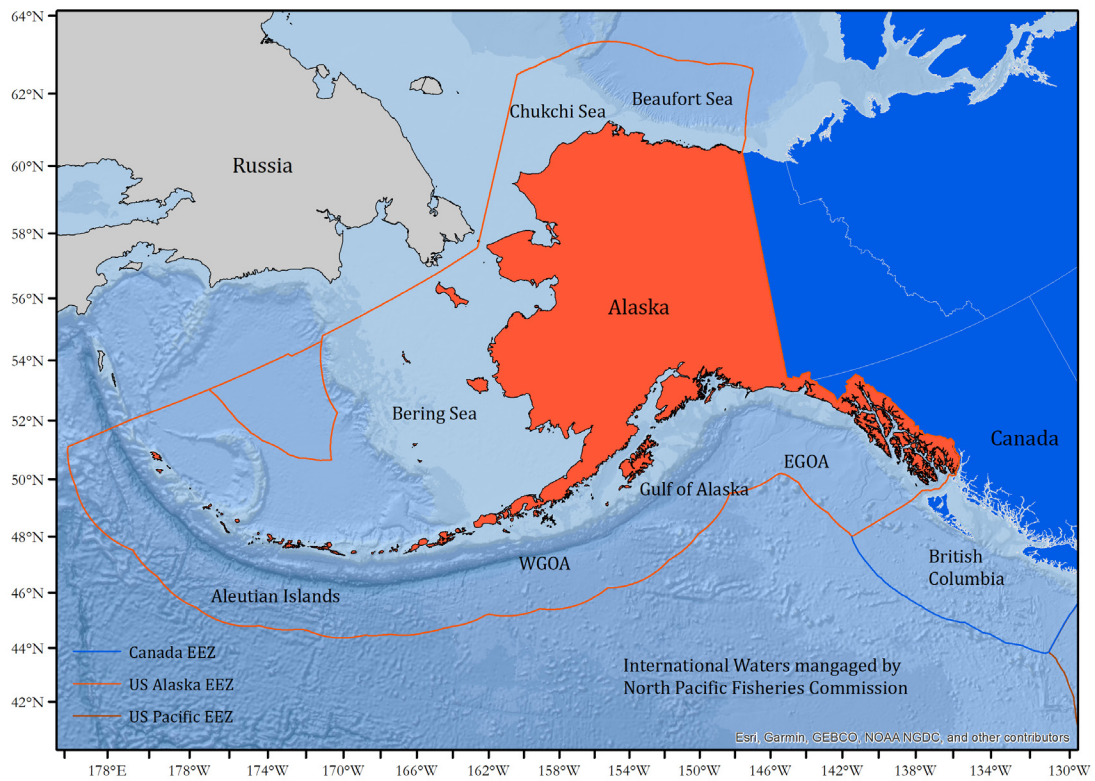
# Résumé

Wilborn, R.E., Goddard, P., Wilborn, M.M. II (illus.), Best, M., and Rooper, C.N.. 2021. Field Guide to Corals of British Columbia, Canada, Alaska, USA, and the eastern North Pacific Ocean (Anthozoa: Octocorallia and Hexacorallia) (Hydrozoa: Anthoathecata). A complete compilation of coral identifications for the eastern North Pacific Ocean. Can. Tech. Rep. Fish. Aquat. Sci. 3433: xi + 123 p.

Ce guide de terrain consolide les ressources actuelles pour l'identification taxonomique des coraux des grands fonds. Le guide de terrain couvre les coraux répartis dans l'est de l'océan Pacifique Nord, y compris les espèces et les groupes taxonomiques de l'Alaska, de la Colombie-Britannique et des eaux internationales gérées par la North Pacific Fisheries Commission. Le guide est destiné à être utilisé par les biologistes de terrain, les observateurs des pêches et les pêcheurs travaillant en haute mer. Le guide comprend cinq Ordres, 31 Familles et 153 Espèces de coraux qui ont été documentées dans les eaux de l'est du Pacifique Nord. Il fournit des liens vers les numéros d'identification de la base de données commune (par exemple, le Registre mondial des espèces marines, la base de données GFBio et la base de données d'enquête sur les chaluts de fond RACE). Des photos de spécimens, des distributions spatiales et en profondeur, des notes sur les collections d'échantillons et des descriptions morphologiques générales sont fournies pour chaque espèce ou groupement taxonomique.

# British Columbia and Alaska **Coral Guide**

**Regions:** British Columbia,  
Aleutian Islands, Bering Sea, Gulf of Alaska,  
Seamounts of British Columbia and Gulf of Alaska,  
Beaufort and Chukchi Seas



This guide encompasses corals and hydrocorals found in the waters surrounding British Columbia and Alaska, including international waters. Distribution designations found in this document include: British Columbia (BC), Aleutian Islands (AI), Beaufort Sea, Bering Sea (BS), Chukchi Sea, Gulf of Alaska (GOA), eastern GOA (EGOA), western GOA (WGOA), and international waters managed by the North Pacific Fisheries Commission. In addition, seamount names are provided in the text, where appropriate.

## **Image licensing**

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# User Guide

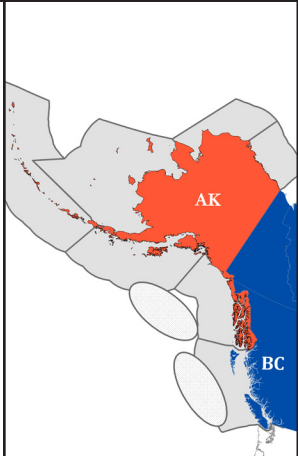
This document is an attempt to consolidate the scope of coral identification information that is available in the literature and relevant to the waters off British Columbia, Canada and Alaska, USA. This guide is a component of a larger international collaboration that intends to incorporate deep-sea coral species from southern California through the Arctic. It is not a comprehensive microscopic lab or genetics guide, but rather a macroscopic field/image guide to improve standardization of coral identification. Keys in this guide were largely modified from the most recent taxonomic literature and restricted to the north Pacific Ocean (NPO) region.

The layout of this guide is divided into colored sections by Order. Keys to Families in each order are typically at the start of each section, unless the Order is further subdivided into Suborder. Identification keys will guide the reader to the appropriate page based on key descriptors of Families and example images. Each species is described in its own species descriptor box (see example below) and supporting images are provided on the facing page. Words highlighted in **TEAL** have definitions found in the glossary (pg. 113-114).

Scientific name is provided as the most up-to-date version found in WoRMS. Common names were the product of various sources, including WoRMS, taxonomic literature, and seeking the latin meanings to words. Coral characteristics were compiled from original and updated taxonomic records of each species. Lastly, geographic and depth distributions are currently understood estimates, but can be expanded or retracted based on future specimen analysis.

Hyperlinks are provided in the digital version of this guide to the [WoRMS Aphia ID](#) database for any validated species. Species codes for British Columbia (GF Bio) and [Alaska](#) (RACE) are also included. Many specimens used to verify presence/absence for this guide can be found in museum collections; including the [Smithsonian National Museum of Natural History Invertebrate Collection](#) (SNMNH), [California Academy of Sciences Institute for Biodiversity Science and Sustainability Invertebrate Collections Catalogue](#) (CAS), and the [Royal British Columbia Museum](#) (RBCM).

## How to Use This Guide

<p>Scientific Name (*cf.)<sup>citations</sup> <b>Common Name</b> (previous name) <b>COLOR:</b> <b>SIZE:</b> <b>SHAPE:</b> <b>DIAGNOSTIC FEATURES:</b> <b>POLYP DESCRIPTION:</b> <b>SEPTA ARRANGEMENT:</b> (Scleractinians) <b>OTHER CHARACTERISTICS:</b> (Scleractinians) <b>CYCLOSYSTEMS:</b> (Stylasterids) <b>NEMATO/DACTYLO-PORES:</b> (Stylasterids) <b>REPORTED DISTRIBUTION:</b> <b>REPORTED DEPTH:</b></p>	<p>WoRMS Aphia ID: GFBio Code: RACE Code:</p>  <p>Distribution Map</p>
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\*latin for "confer", used in taxonomy to indicate "compare with"



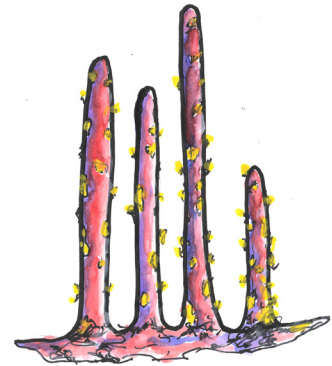
# Coral Branching Patterns



**Dichotomous**



**Irregular**



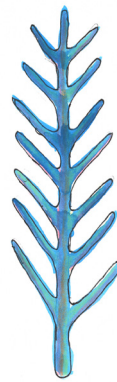
**Unbranched**



**Uniserial**



**Alternate Pinnate**



**Pinnate**



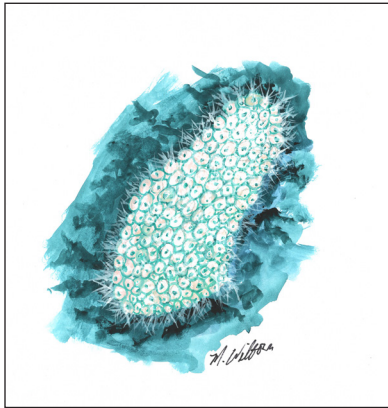
# Coral Morphology Types



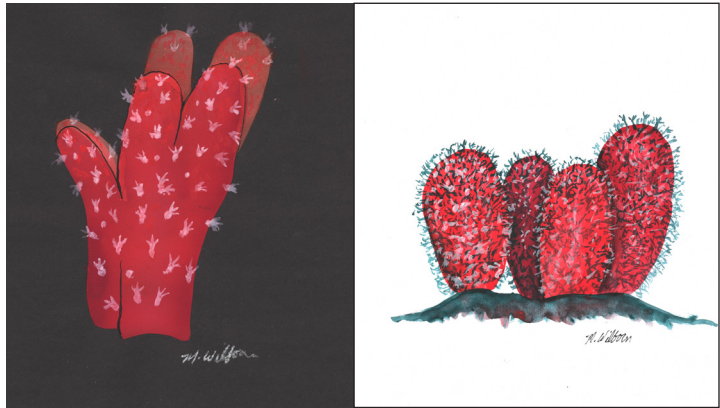
**Arborescent**



**Capitate** (Toadstool, Mushroom)



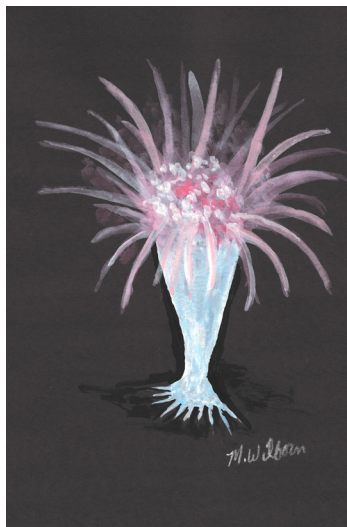
**Encrusting**



**Digitiform** (Finger-like, Lumpy)



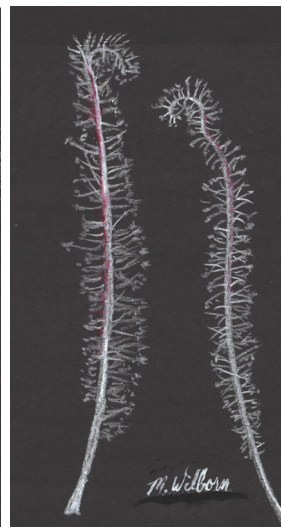
**Bushy**



**Funnel**



**Planar** (Uniplanar, Fan-Shaped)



**Stick** (Whip)

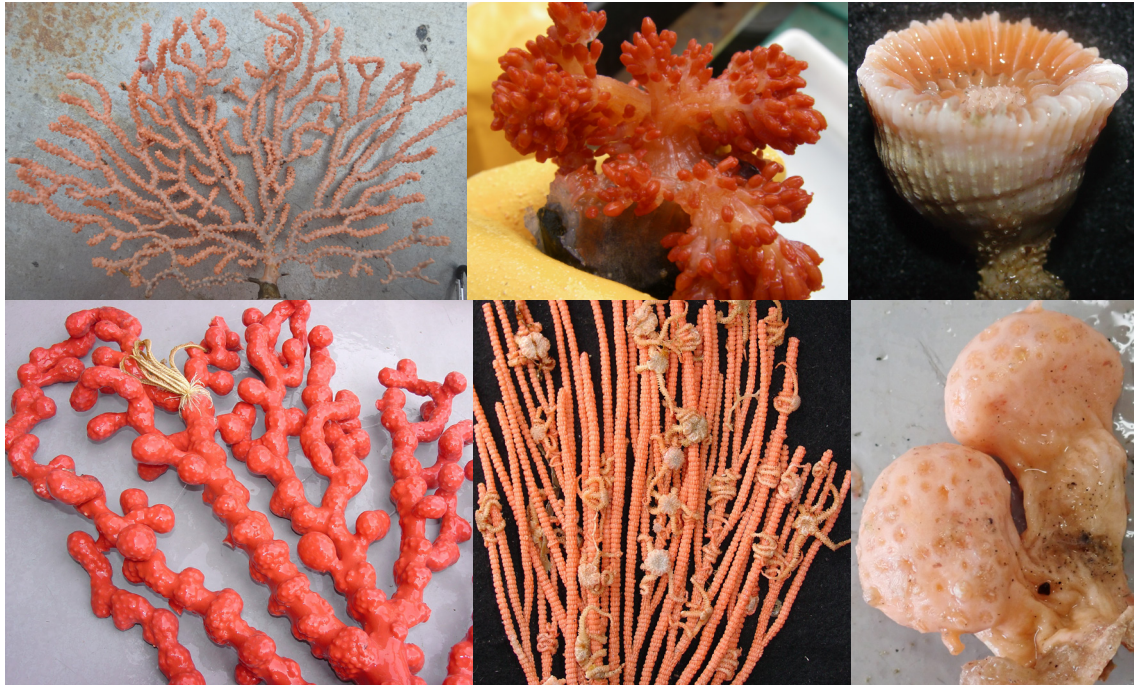
## Identification Key to Phylum Cnidaria

- Sedentary, marine cnidarians; can be solitary or colonial; polyps have a central mouth surrounded by tentacles containing nematocysts (stinging cells)

**Class Anthozoa (stony and soft corals)**..... [pg. 7](#)

- Solitary or colonial; most with a medusa phase in life cycle; no nematocysts (stinging cells); can resemble true corals or jellyfish

**Class Hydrozoa (hydrocorals, lace corals)**..... [pg. 98](#)



Examples of Stony and Soft Corals



Examples of Hydrocorals/Lace Corals

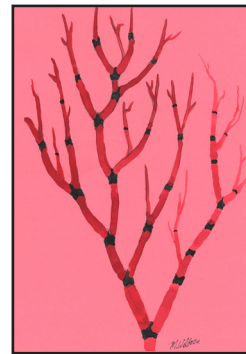
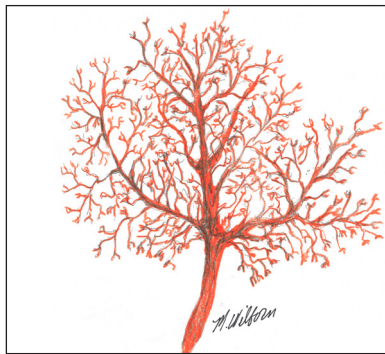
# Identification Key to Class Anthozoa (Stony and Soft Corals)

**Subclass Octocorallia** .....polyps have 8 tentacles

- Colonies vary from encrusting to upright; unbranched to highly **arborescent**; typically attached to substrate with a **basal disc**/holdfast; have a central mostly-calcified axis surrounded by a fleshy “rind”  
**Order Alcyonacea** (ex. soft corals, sea fans, bamboo corals, stoloniferans)..... [pg. 8](#)
- Colonies frequently whip- or stick-like in shape, but not branching or encrusting; sometimes with leaf-like structures on the **rachis**; often with a basal muscular **peduncle** for anchoring in soft substrate  
**Order Pennatulacea** (ex. sea pens/whips, sea pansies).....[pg. 64](#)



Sea Fans



Bamboo Corals



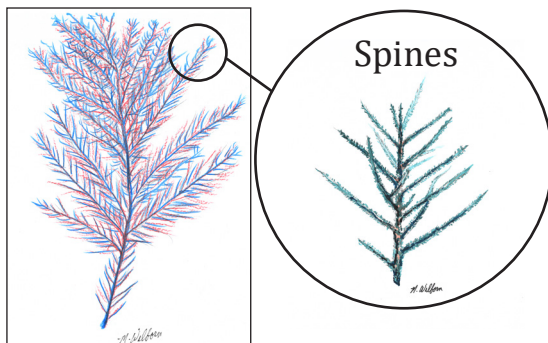
Stoloniferans



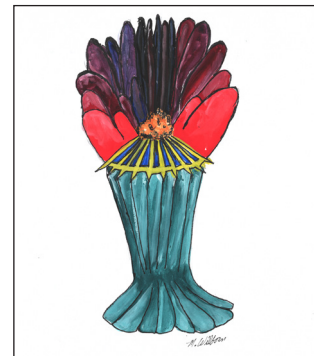
Sea Pens

**Subclass Hexacorallia**..... 6, 8, or 10-fold symmetry

- Colonies can be unbranched to complexly **arborescent** (<sup>41</sup>Opresko, 1972); with a spiny, strong, proteinaceous skeleton; typically black to dark in color; polyps have 6-fold symmetry  
**Order Antipatharia** (black corals)..... [pg. 78](#)
- Colonies can be colonial or solitary; have a solid calcareous skeleton (external to the soft tissues) which forms cone- to funnel-shaped **calices** subdivided by **septa** (<sup>42</sup>Cairns, 1999)  
**Order Scleractinia** (stony corals)..... [pg. 88](#)



Black Corals



Stony Corals

## Identification Key to Order Alcyonacea

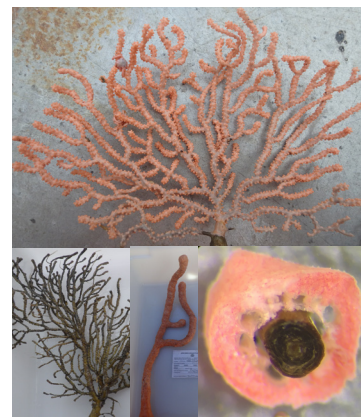
- Colonies with polyps united within a fleshy mass of **coenenchyme**  
**Suborder Alcyoniina** ..... pg. 9
- Colonies with axis of non-scleritic calcite or aragonite; nodes of **gorgonin** interspersed; hollow, cross-chambered central core is absent  
**Suborder Calcaxonia** ..... pg. 16
- Colonies with axis consisting primarily of **gorgonin**; often with small amounts of embedded non-scleritic calcite, hollow, cross-chambered central core is present  
**Suborder Holaxonia** ..... pg. 42
- Colonies with axis or internal axial-like layer composed predominantly of sclerites that may be either unfused or fused with calcite or **gorgonin**; often covered in knobby protrusions  
**Suborder Scleraxonia** ..... pg. 52
- Colonies with polyps united basally by **stolons** that may fuse to form ribbons or thin membranes  
**Suborder Stolonifera** ..... pg. 58



Alcyoniina Examples



Calcaxonia Examples



Holaxonia Examples



Cross-section of stem  
Scleraxonia Examples



Stolonifera Examples

## Identification Key to Suborder Alcyoniina

- Colonies encrusting or erect; often producing **digitiform** or toadstool-shaped colonies; polyps widely distributed and can be **retractile** or non-**retractile**, **dimorphic** or **monomorphic**  
**Family Alcyoniidae**..... [pg 10](#)
- Colonies **arborescent**, sometimes encrusting; with finger-like extensions; non-**retractile** polyp clusters on terminal lobes  
**Family Nephtheidae**..... [pg . 14](#)

## List of species of Suborder Alcyoniina

### Family Alcyoniidae

*Alcyonium pacificum*  
*Alcyonium* spp.  
*Discophyton rudyi*  
*Heteropolypus japonicus*  
*Heteropolypus ritteri*  
*Pseudoanthomastus* sp.  
*Thrombophyton trachydermum*  
 Unidentified Alcyoniidae

### Family Nephtheidae

*Gersemia* cf. *juliepackardae*  
*Gersemia* cf. *lambi*  
*Gersemia rubiformis*

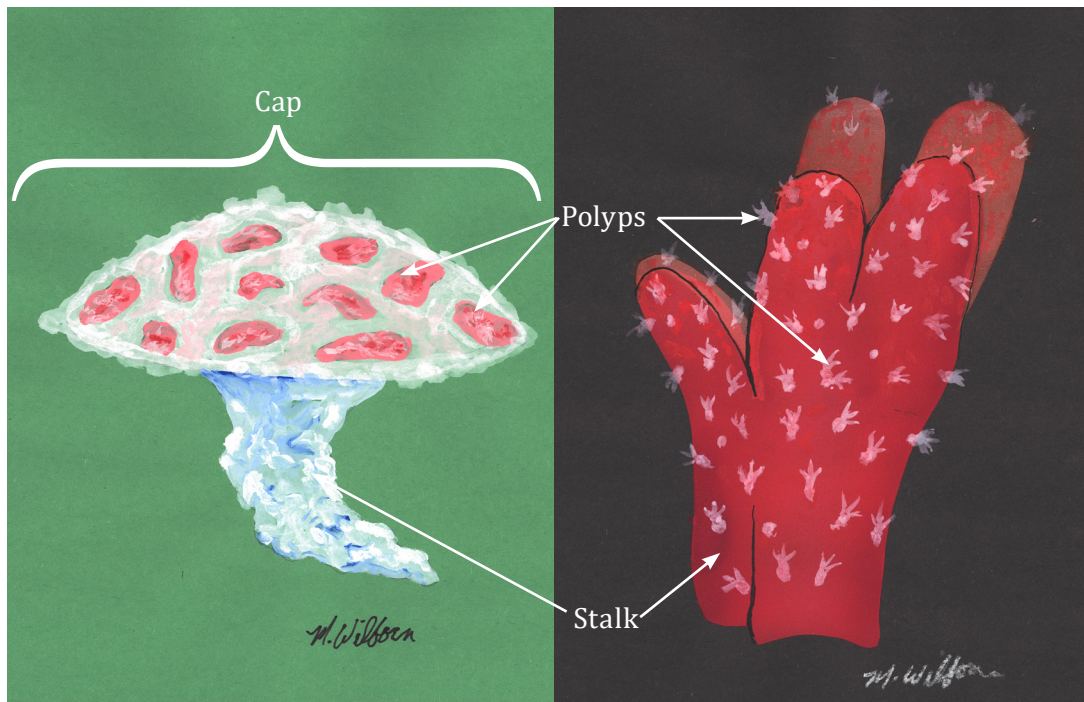


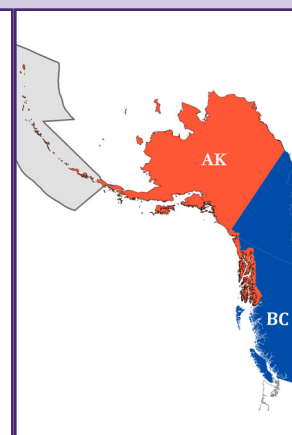
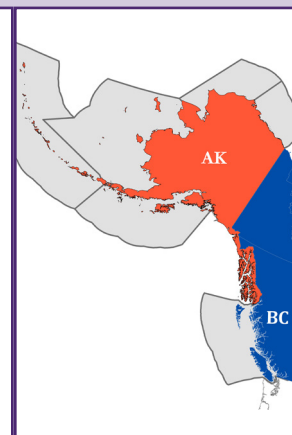
Illustration: Anatomy of an Alcyoniid coral

## Family ALCYONIIDAE

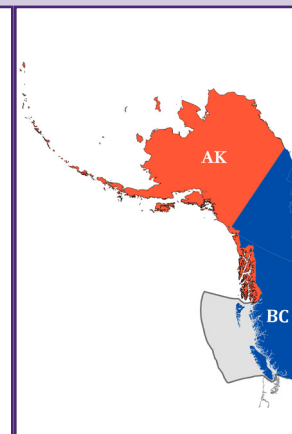
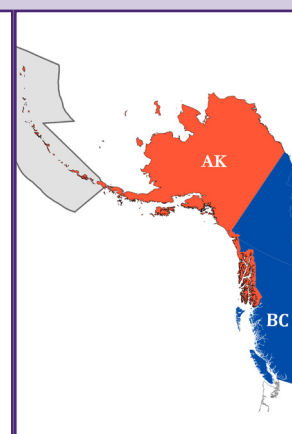
*Alcyonium pacificum*<sup>2,3,4</sup>**Pacific Soft Coral**WoRMS Aphia ID: [287373](#)

GFBio Code:

RACE Code:

**COLOR:** Bright reddish-orange**SHAPE:** **Capitate**, mushroom-shaped with a distinct cap and short stalk**SIZE:** Height to 2 cm**DIAGNOSTIC FEATURES:** Cap diameter to 4 cm; cap height to 2 cm; polyp length up to 1 cm**POLYP DESCRIPTION:** **Retractile**, large, and evenly distributed on cap only; **monomorphic****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 5-40 m*Alcyonium spp.*<sup>1,40,47,51</sup>**Unidentified Soft Corals**WoRMS Aphia ID: [125284](#)GFBio Code: **5B3**RACE Code: **41102****COLOR:** Pink and orange**SHAPE:** **Capitate**, mushroom-shaped or irregular and lumpy**SIZE:** NA**DIAGNOSTIC FEATURES:** NA**POLYP DESCRIPTION:** Polyps usually **retractile**; **monomorphic****REPORTED DISTRIBUTION:** AI, BS, Beaufort Sea, Chukchi Sea, WGOA, BC**REPORTED DEPTH:** 18-160 m*Discophyton rudyi*<sup>3,66</sup>**White Disc Soft Coral**WoRMS Aphia ID: [289828](#)GFBio Code: **5B8**

RACE Code:

**COLOR:** White to light salmon pink**SHAPE:** Encrusting**SIZE:** Height to 5 mm (when polyps extended)**DIAGNOSTIC FEATURES:** Colony 5-15 mm diameter**POLYP DESCRIPTION:** Evenly distributed over colony; fully **retractile**; **calices** absent**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** Intertidal*Heteropolypus japonicus*<sup>1,5,19,40</sup>**Japan's Toadstool Coral**WoRMS Aphia ID: [724714](#)GFBio Code: **5B4 (genus)**RACE Code: **41333****COLOR:** Dark red to bright scarlet; polyps slightly darker**SHAPE:** **Capitate**, toadstool-shaped; rounded cap with extended stalk**SIZE:** Height to 7 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Typically found along cap edge; less dense on upper surface; up to 12 mm long; **dimorphic****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 424-603 m

No Images On Record  
With DFO or AFSC

*Alcyonium pacificum*



*Alcyonium* spp.



Credit: Gustav Paulay, FMNH, Invert. Zool. Collection, CC0

Credit: The Smithsonian Institute, CC-BY-NC-SA

*Discophyton rudyi*



Credit: Nutting, 1912

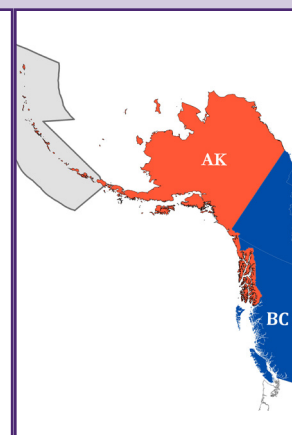
*Heteropolypus japonicus*



## Family ALCYONIIDAE

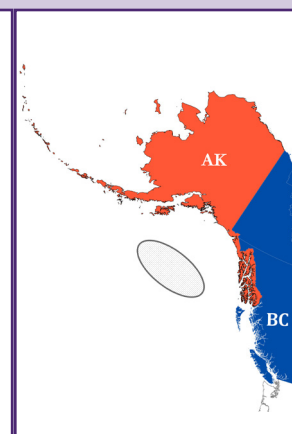
*Heteropolypus ritteri*<sup>1,2,5,51</sup>**Ritter's Toadstool Coral**WoRMS Aphia ID: [724715](#)GFBio Code: **5BP**

RACE Code:

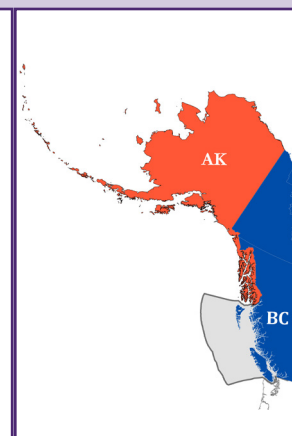
**COLOR:** Red to white**SHAPE:** **Capitate**, toadstool-shaped with short, stout stalk; cap is large and hemispherical**SIZE:** Height to 10 cm**DIAGNOSTIC FEATURES:** NA**POLYP DESCRIPTION:** Cap has several very large polyps; **dimorphic****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 241-801 m*Pseudoanthomastus sp.*<sup>1,5,40</sup>**Unidentified Toadstool Coral**WoRMS Aphia ID: [267770](#)

GFBio Code:

RACE Code:

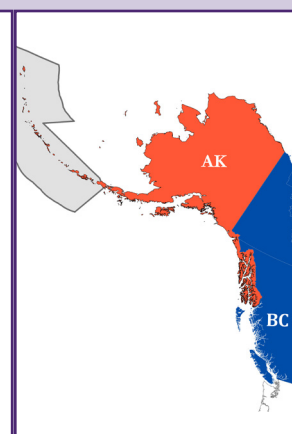
**COLOR:** Rust to dark red cap; stalk is light brown**SHAPE:** **Capitate**, toadstool-shaped; dome-shaped cap, with conspicuous stalk**SIZE:** None provided, but likely similar to other toadstool corals**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Large and **retractile**; often remain extruded after collection; **monomorphic****REPORTED DISTRIBUTION:** GOA Seamounts (Denson and Welker)**REPORTED DEPTH:** 1122-1535 m*Thrombophyton trachydermum*<sup>3</sup>**Rough-Skinned Soft Coral**WoRMS Aphia ID: [291219](#)GFBio Code: **5BH**

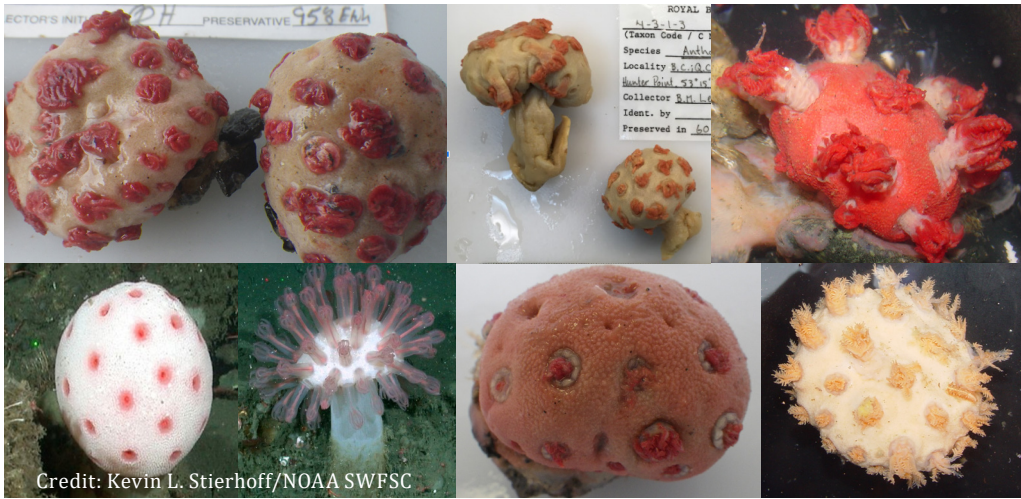
RACE Code:

**COLOR:** Yellowish-orange**SHAPE:** Colonies encrusting; membranous and irregularly shaped**SIZE:** Height to 4 mm**DIAGNOSTIC FEATURES:** NA**POLYP DESCRIPTION:** **Monomorphic** and fully **retractile**; can form small raised clusters like *Discophyton sp.***REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** Inter- and subtidal to 28 mUnidentified Alcyoniidae<sup>17</sup>**Purple Encrusting Soft Coral**WoRMS Aphia ID: [125269](#)

GFBio Code:

RACE Code:

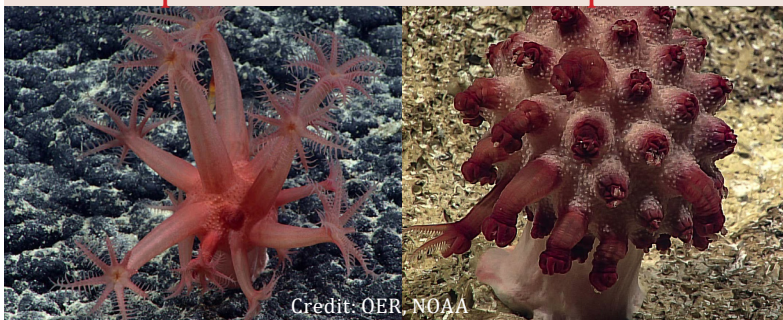
**COLOR:** Dark pink, fuschia, purple**SHAPE:** Encrusting; very small**SIZE:** Height to 2 cm**DIAGNOSTIC FEATURES:** NA**POLYP DESCRIPTION:** Polyps relatively large**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 25-352 m



Credit: Kevin L. Stierhoff/NOAA SWFSC

*Heteropolypus ritteri*

Examples ONLY! Not actual specimen



Credit: OER, NOAA



Credit: SNMNH, CC0

*Pseudoanthomastus* sp.



Credit: SNMNH, CC0

*Thrombophyton trachydermum*

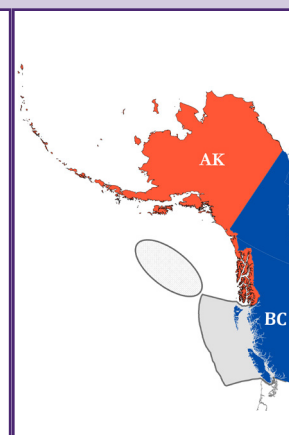


Unidentified Alcyoniidae

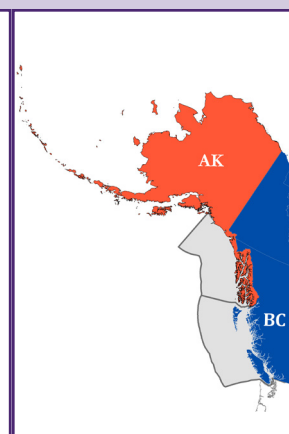
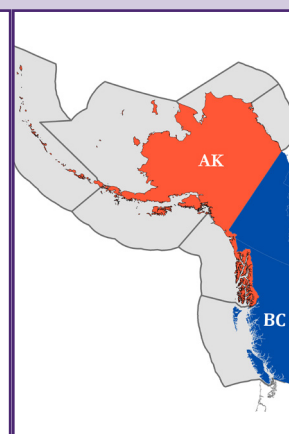
## Family NEPHTHEIDAE

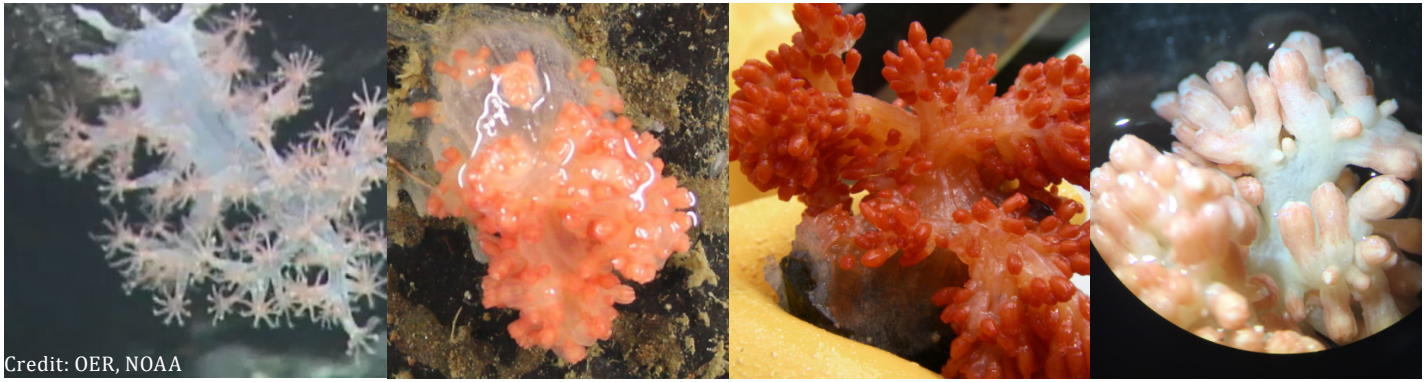
*Gersemia cf. juliepackardae*<sup>1,43</sup>**Carnation Coral Unid****COLOR:** White to pale pink/orange**SHAPE:** Erect and **arborescent** in situ; small and lumpy out of water**SIZE:** Height to 9 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Tubular and non-**retractile**; 4.5-5.5 mm long**REPORTED DISTRIBUTION:** GOA Seamounts, BC**REPORTED DEPTH:** 520-2034 m

WoRMS Aphia ID:

GFBio Code: **5BM**RACE Code: **41201 (genus)***Gersemia cf. lambi*<sup>2,6</sup>**Carnation Coral****COLOR:** Pink to reddish**SHAPE:** Erect and **arborescent** in situ; small and lumpy out of water**SIZE:** Height to 5.5 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Congested, densely packed, tubular-shaped, curved, non-**retractile** and large (4-8 mm length)**REPORTED DISTRIBUTION:** EGOA, BC**REPORTED DEPTH:** 6-20 m

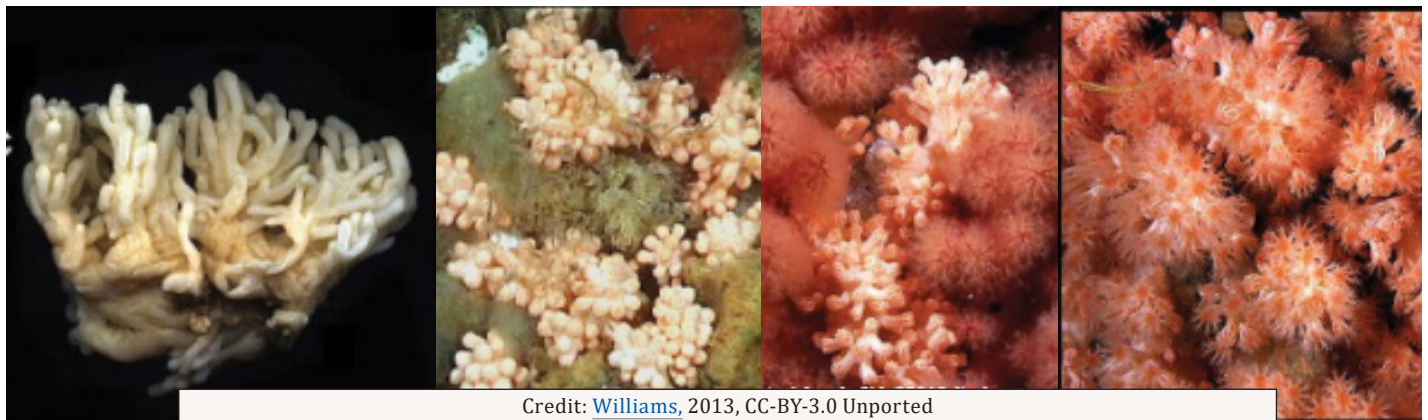
WoRMS Aphia ID:

GFBio Code: **5BN**RACE Code: **41201 (genus)***Gersemia rubiformis*<sup>1,2,6,69,79</sup>**Strawberry Carnation Coral****COLOR:** Pink, red, peach**SHAPE:** Erect and **arborescent** in situ; small and lumpy out of water**SIZE:** Height to 10 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Numerous; fully **retractile**; highly expandable**REPORTED DISTRIBUTION:** AI, BS, Beaufort Sea, Chukchi Sea, GOA, BC**REPORTED DEPTH:** 10-200 mWoRMS Aphia ID: [156103](#)GFBio Code: **5BF**RACE Code: **41221**



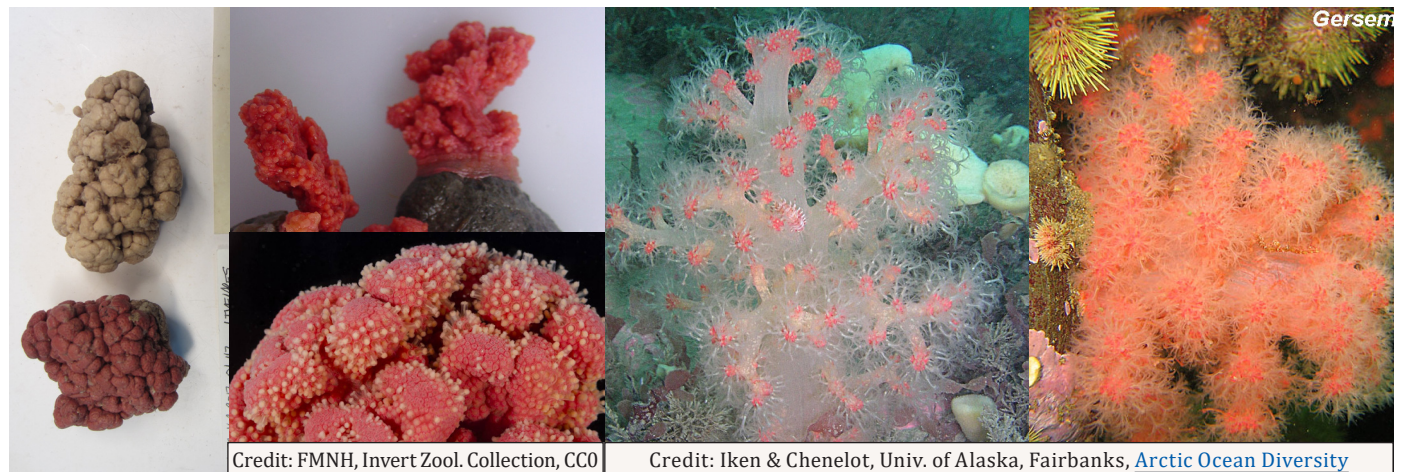
Credit: OER, NOAA

*Gersemia cf. juliepackardae*



Credit: Williams, 2013, CC-BY-3.0 Unported

*Gersemia cf. lambi*



Credit: FMNH, Invert Zool. Collection, CC0

Credit: Iken & Chenelot, Univ. of Alaska, Fairbanks, Arctic Ocean Diversity

*Gersemia rubiformis*

## Identification Key to Suborder Calcaxonia

- Colonies can be branched or unbranched; holdfast is calcified; axis is solid, smooth, and metallicly iridescent; made of concentrically-layered proteinaceous material; polyps are not **retractile**; arranged in rows of 1, 2, or multiples; never in whorls  
**Family Chrysogorgiidae**.....[pg.18](#)
- Colonies whip-like to profusely branched, bushy or fan-shaped; axis is segmented between black (**gorgonin**) nodes and white (calcareous) internodes; branching occurs at or between the nodes, depending on genus; polyps can be **retractile** or non-**retractile**  
**Family Isididae (RACE Code: 44084)** ..... [pg. 20](#)
- Colonies fan-shaped, bushy, or **arborescent**; axis is not segmented; polyps are non-**retractile** and arranged in whorls or randomly on all sides of branches  
**Family Primnoidae**..... [pg. 24](#)

## List of species of Suborder Calcaxonia

### Family Chrysogorgiidae

*Chrysogorgia* sp. B  
*Chrysogorgia* sp. C  
*Pseudochrysogorgia* sp.  
*Radicipes stonei*

### Family Isididae

*Bathygorgia profunda*  
*Isidella* spp.  
*Isidella tentaculum*  
*Keratoisis* spp.  
*Lepidisis* spp.

### Family Primnoidae

*Acanthoprímnoa* sp.  
*Arthrogorgia kinoshitai*  
*Arthrogorgia otsukai*  
*Arthrogorgia utinomii*  
*Callogorgia compressa*  
*Callogorgia fraseri*  
*Callogorgia* cf. *kinoshitai*  
*Calyptrophora laevispinosa*  
*Narella abyssalis*  
*Narella alaskensis*  
*Narella arbuscula*  
*Narella bayeri*  
*Narella bowersi*  
*Narella cristata*  
*Parastenella doederleini*  
*Parastenella gymnogaster*  
*Parastenella pacifica*  
*Parastenella ramosa*  
*Plumarella aleutiana*  
*Plumarella echinata*  
*Plumarella hapala*  
*Plumarella nuttingi*  
*Plumarella profunda*  
*Plumarella robusta*  
*Plumarella spicata*  
*Plumarella superba*  
*Primnoa pacifica*  
*Primnoa pacifica* var. *willeyi*  
*Primnoa wingi*  
*Thouarella cristata*  
*Thouarella trilineata*



Examples of Calcaxonia corals (top row- *Plumarella* spp.; bottom row, left to right- *Isidella* sp., *Arthrogorgia* sp., *Primnoa* sp.)

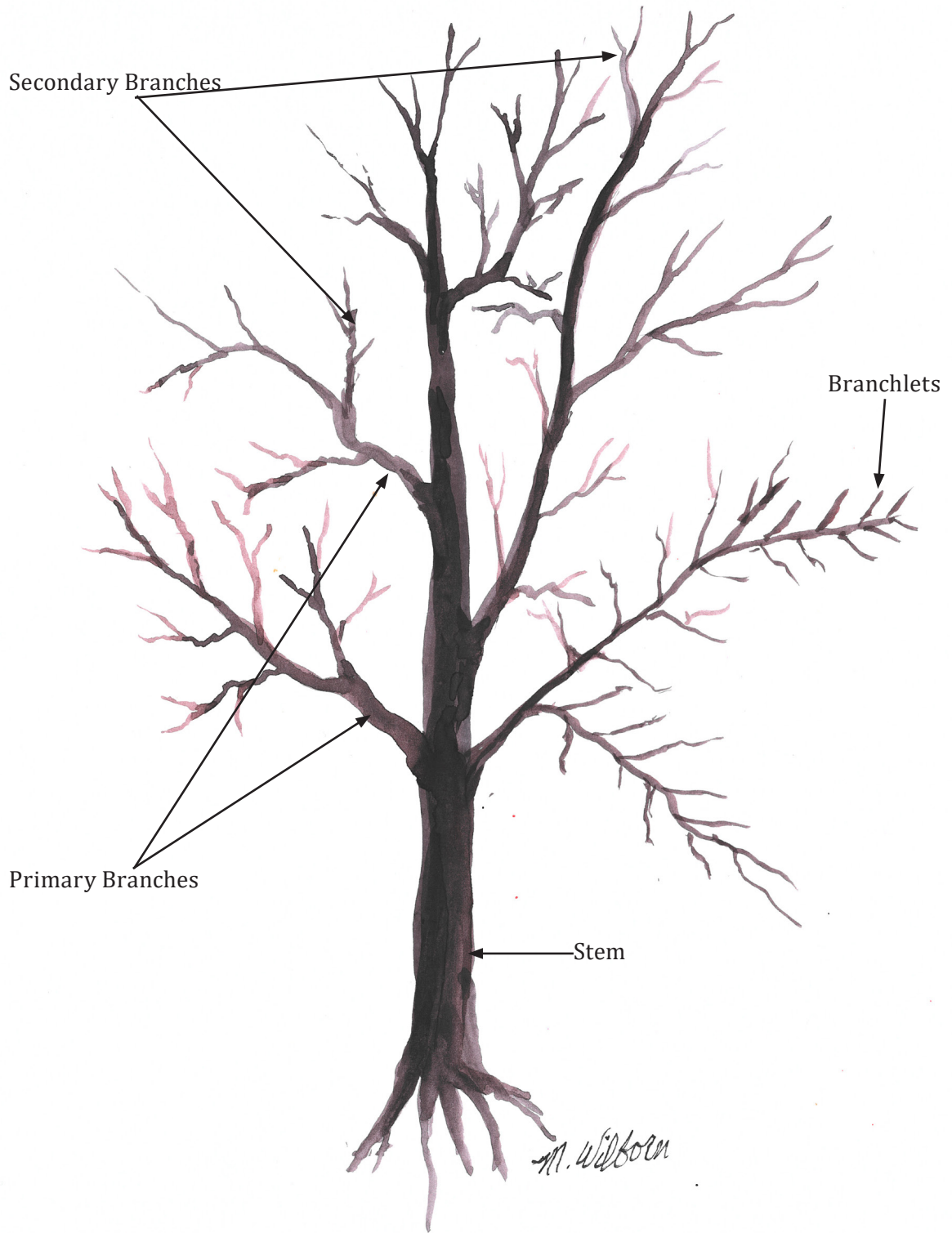


Illustration: Anatomy of a Calcaxonian coral

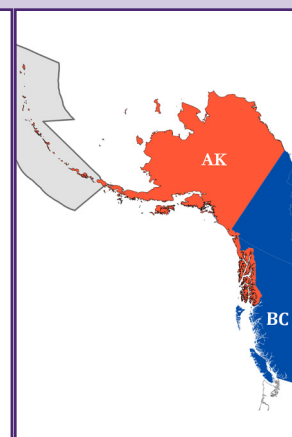
## Family CHRYSOGORGIIDAE (Golden Corals)

*Chrysogorgia* sp. B <sup>1,40</sup>**Golden Coral B Unid.****COLOR:****SHAPE:** Sympodial; branching **dichotomous** in spiral around main stem**SIZE:****DIAGNOSTIC FEATURES:** Skeleton has metallic luster; differs from *Chrysogorgia* sp. C in location and depth**POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 1359-2163 m

WoRMS Aphia ID:

GFBio Code: **3TU (genus)**

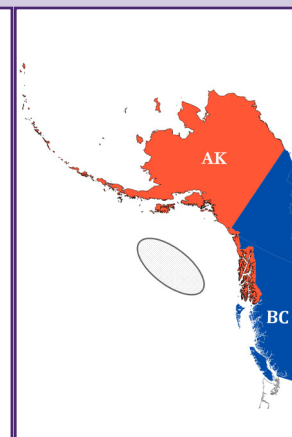
RACE Code:

*Chrysogorgia* sp. C <sup>1,40</sup>**Golden Coral C Unid.****COLOR:****SHAPE:****SIZE:****DIAGNOSTIC FEATURES:** differs from *Chrysogorgia* sp. B in location and depth**POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** GOA Seamounts (Welker, Derickson)**REPORTED DEPTH:** 3385-4328 m

WoRMS Aphia ID:

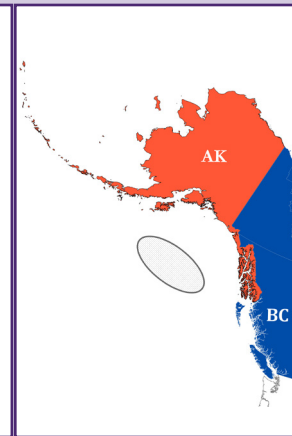
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RACE Code:

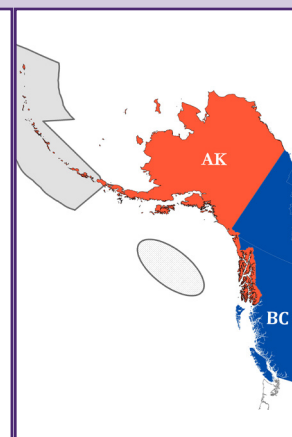
*Pseudochrysogorgia* sp. <sup>1,40,26</sup>**False Golden Coral Unid.****COLOR:****SHAPE:** Bushy, bottlebrush- shaped; axis is monopodial and zig zags**SIZE:****DIAGNOSTIC FEATURES:** Space between branches is < 2 cm**POLYP DESCRIPTION:** Have ornamental sclerites**REPORTED DISTRIBUTION:** GOA Seamounts (Derickson, Pratt)**REPORTED DEPTH:** 1854-4167 mWoRMS Aphia ID: [882825](#)

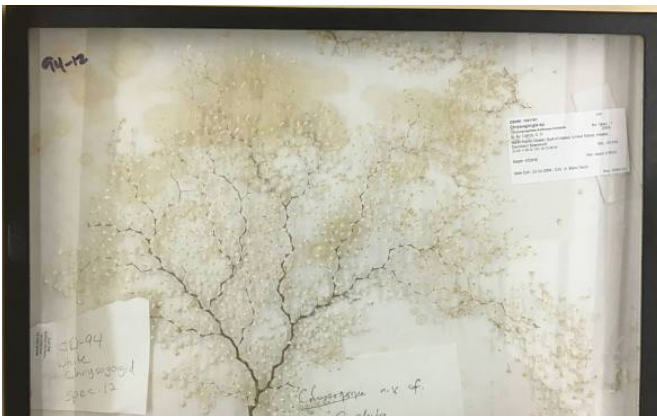
GFBio Code:

RACE Code:

*Radicipes stonei* <sup>1,25,40</sup>**Bob's Golden Pigtail Coral****COLOR:** White**SHAPE:** Unbranched; elongate coiling/spiraling; root-like holdfast**SIZE:** Height to 1 m**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Arranged uniserially on one axis; are perpendicular to axis; up to ~1.3 mm length; 1-5 polyps/cm; 2-5 mm between polyps**REPORTED DISTRIBUTION:** AI, GOA Seamounts (Derickson)**REPORTED DEPTH:** 1207-3580 mWoRMS Aphia ID: [1034980](#)GFBio Code: **3TV (genus)**

RACE Code:





*Chrysogorgia* sp. B



*Chrysogorgia* sp. C

↓Examples ONLY! Not actual specimens↓



*Pseudochrysogorgia* sp.



*Radicipes stonei*

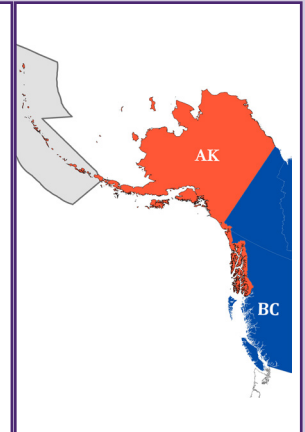
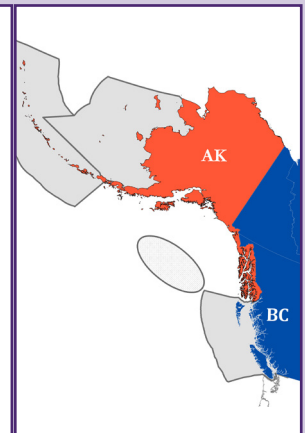
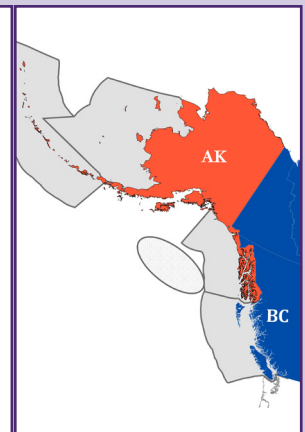


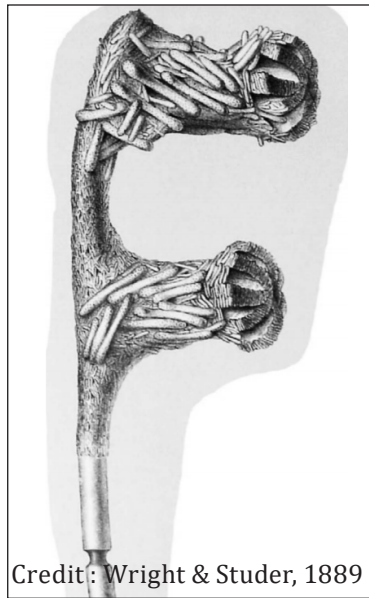
## Family ISIDIDAE (Bamboo Corals)

*Bathygorgia profunda*<sup>1,2,8,40</sup>**Deep-sea Bamboo Coral**WoRMS Aphia ID: [883744](#)

GFBio Code:

RACE Code:

**COLOR:** Orange-brown; polyps are dark brown**SHAPE:** **Arborescent**; can appear uniplanar; jointed with square-ish white internodes and small black nodes**SIZE:** Height to 10 cm long; diameter to ~ 1 mm; only small specimens described**DIAGNOSTIC FEATURES:** Very thin axis, no large needle-shaped **sclerites****POLYP DESCRIPTION:** Large (up to 4 mm), club-shaped, and uni-serially distributed on branch; non-retractile**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 3230-4206 m*Isidella* spp.<sup>1,40,47</sup>**Bamboo Coral Unid.**WoRMS Aphia ID: [125305](#)GFBio Code: **5C4**RACE Code: **44085****COLOR:** White, orange, pink**SHAPE:** **Arborescent**, branching; can appear uniplanar; branching occurs from the brown/black nodes**SIZE:** Height to > 1 m, but frequently are broken when seen on deck**DIAGNOSTIC FEATURES:** Black and white skeleton**POLYP DESCRIPTION:** Large; translucent membrane between polyps**REPORTED DISTRIBUTION:** AI, BS, GOA Seamounts (Pratt,Giacomini,Derickson,Dickens,Patton), BC**REPORTED DEPTH:** 287-4575 m*Isidella tentaculum*<sup>1,2,7</sup>**Tentacled Bamboo Coral**WoRMS Aphia ID: [582522](#)GFBio Code: **5C4 (genus)**RACE Code: **44065****COLOR:** White, peach, orange**SHAPE:** Large, branching with black/dull brown nodes and white internodes; branching occurs from the nodes**SIZE:** Height to 2 m, but frequently are broken when seen on deck**DIAGNOSTIC FEATURES:** Sweeper tentacles occur along base of colony**POLYP DESCRIPTION:** Large, crowded, and dull orange**REPORTED DISTRIBUTION:** AI, BS, EGOA, GOA Seamounts, BC**REPORTED DEPTH:** 340-1468 m



Credit: Wright & Studer, 1889

*Bathygorgia profunda*

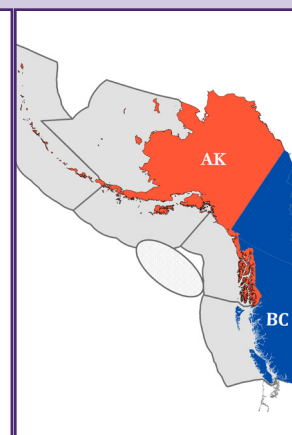
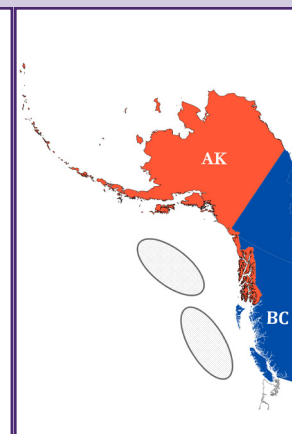


*Isidella* spp.



*Isidella tentaculum*

## Family ISIDIDAE (Bamboo Corals)

*Keratoisis* spp.<sup>1,40</sup>**Unidentified Bamboo Coral**WoRMS Aphia ID: [125306](#)GFBio Code: **5C5**RACE Code: **44088****COLOR:** White, beige, orange**SHAPE:** Frequently branching; branching occurs at the white internodes**SIZE:** Height to 1+ m**DIAGNOSTIC FEATURES:** Branches at the internodes**POLYP DESCRIPTION:** Not **retractile**; large and easily visible; fairly widely spaced**REPORTED DISTRIBUTION:** AI, BS, GOA, GOA Seamounts (Denson, Giacomini, Walker, Pratt, Derickson), BC**REPORTED DEPTH:** 454-4097 m*Lepidisis* spp.<sup>1,40,47</sup>**Whip Bamboo Coral Unid.**WoRMS Aphia ID: [125307](#)GFBio Code: **5C7**RACE Code: **44110****COLOR:** Cream to beige in situ; polyp tips/tentacles slightly darker than polyp stalk**SHAPE:** Whip-like; rarely branching; often has kinks or curls in shape**SIZE:** Unknown**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Large, not **retractile**, and widely spaced**REPORTED DISTRIBUTION:** GOA and BC Seamounts (Derickson, Walker, Giacomini, Pratt, Bowie)**REPORTED DEPTH:** 1130-4784 m



*Keratoisis* spp.



Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners



Credit: Ocean Exploration Trust and Research, NOAA

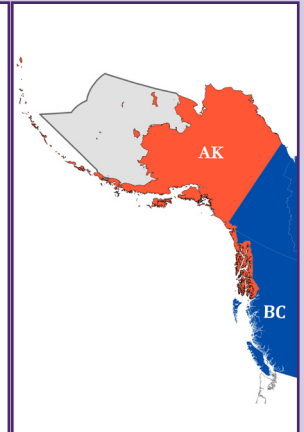
*Lepidisis* spp.

## Family PRIMNOIDAE

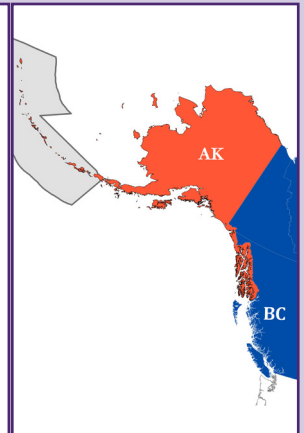
*Acanthoprimnoa* sp.<sup>1,10</sup>**Thorny Sea Fan Unid**WoRMS Aphia ID: [267188](#)

GFBio Code:

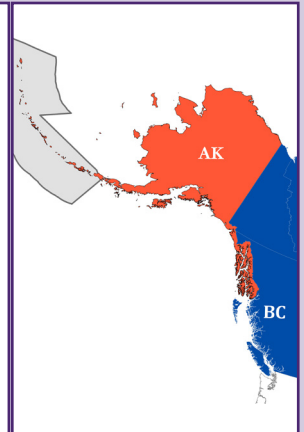
RACE Code:

**SHAPE:** Uniplanar to plumose; typically alternate **pinnate** branching (some **dichotomous**)**SIZE:** Unknown**DIAGNOSTIC FEATURES:** Similar to *Plumarella* spp. but lacking **tubercles** on inner surfaces of **sclerites****POLYP DESCRIPTION:** Bi-serially arranged; directed away from base**REPORTED DISTRIBUTION:** BS**REPORTED DEPTH:** 300 m*Arthrogorgia kinoshitai*<sup>1,2,10,11,12</sup>**Kinoshita's Armored Sea Fan**WoRMS Aphia ID: [289457](#)

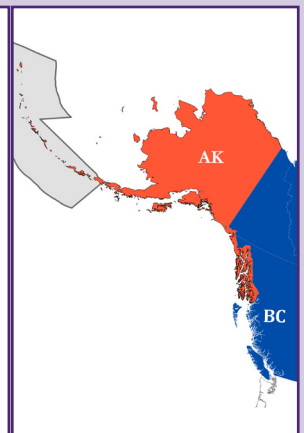
GFBio Code:

RACE Code: **44115****COLOR:** Pale orange to pink**SHAPE:** Large; uniplanar; **dichotomous** branching**SIZE:** Height to 40 cm**DIAGNOSTIC FEATURES:** Branch length 9-30 cm; axis is round**POLYP DESCRIPTION:** Large (3-3.5 mm); point towards base; form whorls; 6-9 polyps/whorl; 7-8 whorls per 3 cm; sharp spines**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 150-1309 m*Arthrogorgia otsukai*<sup>1,2,10,11,12</sup>**Otsuka's Armored Sea Fan**WoRMS Aphia ID: [289458](#)

GFBio Code:

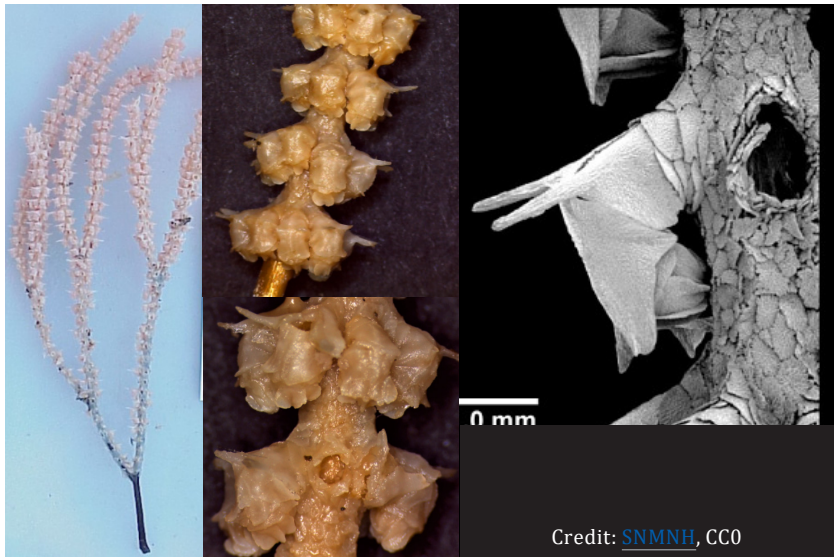
RACE Code: **44114****SHAPE:** Moderate-size; uniplanar; uneven **dichotomous** branching**SIZE:** Height to 20 cm**DIAGNOSTIC FEATURES:** Branch length 4-15 cm; axis is round**POLYP DESCRIPTION:** Large (2.3-2.8 mm); point towards base; form whorls; 5-7 polyps/whorl; 11-13 whorls per 3 cm; no projecting spines**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 1300-1400 m*Arthrogorgia utinomii*<sup>1,2,10,11</sup>**Utinomi's Armored Sea Fan**WoRMS Aphia ID: [289459](#)

GFBio Code:

RACE Code: **44099****SHAPE:** Moderate-size; uniplanar; uneven dichotomous branching**SIZE:** Height to 35 cm**DIAGNOSTIC FEATURES:** Branch length to 30 cm**POLYP DESCRIPTION:** Large (3-3.5 mm); point towards base; form whorls; 7-10 polyps/whorl; 7-9 whorls per 3 cm; long, broad, rounded spines**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 163-882 m

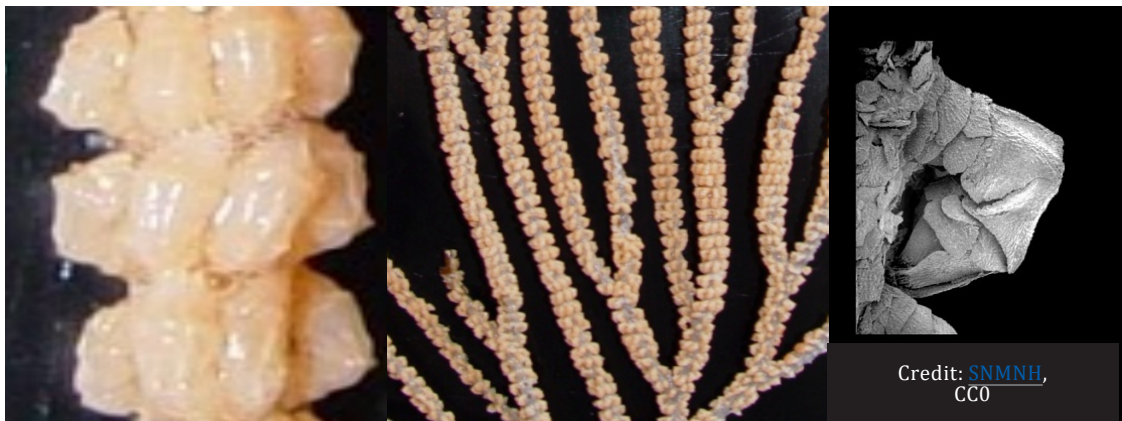
No Images On Record  
With DFO or AFSC

*Acanthoprimnoa* sp.



Credit: [SNMNH](#), CC0

*Arthrogorgia kinoshitai*



Credit: [SNMNH](#), CC0

*Arthrogorgia otsukai*

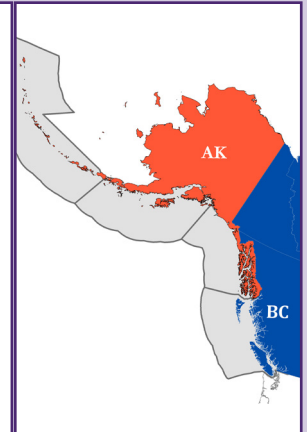


*Arthrogorgia utinomii*

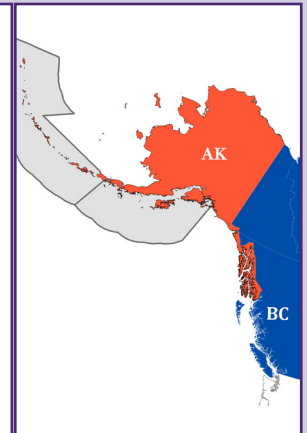
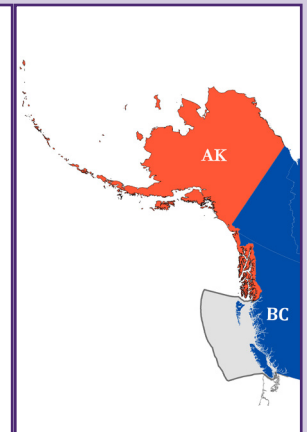
## Family PRIMNOIDAE

*Callogorgia compressa*<sup>1,2,9</sup>**Compressed Sea Feather**(formerly *Fanellia compressa*)**COLOR:** Orange, pink-orange**SHAPE:** Large; uniplanar; **dichotomous** branching**SIZE:** Height to 1 m**DIAGNOSTIC FEATURES:** Branching occurs every 3-5 cm; distal branches longer (up to 50 cm) and straight**POLYP DESCRIPTION:** Length 1.6-2.0 mm; form whorls; 8-12 polyps/whorl distally; up to 25 polyps/whorl near base; 4-6 whorls/cm**REPORTED DISTRIBUTION:** AI, GOA, BC**REPORTED DEPTH:** 80-1400 mWoRMS Aphia ID: [292043](#)

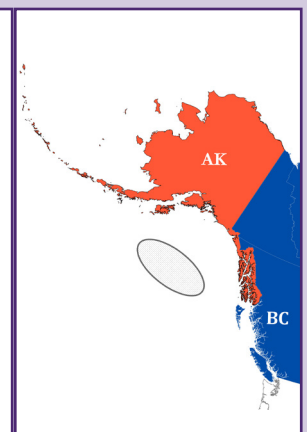
GFBio Code:

RACE Code: **44090***Callogorgia fraseri*<sup>1,2,9</sup>**Dry Sea Feather**(formerly *Fanellia fraseri*)**COLOR:** Light orange, pink-orange**SHAPE:** Medium-sized; uniplanar; alternate **pinnate** branching**SIZE:** Height to 35 cm**DIAGNOSTIC FEATURES:** Branching occurs every 6-15 mm; short end branches (<15 cm)**POLYP DESCRIPTION:** Length 1.1-1.5 mm; form whorls; 5-8 polyps/whorl distally; up to 12/whorl near base; 6-7 whorls/cm**REPORTED DISTRIBUTION:** AI, WGOA**REPORTED DEPTH:** 50-1340 mWoRMS Aphia ID: [292044](#)

GFBio Code:

RACE Code: **44091***Callogorgia cf. kinoshitai*<sup>48,53,71</sup>**Kinoshitai's Sea Feather****COLOR:** White, slight pinkish hue**SHAPE:** Uniplanar; taller than broad; alternate **pinnate** branching**SIZE:** Height to 50 cm**DIAGNOSTIC FEATURES:** Terminal branchlets up to 13 cm long and unbranched**POLYP DESCRIPTION:** Length 1.5-2.0 mm; curved out and upward; form whorls; 5-6 polyps/whorl, 4-5 whorls/cm**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 219-2472 mWoRMS Aphia ID: [1055877](#)GFBio Code: **3QD**RACE Code: **41601***Calyptrophora laevispinosa*<sup>1,2,9,13</sup>**Smooth-spined Tree Coral****COLOR:** White**SHAPE:** Medium-sized; **dichotomous** branching**SIZE:** Height to 40 cm**DIAGNOSTIC FEATURES:** Distinct spacing between whorls**POLYP DESCRIPTION:** Length 1.5-2 mm; point distally; form whorls; 3-4 polyps/whorl; 10-12 whorls per 3 cm; 4 (rarely 6) buccal spines**REPORTED DISTRIBUTION:** GOA Seamounts**REPORTED DEPTH:** 1800-3100 mWoRMS Aphia ID: [409579](#)GFBio Code: **3QI**

RACE Code:





*Callogorgia compressa*



*Callogorgia fraseri*



*Callogorgia cf. kinoshitai*



*Calyptrophora laevispinosa*

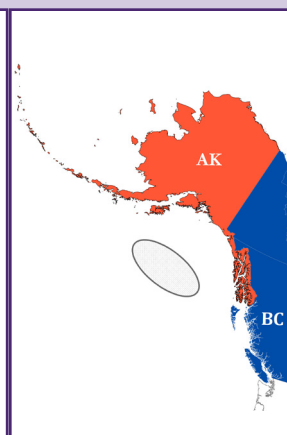


## Family PRIMNOIDAE

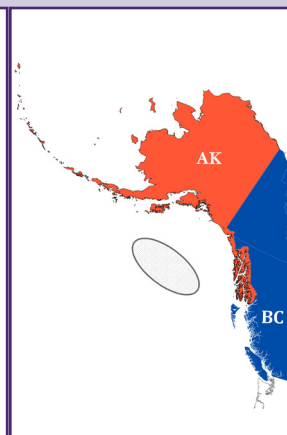
*Narella abyssalis* <sup>1,2,14,46,49</sup>**Deepwater Sea Coral****COLOR:** Axis is golden yellow**SHAPE:** Uniplanar; **dichotomous** sparse branching**SIZE:** Unknown**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length 1.9-2.4 mm and spaced 1.3-2.3 mm apart; form whorls; 2-4 polyps/whorl; 9 whorls per 3 cm**REPORTED DISTRIBUTION:** GOA Seamounts (Derickson)**REPORTED DEPTH:** 4594 mWoRMS Aphia ID: [409560](#)

GFBio Code:

RACE Code:

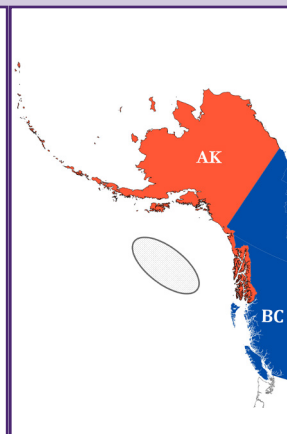
*Narella alaskensis* <sup>1,2,14,53,46,49</sup>**Alaska Sea Coral****COLOR:** Light orange, pink-orange**SHAPE:** Uniplanar; **dichotomous** sparse branching**SIZE:** Unknown**DIAGNOSTIC FEATURES:** Terminal branches long; prominent spines**POLYP DESCRIPTION:** Length is 2.7-3.2 mm; form whorls; 7-9 polyps/whorl; 10.5 whorls per 3 cm**REPORTED DISTRIBUTION:** GOA Seamounts (Welker)**REPORTED DEPTH:** 2092-3100 mWoRMS Aphia ID: [409561](#)GFBio Code: [3QP \(genus\)](#)

RACE Code:

*Narella arbuscula* <sup>1,2,14,49</sup>**Small Tree Sea Coral****COLOR:** Unknown**SHAPE:** Bushy; **dichotomous** sparse branching**SIZE:** Unknown**DIAGNOSTIC FEATURES:** Terminal branches long (up to 12 cm); polyps larger than other *Narella* sp.**POLYP DESCRIPTION:** Length is 3.4-4.7 mm; form whorls; 6-7 polyps/whorl; 6-8 whorls per 3 cm**REPORTED DISTRIBUTION:** GOA Seamounts (Derickson)**REPORTED DEPTH:** 2775-3500 mWoRMS Aphia ID: [409558](#)

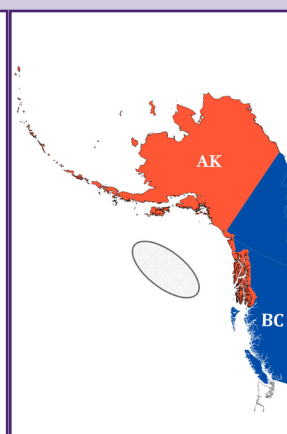
GFBio Code:

RACE Code:

*Narella bayeri* <sup>1,2,14,49</sup>**Bayer's Sea Coral****COLOR:** Unknown**SHAPE:** Uniplanar; **dichotomous** sparse branching**SIZE:** Height to 29+ cm**DIAGNOSTIC FEATURES:** Branching occurs every 13-25 mm; terminal branches long (up to 17 cm)**POLYP DESCRIPTION:** Length is 2.2-3.4 mm; form whorls; 5-7 polyps/whorl; 11-12 whorls per 3 cm**REPORTED DISTRIBUTION:** GOA Seamounts**REPORTED DEPTH:** 3200-4100 mWoRMS Aphia ID: [409557](#)

GFBio Code:

RACE Code:



No Images On Record  
With DFO or AFSC

*Narella abyssalis*



*Narella alaskensis*

No Images On Record  
With DFO or AFSC

*Narella arbuscula*

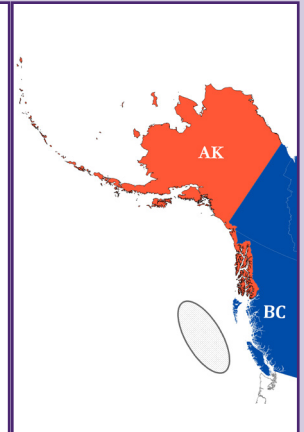
No Images On Record  
With DFO or AFSC

*Narella bayeri*

## Family PRIMNOIDAE

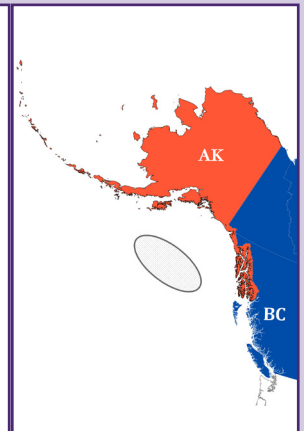
*Narella bowersi*<sup>1,2,13,44</sup>**Bower's Sea Coral****COLOR:** White**SHAPE:** Uniplanar; **dichotomous** branching**SIZE:** Height to 23+ cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length 2.5-3.2 mm and spaced 0.6-1.5 mm apart; form whorls; 3-4 polyps/whorl**REPORTED DISTRIBUTION:** BC Seamounts**REPORTED DEPTH:** 1218-2600 mWoRMS Aphia ID: [286512](#)GFBio Code: [3QP \(genus\)](#)

RACE Code:

*Narella cristata*<sup>1,2,14,49</sup>**Crested or Ridged Sea Coral****COLOR:** Unknown**SHAPE:** Uniplanar; **dichotomous** sparse branching**SIZE:** Unknown**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length is 2.1-3.0 mm; bend toward base; 2-4 polyps/whorl; 8-10 whorls per 3 cm; whorls are 1.3-2.2 mm apart**REPORTED DISTRIBUTION:** GOA Seamounts**REPORTED DEPTH:** 3385 mWoRMS Aphia ID: [409559](#)

GFBio Code:

RACE Code:





*Narella bowersi*

No Images On Record  
With DFO or AFSC

*Narella cristata*

↓Examples ONLY! Not actual specimens↓

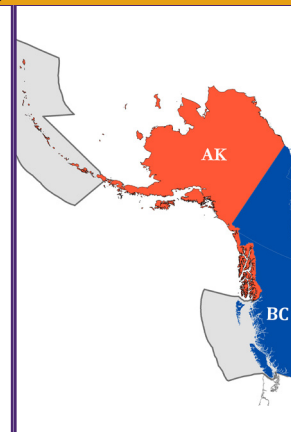


*Narella* Examples

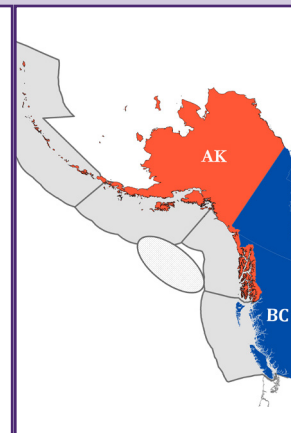
## Family PRIMNOIDAE

\*Genus *Parastenella* needs genetics or microscope to identify to species\**Parastenella doederleini*<sup>1,9,13</sup>**Doederlein's Tree Coral**WoRMS Aphia ID: [290683](#)GFBio Code: **3QS**

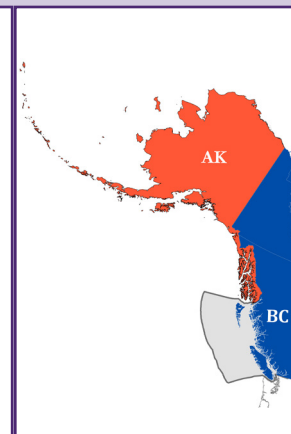
RACE Code:

**COLOR:** Axis dark brown; visible through a thin white layer; faint pinkish hue on large specimens**SHAPE:** Uniplanar to slightly bushy; **dichotomous** branching; small**SIZE:** Height to at least 70 cm**DIAGNOSTIC FEATURES:** Similar to *P. ramosa***POLYP DESCRIPTION:** Occur singly, in pairs, and occasionally in whorls of 3-4; project perpendicular to branch; length is 2.1-2.5 mm**REPORTED DISTRIBUTION:** AI, BC**REPORTED DEPTH:** 400-4594 m\**Parastenella gymnogaster*<sup>1,13</sup>**Bare-bellied Tree Coral**WoRMS Aphia ID: [409580](#)GFBio Code: **3QT**

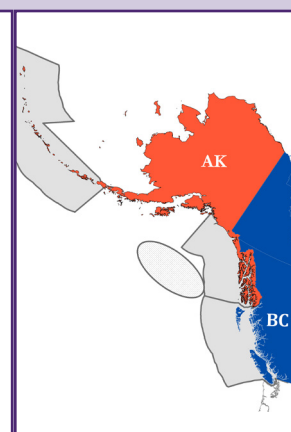
RACE Code:

**COLOR:** Axis is bronze**SHAPE:** Uniplanar; **dichotomous**, irregular branching**SIZE:** Height to 28 cm**DIAGNOSTIC FEATURES:** Branching every 12-15 mm; terminal branches are straight and rarely > 4 cm**POLYP DESCRIPTION:** Occur singly, in pairs, and occasionally in whorls of 3; spaced ~ 0.4-0.6 mm apart; strongly directed basally; length is 2.2-3.0 mm**REPORTED DISTRIBUTION:** AI, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 1527-2773 m\**Parastenella pacifica*<sup>13,71</sup>**Pacific Tree Coral**WoRMS Aphia ID: [409581](#)GFBio Code: **3QU**

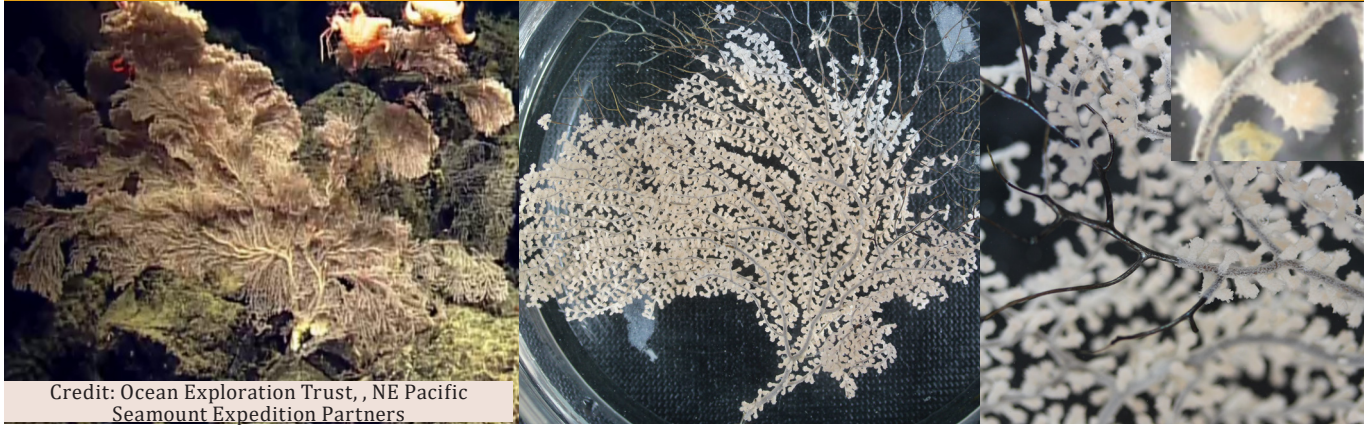
RACE Code:

**COLOR:** Axis is light brown; polyps pale yellow to white**SHAPE:** Uniplanar and flabellate; **dichotomous**, irregular branching**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:** Branching every 10-15 mm; terminal branches are short and rarely > 10 cm**POLYP DESCRIPTION:** Occur singly, in pairs, and in whorls of 3; spaced ~0.5-1.5 mm apart; usually oriented perpendicular to base; length is 2.1-3.0 mm; flared shape**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 2775-3500 m\**Parastenella ramosa*<sup>1,13,71</sup>**Branched Tree Coral**WoRMS Aphia ID: [290684](#)GFBio Code: **3QV**

RACE Code:

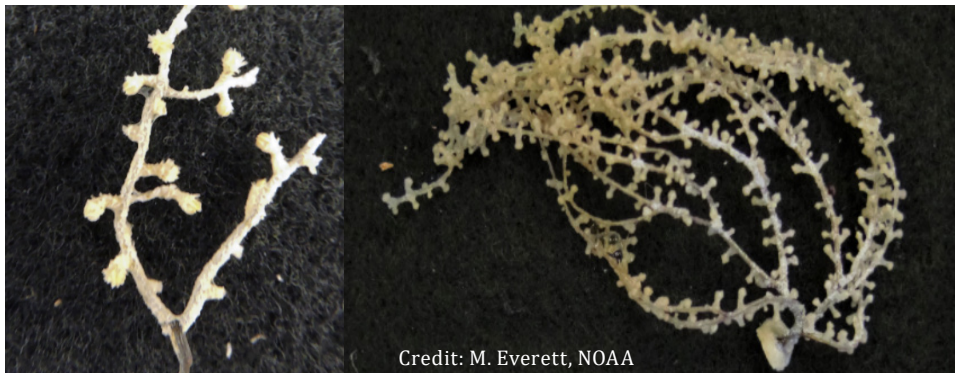
**COLOR:** Axis dark bronze; easily seen beneath a single layer of white, translucent **coenenchyme****SHAPE:** Usually uniplanar, rarely bushy; **dichotomous**, irregular branching**SIZE:** Height to 50 cm**DIAGNOSTIC FEATURES:** Similar to *P. doederleini*; branching every 9-11 mm; terminal branches are straight and rarely > 3 cm**POLYP DESCRIPTION:** Occur singly, in pairs, and occasionally in whorls of 3; spaced ~1-1.5 mm apart; usually directed basally; length is 2.5-3.3 mm**REPORTED DISTRIBUTION:** AI, EGOA, GOA Seamounts, BC**REPORTED DEPTH:** 665-2000 m

**\*Genus *Parastenella* needs genetics or microscope to identify to species**



Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners

*\*Parastenella doederleini*



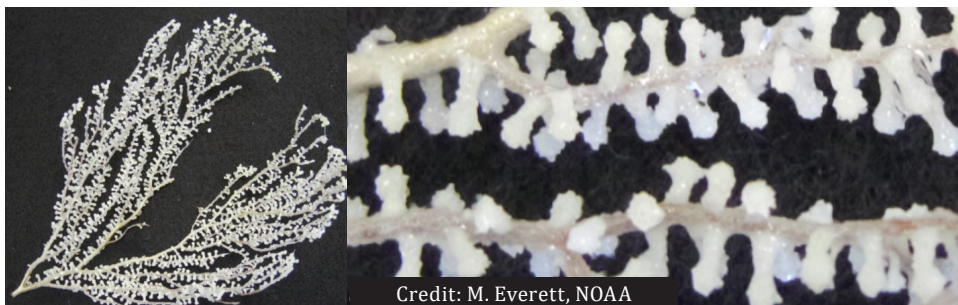
Credit: M. Everett, NOAA

*\*Parastenella gymnogaster*



Credit: M. Everett, NOAA

*\*Parastenella pacifica*



Credit: M. Everett, NOAA

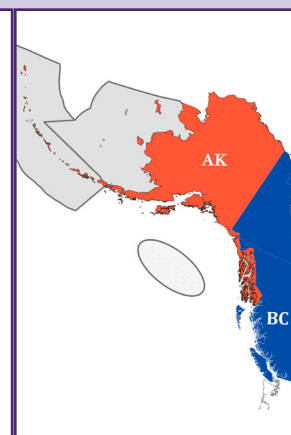
*\*Parastenella ramosa*

## Family PRIMNOIDAE

*Plumarella aleutiana*<sup>1,2,9</sup>**Aleutian Tree Coral**WoRMS Aphia ID: [574236](#)

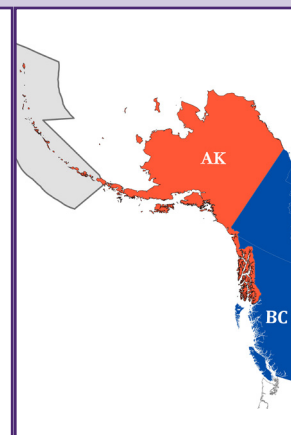
GFBio Code:

RACE Code: 44101

**COLOR:** Pale orange**SHAPE:** Uniplanar; few main branches; alternating **pinnate** branchlets**SIZE:** Height to 50 cm**DIAGNOSTIC FEATURES:** Branchlets 4-9 cm length; rarely branch secondarily**POLYP DESCRIPTION:** Small; length is 0.9-1.2 mm; 20-35 polyps/cm distally; turned upward**REPORTED DISTRIBUTION:** AI, BS, GOA Seamounts**REPORTED DEPTH:** 79-517 m*Plumarella echinata*<sup>1,2,9</sup>**Spiny Tree Coral**WoRMS Aphia ID: [574239](#)

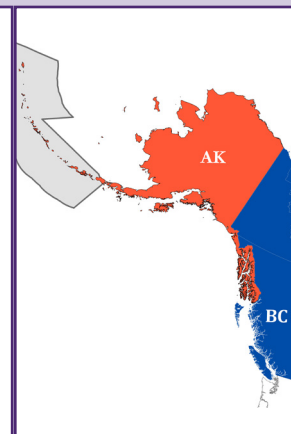
GFBio Code:

RACE Code: 44102

**COLOR:** White**SHAPE:** Uniplanar; moderate number of main branches; alternating **pinnate** branchlets**SIZE:** Height to 25 cm**DIAGNOSTIC FEATURES:** Branchlets short (2.0-6.0 cm) and infrequently re-branch in parallel every 3-4 mm**POLYP DESCRIPTION:** Length is 1.1-1.4 mm; slightly flared/curving upward; 20-30 polyps/cm distally; distinct elongate marginal spines**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 150-1692 m*Plumarella hapala*<sup>1,2,9</sup>**Delicate Tree Coral**WoRMS Aphia ID: [574235](#)

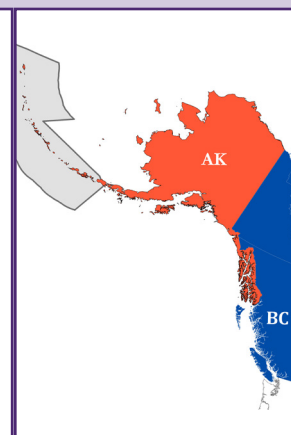
GFBio Code:

RACE Code: 44103

**COLOR:****SHAPE:** Uniplanar; few main branches; alternating **pinnate** branchlets**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:** Branchlets 4-5 cm in length with occasional secondary branching**POLYP DESCRIPTION:** Large; length is 2-2.4 mm; tilted upward; 18-25 polyps/cm distally**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 120-402 m*Plumarella nuttingi*<sup>1,2,9</sup>**Nutting's Tree Coral**WoRMS Aphia ID: [574238](#)

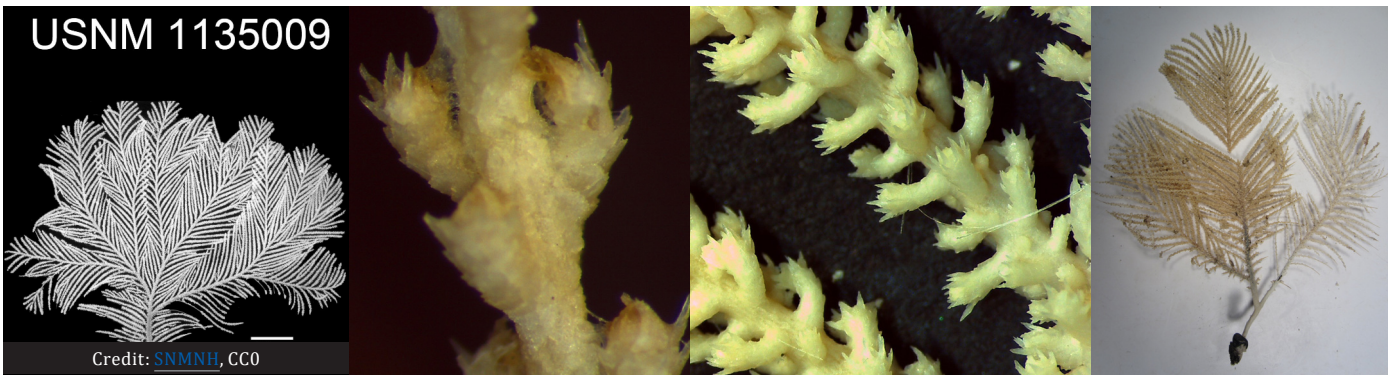
GFBio Code:

RACE Code: 44097

**COLOR:** Pale yellow, white**SHAPE:** Uniplanar to bushy; few main branches; branchlets on all sides in a compressed bottlebrush form**SIZE:** Height to 19 cm**DIAGNOSTIC FEATURES:** Branchlets up to 7 cm long; usually not subdivided**POLYP DESCRIPTION:** Large; length is 3.0-3.6 mm; fleshy and slightly upturned at ends; 9-14 polyps/cm**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 492-888 m



*Plumarella aleutiana*



*Plumarella echinata*



*Plumarella hapala*



*Plumarella nuttingi*

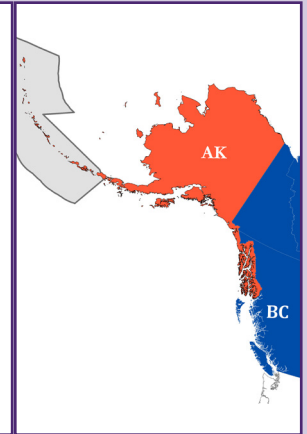


## Family PRIMNOIDAE

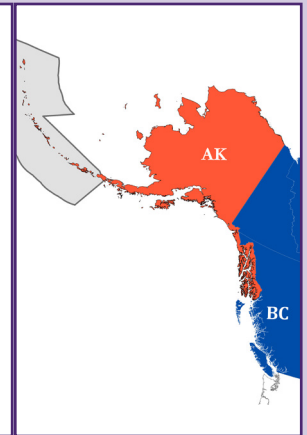
*Plumarella profunda*<sup>1,2,9</sup>**Deep-sea Tree Coral**WoRMS Aphia ID: [574234](#)

GFBio Code:

RACE Code:

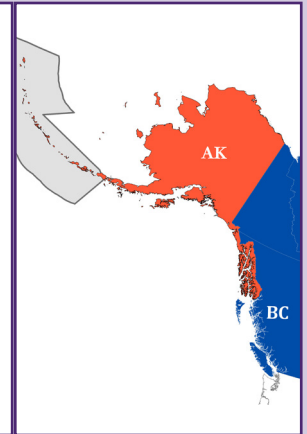
**COLOR:** Pale yellow**SHAPE:** Uniplanar and flabellate; few main branches; alternating **pinnate** branchlets**SIZE:** Height to 18 cm**DIAGNOSTIC FEATURES:** Branchlets up to 9 cm long**POLYP DESCRIPTION:** Length is 1.5-1.9 mm; slightly turned upward and universally distributed; 10-14 polyps/cm**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 2514 m*Plumarella robusta*<sup>1,2,9</sup>**Robust Deep-sea Tree Coral**WoRMS Aphia ID: [574240](#)

GFBio Code:

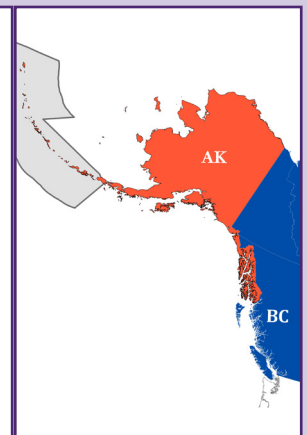
RACE Code: **44111****COLOR:** Pale yellow**SHAPE:** Uniplanar and flabellate; typically 1 main branch; alternating **pinnate** branchlets**SIZE:** Height to 25 cm**DIAGNOSTIC FEATURES:** Species co-occurs with *P. spicata*; branchlets 7-8 cm long basally, longer medially, ~ 4 cm long distally**POLYP DESCRIPTION:** Length is 1.4-1.8 mm; tilted upwards and universally distributed; ~20 polyps/cm distally, elongate spines**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 712-1061 m*Plumarella spicata*<sup>1,2,9</sup>**Spiny Deep-sea Tree Coral**WoRMS Aphia ID: [287675](#)

GFBio Code:

RACE Code:

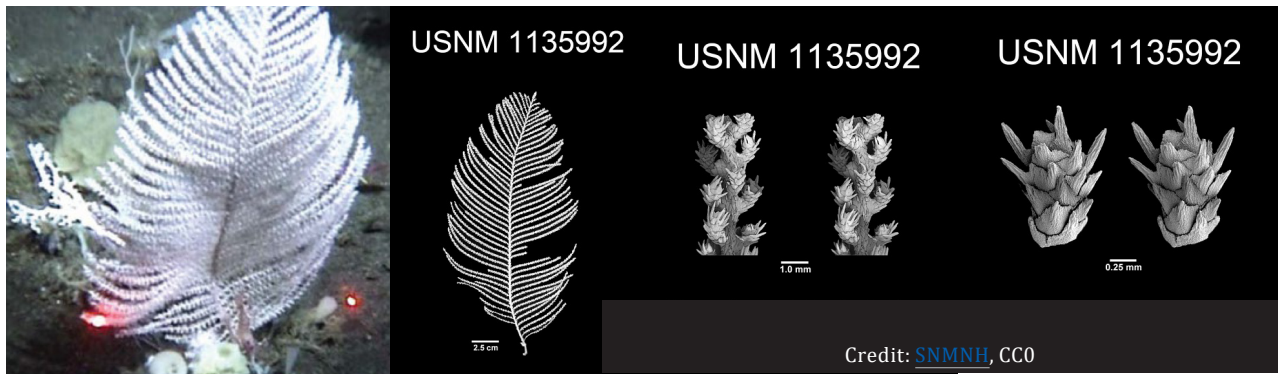
**COLOR:** Straw yellow**SHAPE:** Uniplanar and flabellate; delicate; quasi-**dichotomous** branchlets**SIZE:** Height to 14 cm**DIAGNOSTIC FEATURES:** Species co-occurs with *P. robusta***POLYP DESCRIPTION:** Length is 1.4-1.6 mm; alternating, biserial arrangement; 12-14 polyps/cm; have spines**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 712-1912 m*Plumarella superba*<sup>1,2,9</sup>**Superb Bushy Tree Coral**WoRMS Aphia ID: [574237](#)

GFBio Code:

RACE Code: **44075****COLOR:** Pale orange**SHAPE:** Uniplanar to bushy; few main branches; numerous modified bottlebrush branchlets**SIZE:** Height to 60 cm**DIAGNOSTIC FEATURES:** Branchlets rigid and wiry; universally distributed and rebranching; length is 1.5-2 cm**POLYP DESCRIPTION:** Length is 1.0-1.3 mm; universally distributed and turned slightly upward; 30-35 polyps/cm**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 29-1258 m



*Plumarella profunda*



*Plumarella robusta*

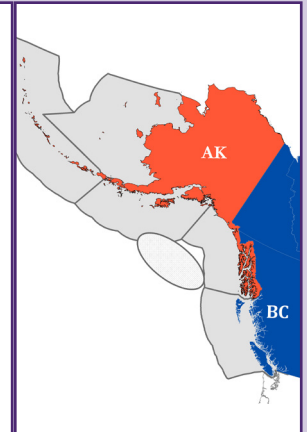
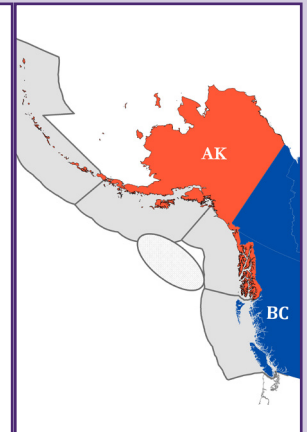
No Images On Record  
With DFO or AFSC

*Plumarella spicata*

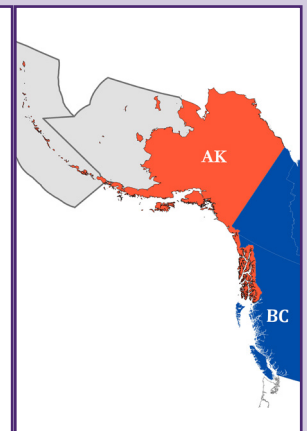


*Plumarella superba*

## Family PRIMNOIDAE

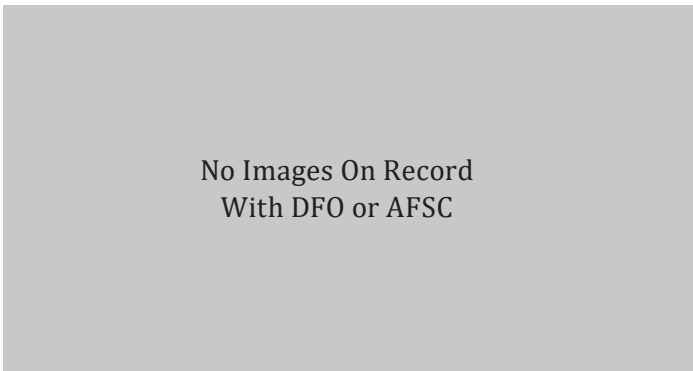
*Primnoa pacifica*<sup>1,2,15,71</sup>**Pacific Red Tree Coral**WoRMS Aphia ID: [286539](#)GFBio Code: **3T1**RACE Code: **41521****COLOR:** Pink, orange, and possibly a white variant**SHAPE:** Planar to slightly bushy; stiff, rigid axis; **dichotomous** branching**SIZE:** Height to 2.5 m**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length is 5.0-6.5 mm; universally distributed; stout and straight; slightly flared distally; curve towards base; 1-2 small spines**REPORTED DISTRIBUTION:** AI, BS, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 6-573 m*Primnoa pacifica* var. *willeyi*<sup>1,2,15</sup>**Willey's Red Tree Coral**WoRMS Aphia ID: [409549](#)GFBio Code: **3T2**RACE Code: **41522****COLOR:** Scarlet orange**SHAPE:** Planar to slightly bushy; stiff, rigid axis; **dichotomous** branching**SIZE:****DIAGNOSTIC FEATURES:** A varietal of *P. pacifica***POLYP DESCRIPTION:** Twisted polyps with a narrow midsection and a bulbous distal end**REPORTED DISTRIBUTION:** AI, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 27-863 m*Primnoa wingi*<sup>1,2,15</sup>**Wing's Red Tree Coral**WoRMS Aphia ID: [286540](#)

GFBio Code:

RACE Code: **44107****COLOR:** Reddish-orange in situ and live, pale yellow to cream when preserved**SHAPE:** Roughly planar; sparsely **dichotomous** branching**SIZE:** Height to 5 m**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length is 8.0-12.0 mm; universally and densely distributed; fleshy and expanded distally; elongate and flaccid; curving or twisting towards base**REPORTED DISTRIBUTION:** AI, BS**REPORTED DEPTH:** 110-1280 m



*Primnoa pacifica*



*Primnoa pacifica* var. *willei*



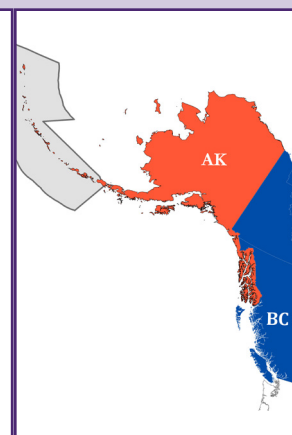
*Primnoa wingi*

## Family PRIMNOIDAE

*Thouarella cristata*<sup>1,2,9</sup>**Crested Bottlebrush Coral**WoRMS Aphia ID: [574232](#)

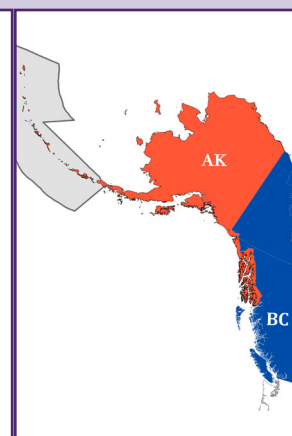
GFBio Code:

RACE Code: 44106

**COLOR:** Dull orange; axis pale yellow to brown-black**SHAPE:** Bushy to bottlebrush appearance; primary branches are uniplanar; irregularly **pinnate** branchlets are both uniplanar and perpendicular to main branches**SIZE:** Height to 50 cm**DIAGNOSTIC FEATURES:** Branchlets to 8 cm in length; not subdivided**POLYP DESCRIPTION:** Length is 1.7-2.5 mm; flared distally and curved upward; universally distributed and crowded; 24-26 polyps/cm increasing distally**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 94-768 m*Thouarella trilineata*<sup>1,2,9</sup>**Three-lined Bottlebrush Coral**WoRMS Aphia ID: [574233](#)

GFBio Code:

RACE Code: 44070

**COLOR:** Pale yellow, axis pale yellow**SHAPE:** Bushy to bottlebrush appearance; primary branches are uniplanar; few main branches; pinnately arranged branchlets occur in 3 directions**SIZE:** Height to 25 cm**DIAGNOSTIC FEATURES:** Branchlet length < 6 cm; not further subdivided; differs from *T. cristata* by having smaller polyps; no spines**POLYP DESCRIPTION:** Length is 1.4-1.7 mm; 35-40 polyps/cm**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** REPORTED DEPTH: 97-642 m



*Thouarella cristata*



*Thouarella trilineata*

## Identification Key to Suborder Holaxonia

- Colonies fan-shaped to occasionally bushy; axis has a wide, cross-chambered central chord; polyps not **retractile** and very prominent; no spine-like **sclerites** projecting out beyond polyps  
**Family Acanthogorgiidae (RACE Code: 44116)** ..... [pg. 44](#)
- Colonies largely planar to slightly bushy; branching into open fans; polyps are usually **retractile**; axis is horny, hollow, and flexible; rind usually thick  
**Family Plexauridae (RACE Code: 41584)** ..... [pg. 46](#)

## List of species of Holaxonia

### Family Acanthogorgiidae

*Acanthogorgia* cf. *spissa*  
*Calcigorgia* *beringi*  
*Calcigorgia* *gigantea*  
*Calcigorgia* *japonica*  
*Calcigorgia* *matua*  
*Calcigorgia* *spiculifera*

### Family Plexauridae

*Alaskagorgia* *aleutiana*  
*Alaskagorgia* *splendicitrina*  
*Cryogorgia* *koolsae*  
*Muriceides* *cylindrica*  
*Swiftia* *pacifica*  
*Swiftia* *simplex*  
*Swiftia* *spauldingi*  
*Swiftia* *torreyi*



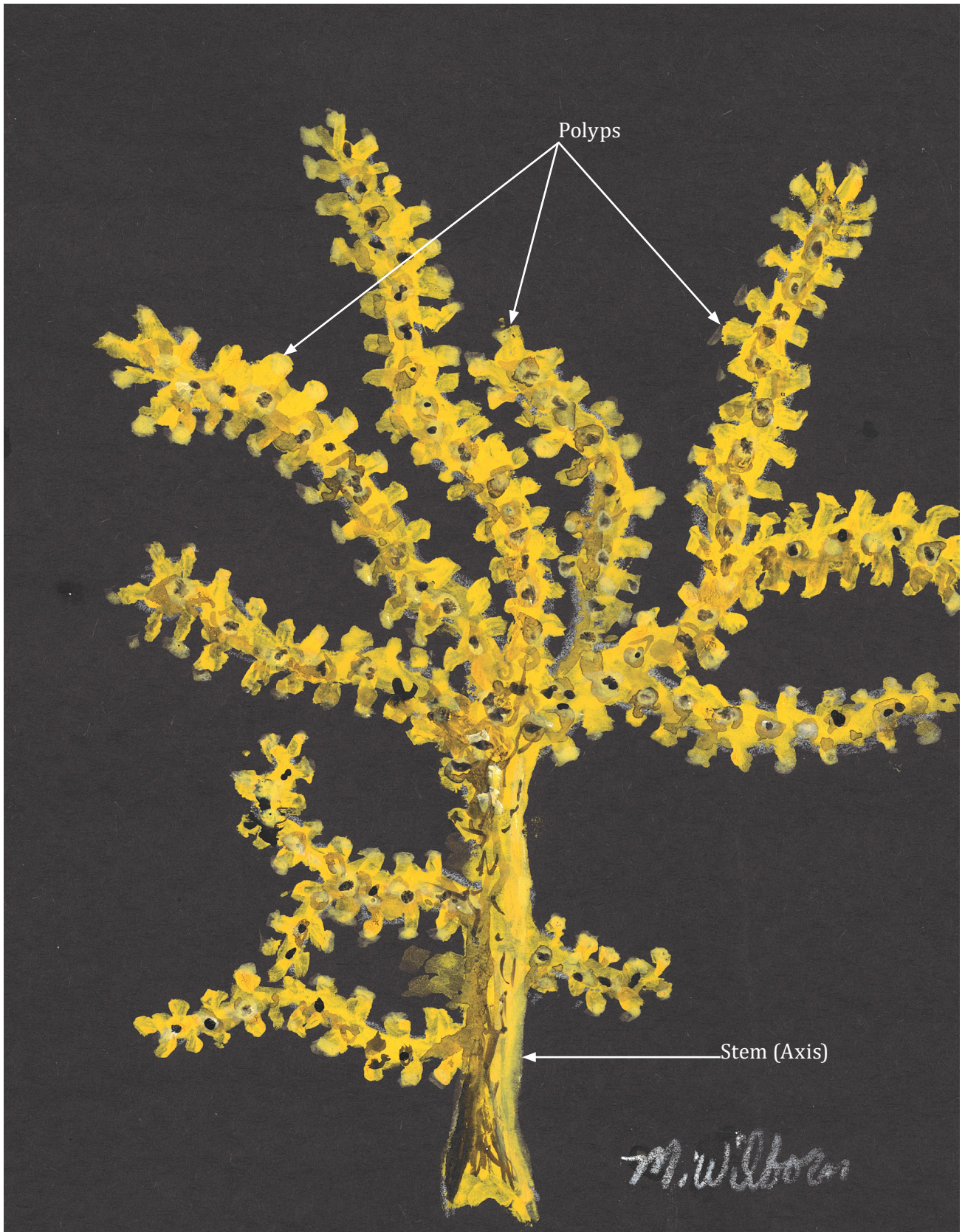
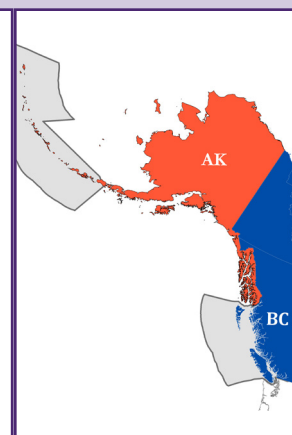
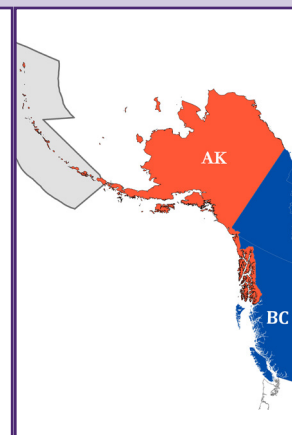


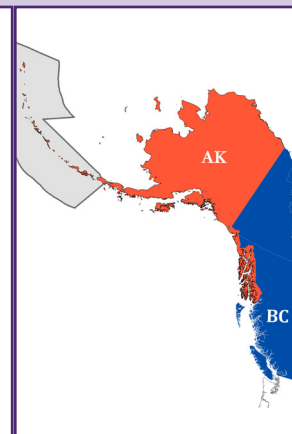
Illustration: Example of Holaxonia coral



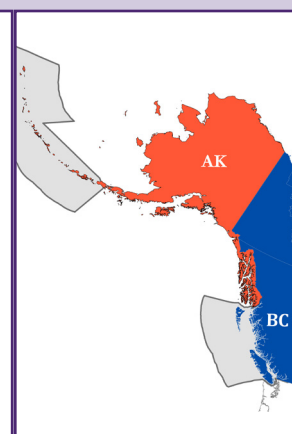
## Family ACANTHOGORGIIDAE

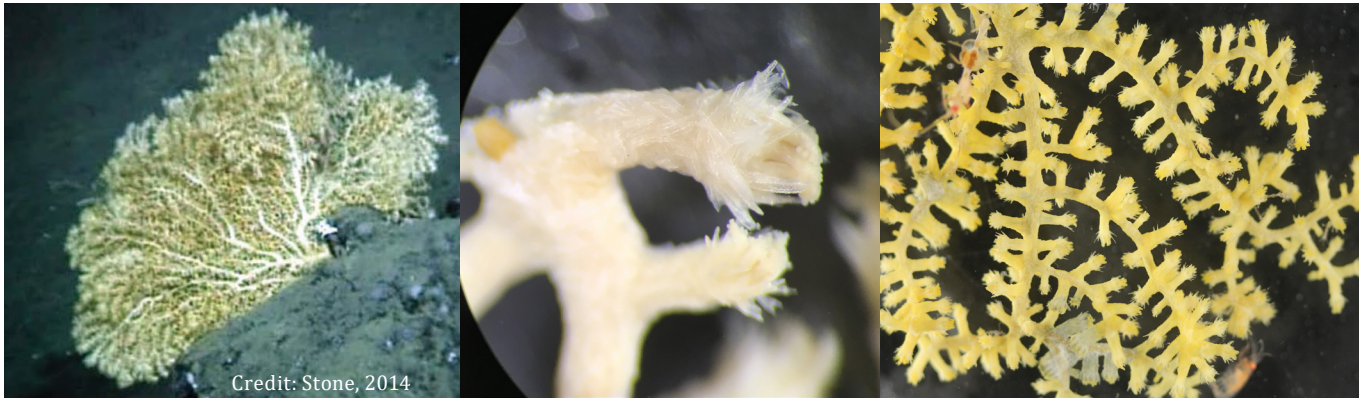
*Acanthogorgia cf. spissa* <sup>1,16,17,40</sup>**Thick Glass-Shard Gorgonian****COLOR:** Light or bright yellow to brown; axis dark yellow to brown**SHAPE:** Generally uniplanar; branching is irregular and wavy**SIZE:** Height to at least 10-15 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length to 2.5 mm; non-retractile; universally distributed**REPORTED DISTRIBUTION:** AI, BC**REPORTED DEPTH:** 843-2087 mWoRMS Aphia ID: [286087](#)GFBio Code: [3TD \(genus\)](#)RACE Code: [44100](#)*Calcigorgia beringi* <sup>1,2,18,19</sup>**Bering Sea Fan Coral****COLOR:** Light yellow, cream, light pink; axis is dark brown proximally**SHAPE:** Roughly planar; irregular branching with subdivisions**SIZE:****DIAGNOSTIC FEATURES:** Similar to *C. matua* (pg. 46); overlapping in AI; branches relatively thin and flexible**POLYP DESCRIPTION:** Length to 2.5 mm; universally distributed; ~2 mm apart**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 39-1900 mWoRMS Aphia ID: [520678](#)GFBio Code: [3UI](#)RACE Code: [41573](#)*Calcigorgia gigantea* <sup>1,18</sup>**Giant Polyp Fan Coral****COLOR:****SHAPE:** Roughly planar; irregular branching**SIZE:** Height to 10 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length is ~9-10 mm; width is 5-6 mm**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 128-391 mWoRMS Aphia ID: [1337212](#)

GFBio Code:

RACE Code: [41700 \(genus\)](#)*Calcigorgia japonica* <sup>1,2,18</sup>**Japanese Fan Coral****COLOR:** Axis is black-brown proximally**SHAPE:** Roughly planar; irregular branching with subdivisions**SIZE:****DIAGNOSTIC FEATURES:** Branches relatively thin and flexible**POLYP DESCRIPTION:** Length to 5 mm; universally distributed; not retractile**REPORTED DISTRIBUTION:** AI, BC**REPORTED DEPTH:** 395-2180 mWoRMS Aphia ID: [517641](#)

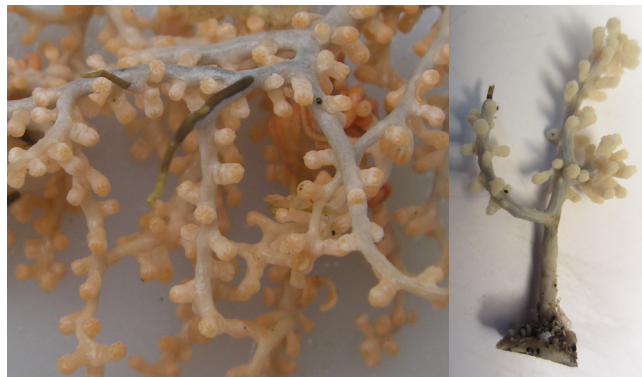
GFBio Code:

RACE Code: [41700 \(genus\)](#)



Credit: Stone, 2014

*Acanthogorgia cf. spissa*



*Calcigorgia beringi*



*Calcigorgia gigantea*

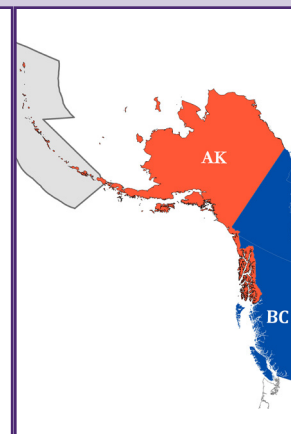
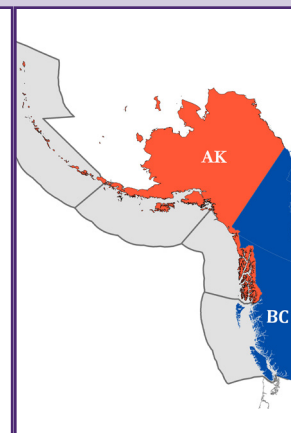


*Calcigorgia japonica*

## Family ACANTHOGORGIIDAE

*Calcigorgia matua*<sup>1,18,20</sup>**Matua Fan Coral****COLOR:** Axis is black-brown proximally**SHAPE:** Roughly planar; irregular branching with subdivisions**SIZE:** Height to at least 10 cm**DIAGNOSTIC FEATURES:** Similar to *C. beringi* (pg. 44), overlapping in AI; branches relatively thin and flexible**POLYP DESCRIPTION:** Length is 2-3 mm; universally distributed and arranged spirally around branches; not **retractile****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 300-900 mWoRMS Aphia ID: [1296112](#)

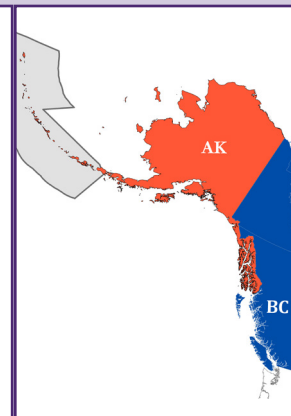
GFBio Code:

RACE Code: **41700 (genus)***Calcigorgia spiculifera*<sup>1,2,18</sup>**Spiculated Fan Coral****COLOR:** Pink, pale orange, white**SHAPE:** Roughly planar to bushy; irregular **dichotomous** branching**SIZE:** Height to 35 cm**DIAGNOSTIC FEATURES:** Branches thick, flexible, blunt; numerous, crowded knobs**POLYP DESCRIPTION:** Length is to 3 mm**REPORTED DISTRIBUTION:** AI, GOA, BC**REPORTED DEPTH:** 18-512 mWoRMS Aphia ID: [378316](#)GFBio Code: **3TF**RACE Code: **41701**

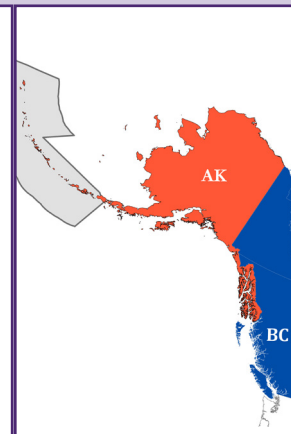
## Family PLEXAURIDAE

*Alaskagorgia aleutiana*<sup>1,2,21</sup>**Aleutian Gorgonian****COLOR:** Pale yellow, cream, brown**SHAPE:** Large (tall); somewhat planar to **arborescent**; branches are sparse; similar to *Cryogorgia koolsae* (pg. 48)**SIZE:** Height to 1 m**DIAGNOSTIC FEATURES:** Branch length < 60 cm; diameter is 12-15 mm; distally expanded up to 17 mm**POLYP DESCRIPTION:** Universally distributed; fully **retractile** with a slightly raised rim**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 100-550 mWoRMS Aphia ID: [289377](#)

GFBio Code:

RACE Code: **41591***Alaskagorgia splendicitrina*<sup>1,22</sup>**Lemon-yellow Squat Gorgonian****COLOR:** Colony is yellow; axis is dark reddish-brown to black**SHAPE:** Fan-like to bushy; irregular branching extensive; convoluted; curving slightly back towards base**SIZE:** Height to 12 cm**DIAGNOSTIC FEATURES:** Branch diameter expands distally to ~10 cm (in holotype)**POLYP DESCRIPTION:** Large; universally distributed and numerous except on stem and holdfast; fully **retractile**; area around polyps is raised**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 150-200 mWoRMS Aphia ID: [1310065](#)

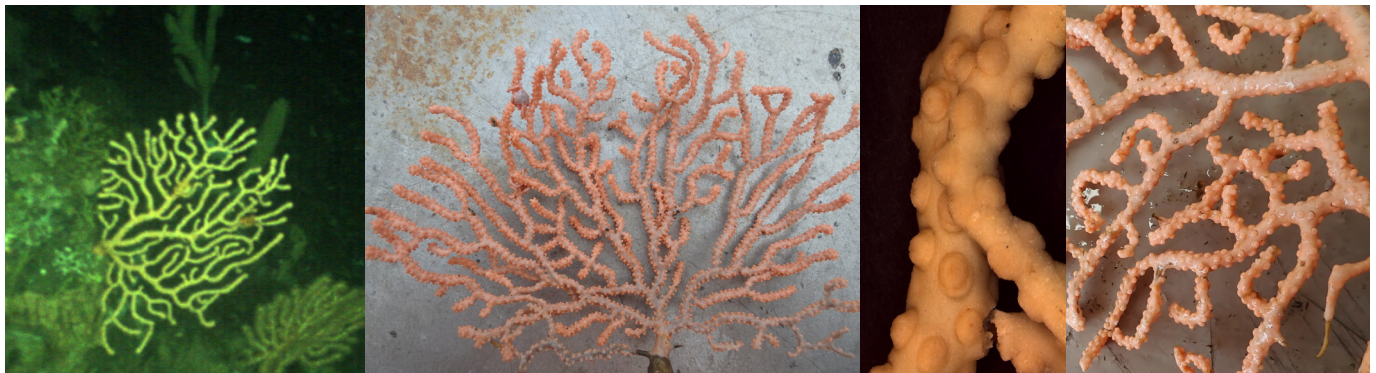
GFBio Code:

RACE Code: **41576**

Family ACANTHOGORGIIDAE



*Calcigorgia matua*



*Calcigorgia spiculifera*

Family PLEXAURIDAE



*Alaskagorgia aleutiana*



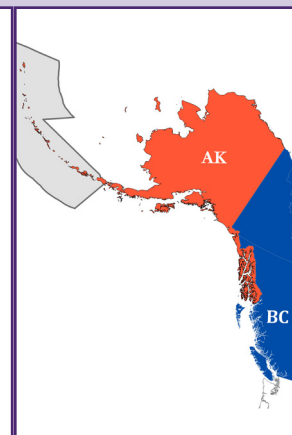
*Alaskagorgia splendictrina*

## Family PLEXAURIDAE

*Cryogorgia koolsae*<sup>1,2,23</sup>**Kool's Coldwater Gorgonian**WoRMS Aphia ID: [289747](#)

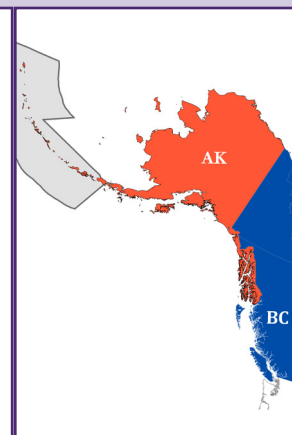
GFBio Code:

RACE Code: 41595

**COLOR:** Pale orange to pink-orange; axis is dark brown to black**SHAPE:** Candelabrum-shaped; branching is irregular, planar, and sparse; stem is typically lengthy; before first branch occurs; similar to *Alaskagorgia aleutiana* (pg. 48)**SIZE:** Height to 40 cm**DIAGNOSTIC FEATURES:** Branch length 30-100 mm; ~8-10 mm thick and blunt**POLYP DESCRIPTION:** Length is < 2 mm; **retractile** into polyp mounds or flush with branch**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 25-400 m*Muriceides cylindrica*<sup>1,2,19</sup>**Long-polyp Gorgonian**WoRMS Aphia ID: [286358](#)

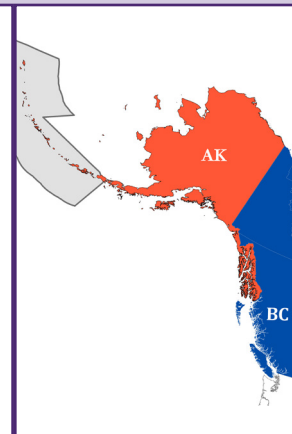
GFBio Code:

RACE Code: 44093 (genus)

**COLOR:** Dull yellow, brown**SHAPE:** Fan-shaped; soft and flexible; irregular branching and re-branching**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Length is to 2 mm; universally distributed; ~2 mm apart; not **retractile****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 170-900 m*Muriceides nigra*<sup>1,2,19</sup>**Purple Gorgonian**WoRMS Aphia ID: [286365](#)

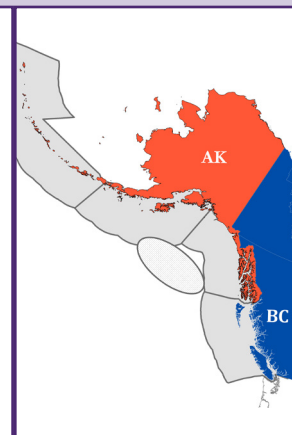
GFBio Code:

RACE Code: 44092

**COLOR:** Olive-brown branches and stem; black to purple polyps**SHAPE:** Moderate size; fan- or tree-shaped; branches irregular**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:** Branches flexible; often found with brittle stars attached**POLYP DESCRIPTION:** Universally distributed; not **retractile****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 50-400 m*Swiftia pacifica*<sup>1,19,50,71</sup>**Pacific Red Gorgonian**WoRMS Aphia ID: [1036537](#)

GFBio Code: 3UK

RACE Code: 41571

**COLOR:** Polyps deep red to grey/green-red; colony color is red**SHAPE:** Somewhat planar; moderate branching in an alternating pattern**SIZE:** Height to 19 cm**DIAGNOSTIC FEATURES:** Branches flabellate; form net-like reticulations**POLYP DESCRIPTION:** Arise from small, prominent mounds**REPORTED DISTRIBUTION:** AI, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 89-2904 m



*Cryogorgia koolsae*



Credit: M. Everett, NOAA

*Muriceides cylindrica*



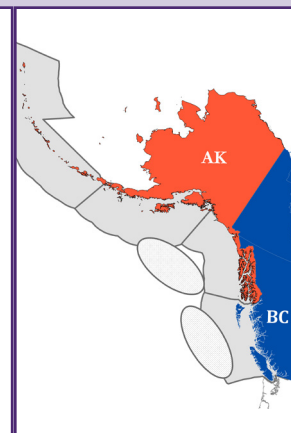
*Muriceides nigra*



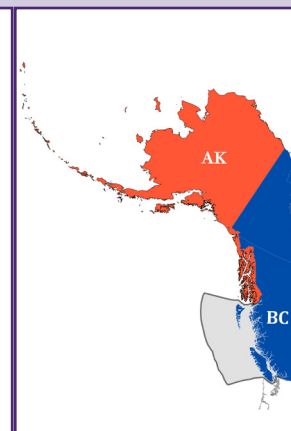
Credit: [SNMNH](#), [CCO](#)

*Swiftia pacifica*

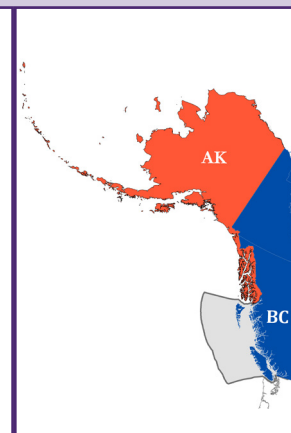
## Family PLEXAURIDAE

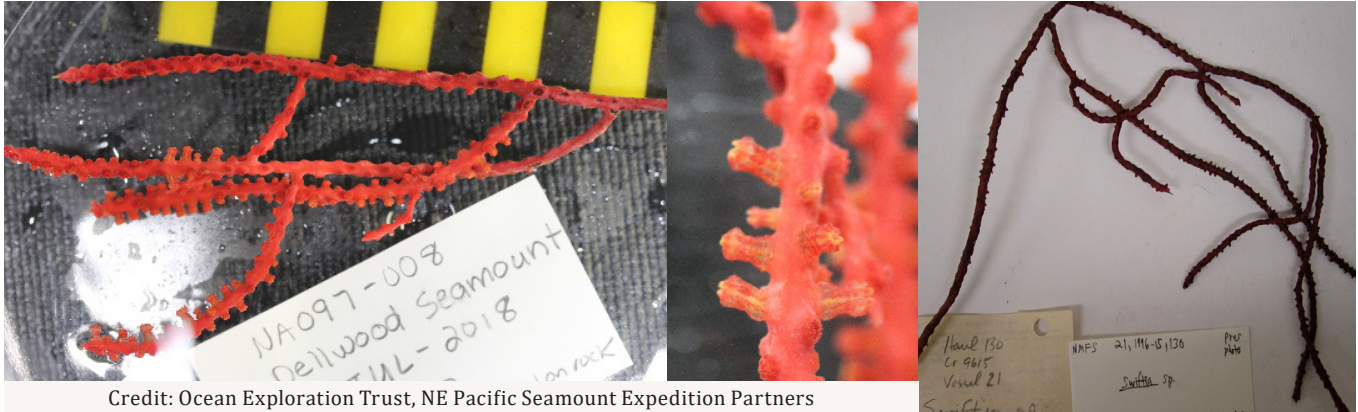
*Swiftia simplex*<sup>1,2,28,52,71</sup>**Red Licorice Gorgonian****COLOR:** Salmon, pinkish-red, coral red**SHAPE:** Moderate-sized; whip-like**SIZE:** Height to 45 cm**DIAGNOSTIC FEATURES:** Branches few, long, slender, and flexible**POLYP DESCRIPTION:** Uniformly distributed; mounds not prominently raised**REPORTED DISTRIBUTION:** AI, GOA, GOA Seamounts (Denson, Dickins, Welker, Pratt), BC, BC Seamounts**REPORTED DEPTH:** 497-1285 mWoRMS Aphia ID: [1036547](#)GFBio Code: [3UL](#)RACE Code: [41570](#)*Swiftia spauldingi*<sup>47,50,52,71</sup>**Spaulding's Gorgonian****COLOR:** Bright coral, salmon-orange, purple**SHAPE:** Short; moderately bushy to uniplanar; flabellate; sparse, irregularly **dichotomous** branching**SIZE:** Height to at least 12 cm**DIAGNOSTIC FEATURES:** Branches can be stout and 5-10 cm long**POLYP DESCRIPTION:** Closely packed on all sides of branches; resemble raised warts**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 38-453mWoRMS Aphia ID: [286420](#)GFBio Code: [3UM](#)

RACE Code:

*Swiftia torreyi*<sup>47,52,71</sup>**Dwarf Red Gorgonian****COLOR:** Maroon, brick red, black**SHAPE:** Bushy to uniplanar; flabellate; branches dense and closely spaced**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:** Branches commonly **anastomose** (merge where two branches touch)**POLYP DESCRIPTION:** Mounds ~1mm high; **retractile****REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 201-2200 mWoRMS Aphia ID: [1036552](#)GFBio Code: [3UN](#)

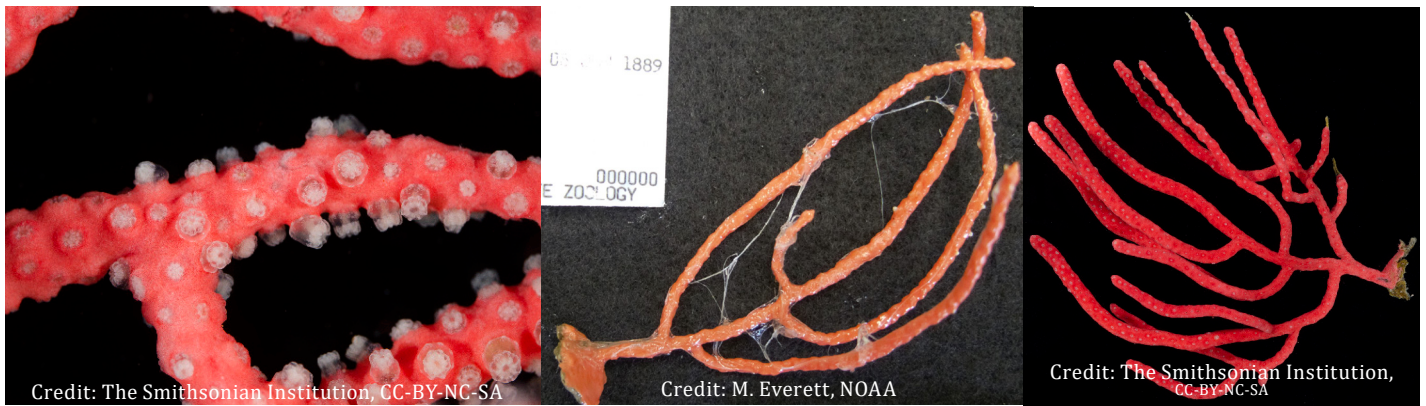
RACE Code:





Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners

*Swiftia simplex*



Credit: The Smithsonian Institution, CC-BY-NC-SA

Credit: M. Everett, NOAA

Credit: The Smithsonian Institution, CC-BY-NC-SA

*Swiftia spauldingi*



Credit: Catherine Hotke, Centre for Biodiversity Genomics

*Swiftia torreyi*



## Identification Key to Suborder Scleraxonia

- Colonies encrusting, bushy or fan-shaped; if branching, then branches are slender, flattened or hollow; polyps are protruding  
**Family Anthothelidae** ..... [pg. 54](#)
- Colonies branching on all sides of stem; deep red, orange, dark pink, color; polyps are **retractile** but mounding; axis is solid calcium carbonate  
**Family Coralliidae**..... [pg. 54](#)
- Colonies robust and branching with slight expansion at tips of branches; polyps widely separated and **retractile**; colonies brightly colored in pink, orange, purple, white and red  
**Family Paragorgiidae (RACE Code: 41581)**..... [pg. 54](#)

## List of species of Suborder Scleraxonia

Family Anthothelidae

*Anthothela pacifica*

Family Coralliidae

*Hemicorallium regale*

Family Paragorgiidae

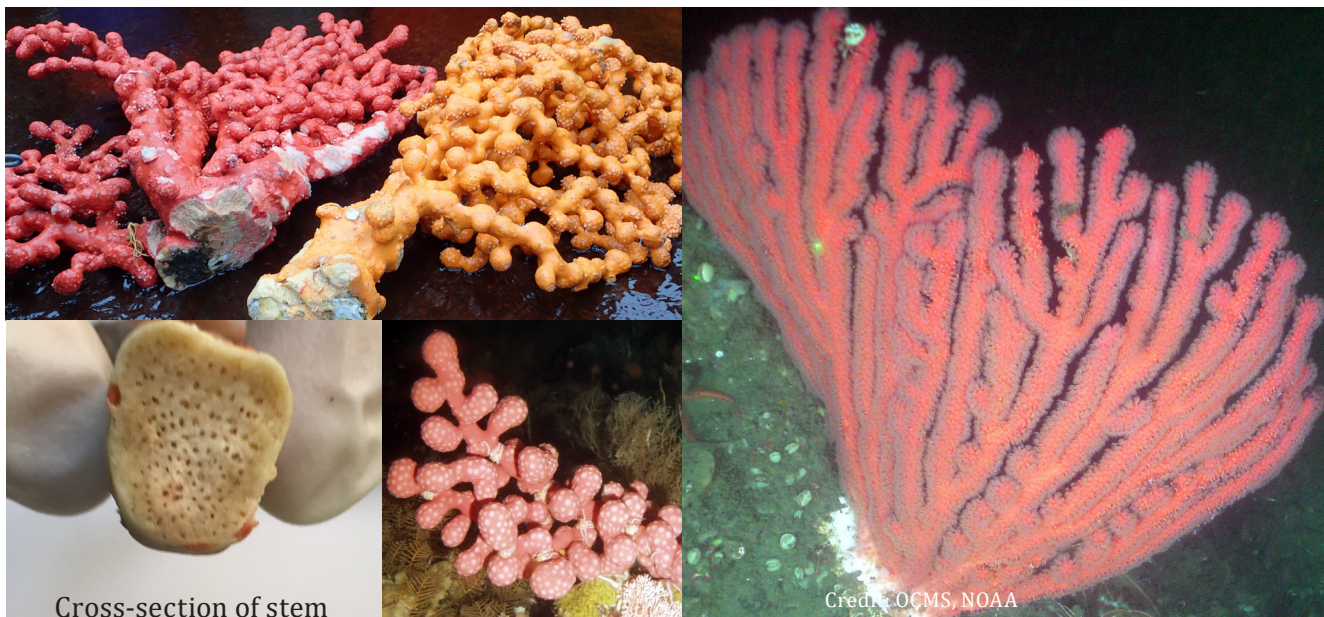
*Paragorgia pacifica*

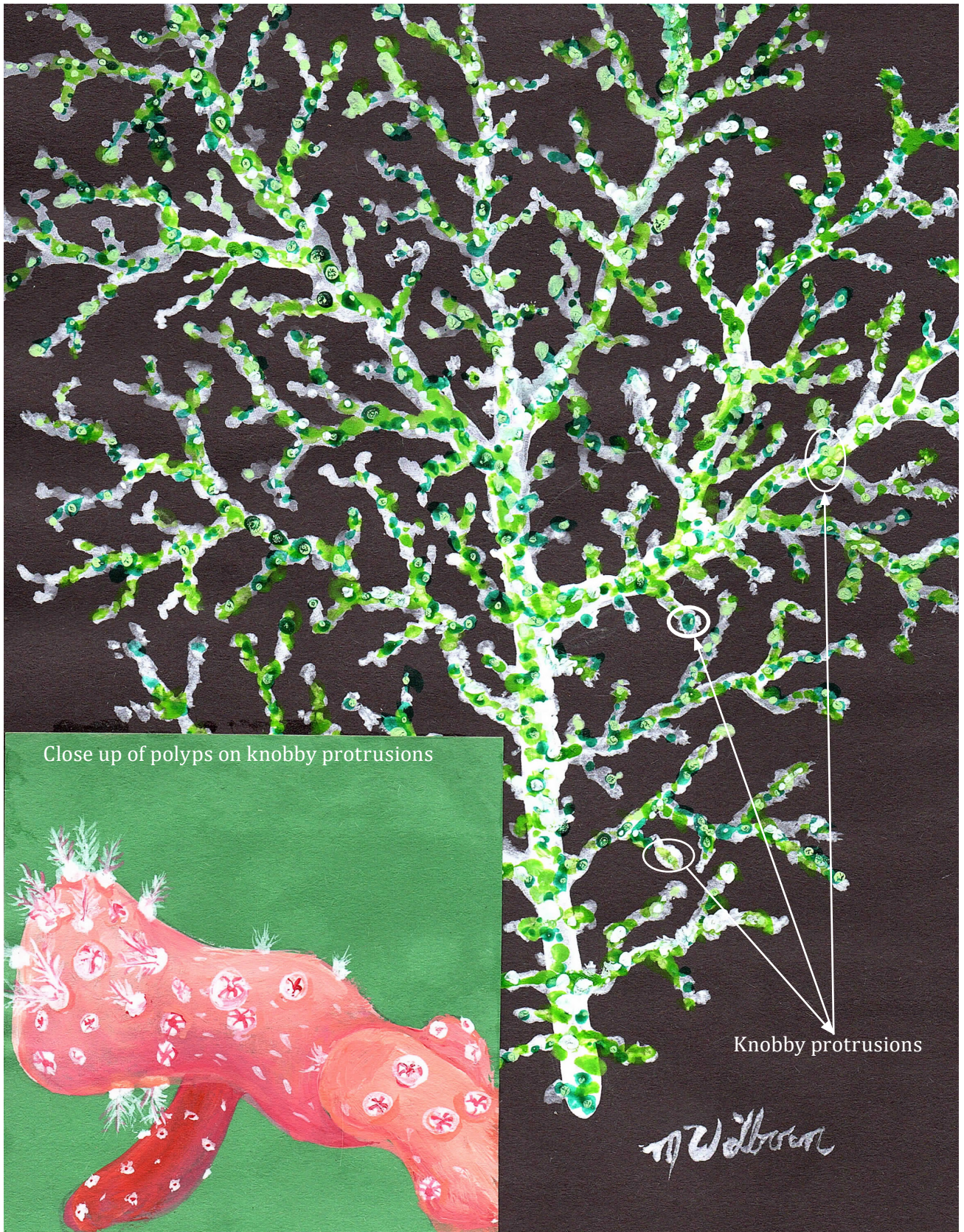
*Paragorgia* sp. A

*Paragorgia stephencairnsi* species complex

*Paragorgia yutlinux*

*Sibogagorgia cauliflora*





Close up of polyps on knobby protrusions

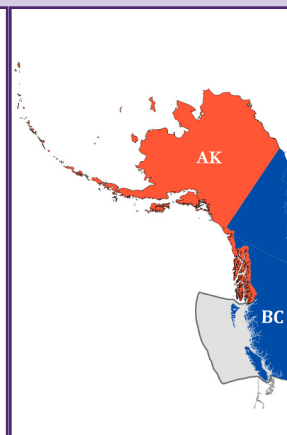
Knobby protrusions

Illustration: Example of Scleraxonian coral with inset illustration showing closeup of knobby protrusions and polyps retracted and extended.

## Family ANTHOTHELIDAE

*Anthothela pacifica* <sup>24,72,73</sup>**Pacific Flowerbud Coral**WoRMS Aphia ID: [286579](#)GFBio Code: **3SX**

RACE Code:

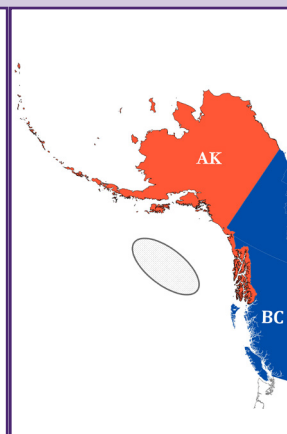
**COLOR:** Light yellow, straw, grayish white**SHAPE:** Thin, flattened branches; irregularly branched with no main large stem**SIZE:****DIAGNOSTIC FEATURES:** Has thin and membranous **coenenchyme****POLYP DESCRIPTION:** **Calices** are prominent (2.5 -3 mm tall); polyps **retractile****REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 350 m

## Family CORALLIIDAE

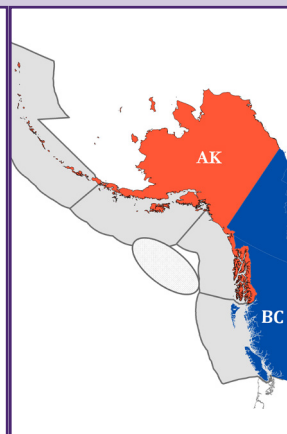
*Hemicorallium regale* <sup>1,2,24,29</sup>**Regal Red Coral**WoRMS Aphia ID: [1311260](#)

GFBio Code:

RACE Code:

**COLOR:** Pink**SHAPE:** Irregularly branching; axis is round, smooth, and solid**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Polyps on 3 sides of branches; **retractile** (not flush with **coenenchyme**); form prominent cylinders (1.5-2.0 mm tall)**REPORTED DISTRIBUTION:** GOA Seamounts (Patton)**REPORTED DEPTH:** 708-1806 m

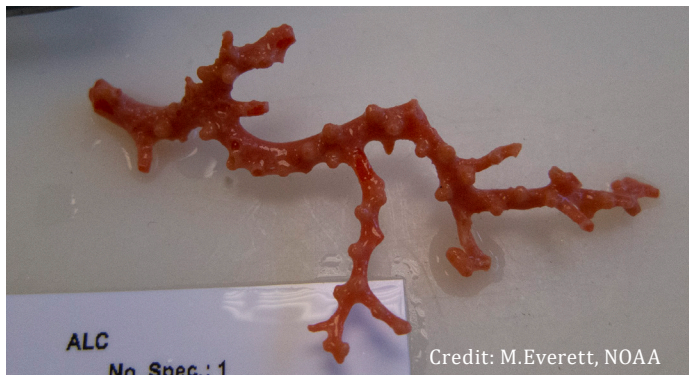
## Family PARAGORGIIDAE

*Paragorgia pacifica* <sup>1,24,45</sup>**Pacific Bubblegum Coral**WoRMS Aphia ID: [517887](#)GFBio Code: **3S7**RACE Code: **41583****COLOR:** Colony red, orange, pink, white, or yellow; polyps red or white**SHAPE:** Large, massive, tree-like corals; branching is irregular**SIZE:** Height to 2 m**DIAGNOSTIC FEATURES:** Branches flexible, thick, and fleshy; terminus of branches often with large autozooid clumps**POLYP DESCRIPTION:** **Retractile** into star-shaped pores**REPORTED DISTRIBUTION:** AI, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 15-1600 m

No Images On Record  
With DFO or AFSC

*Anthothela pacifica*

Family CORALLIIDAE



*Hemicorallium regale*

Family PARAGORGIIDAE

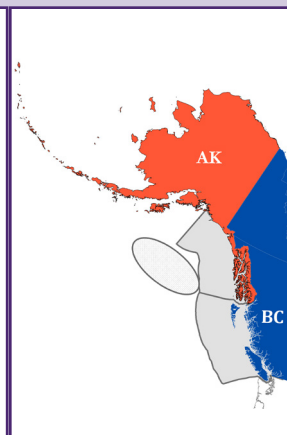


*Paragorgia pacifica*

## Family PARAGORGIIDAE

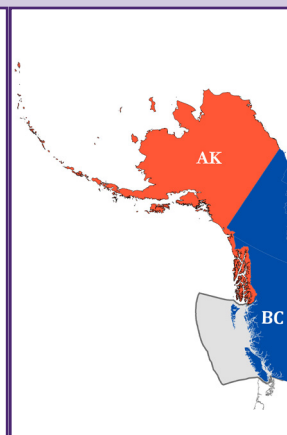
*Paragorgia stephencairnsi* spp. complex<sup>1,24,45,70</sup> WoRMS Aphia ID:  
**Stephen's Bubblegum Coral** GFBio Code: **3S9**  
 RACE Code: **41580 (genus)**

**COLOR:** Colony white, pink, red, or purple; polyps/pores usually darker than the cortex  
**SHAPE:** Tree-like corals with sparse, robust branches; shallower specimens have flattened branches  
**SIZE:** Large colonies; height to ~60 cm  
**DIAGNOSTIC FEATURES:** Two species (*P. stephencairnsi* and *P. jamesi*) separated by genetic analysis; also similar to *P. yutlinux* and requires **sclerite** analysis to differentiate; resembles *S. cauliflora* but shallower depths  
**POLYP DESCRIPTION:** **Retractile** into star-shaped pores  
**REPORTED DISTRIBUTION:** EGOA, GOA Seamounts, BC  
**REPORTED DEPTH:** 350-1195 m



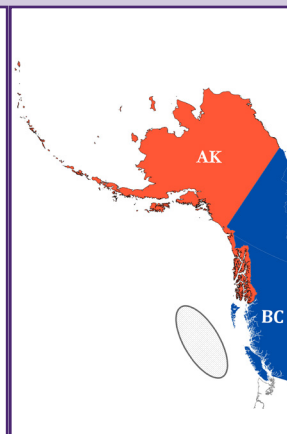
*Paragorgia yutlinux*<sup>24,45,47</sup> WoRMS Aphia ID: **286612**  
**Yutlinux Bubblegum Coral** GFBio Code: **3SA**  
 RACE Code:

**COLOR:** Colony white; polyps pink to purple  
**SHAPE:** Tree-like; arborescent and robust  
**SIZE:** Height to ~10+ cm; branch diameter <1 cm  
**DIAGNOSTIC FEATURES:** Branches are robust; similar to *P. stephencairnsi* spp. complex and requires **sclerite** analysis to differentiate  
**POLYP DESCRIPTION:** **Retractile** into star-shaped pores  
**REPORTED DISTRIBUTION:** BC  
**REPORTED DEPTH:** 503-1000 m



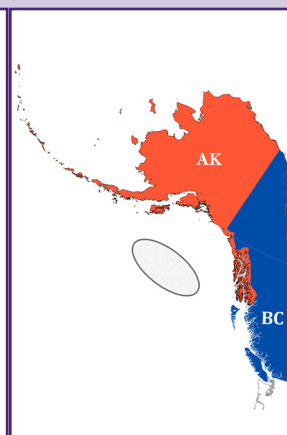
*Paragorgiidae* WoRMS Aphia ID: **125281**  
**Unknown Paragorgiid** GFBio Code:  
 RACE Code: **41581 (family)**

**COLOR:** Light to dark pink; sometimes darker near the branch tips  
**SHAPE:** Fan-shaped and uniplanar; dense branching; slightly curved  
**SIZE:** Width to ~30cm; branch diameter <1 cm at the widest point (near the base)  
**DIAGNOSTIC FEATURES:**  
**POLYP DESCRIPTION:** **Retractile** into star-shaped pores  
**REPORTED DISTRIBUTION:** BC Seamounts  
**REPORTED DEPTH:** 1165 m



*Sibogagorgia cauliflora*<sup>1,27</sup> WoRMS Aphia ID: **517784**  
**Cauliflower Coral** GFBio Code:  
 RACE Code:

**COLOR:** Beige, pink, red  
**SHAPE:** Uniplanar and branching  
**SIZE:** Height to 1.5 m  
**DIAGNOSTIC FEATURES:** Resembles *P. stephencairnsi* spp. complex, but at greater depths; main branches are thicker than terminals  
**POLYP DESCRIPTION:** Universally distributed  
**REPORTED DISTRIBUTION:** GOA Seamounts (Derickson)  
**REPORTED DEPTH:** 2050-2766 m

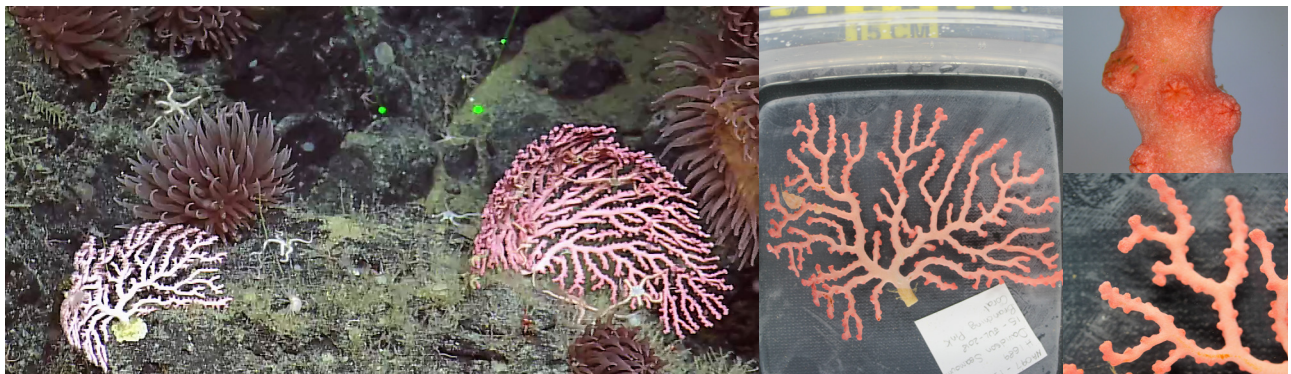




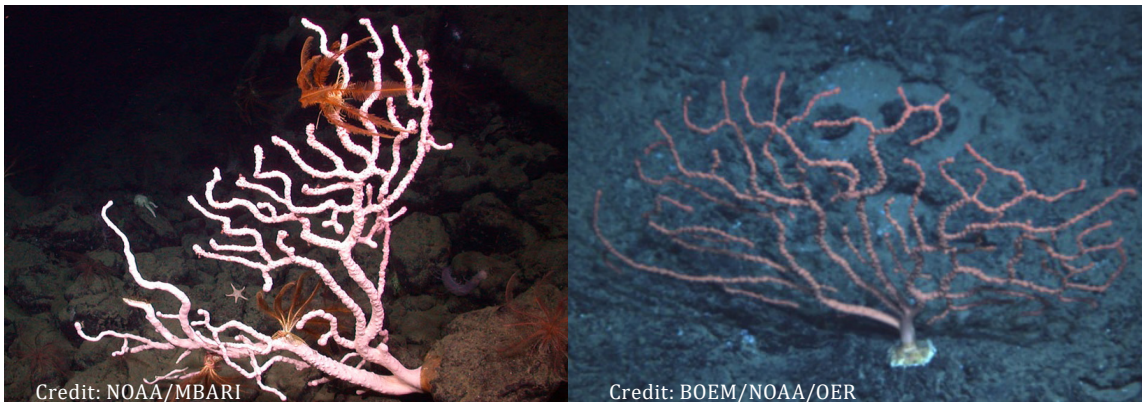
*Paragorgia stephencairnsi* species complex

No Images On Record  
With DFO or AFSC

*Paragorgia yutlinux*



Paragorgiidae



Credit: NOAA/MBARI

Credit: BOEM/NOAA/OER

*Sibogagorgia cauliflora*

## Identification Key to Suborder Stolonifera

- Colonies either encrusting and connected at the base by stolons (illustration next page) or bushy with terminal polyps; polyps are long, cylindrical and **retractile**

**Family Clavulariidae** ..... [pg. 60](#)

## List of species of Suborder Stolonifera

### Family Clavulariidae

*Clavularia armata*

*Clavularia eburnea*

*Clavularia moresbii*

*Clavularia rigida*

*Clavularia* spp.

*Sarcodictyon incrustans*



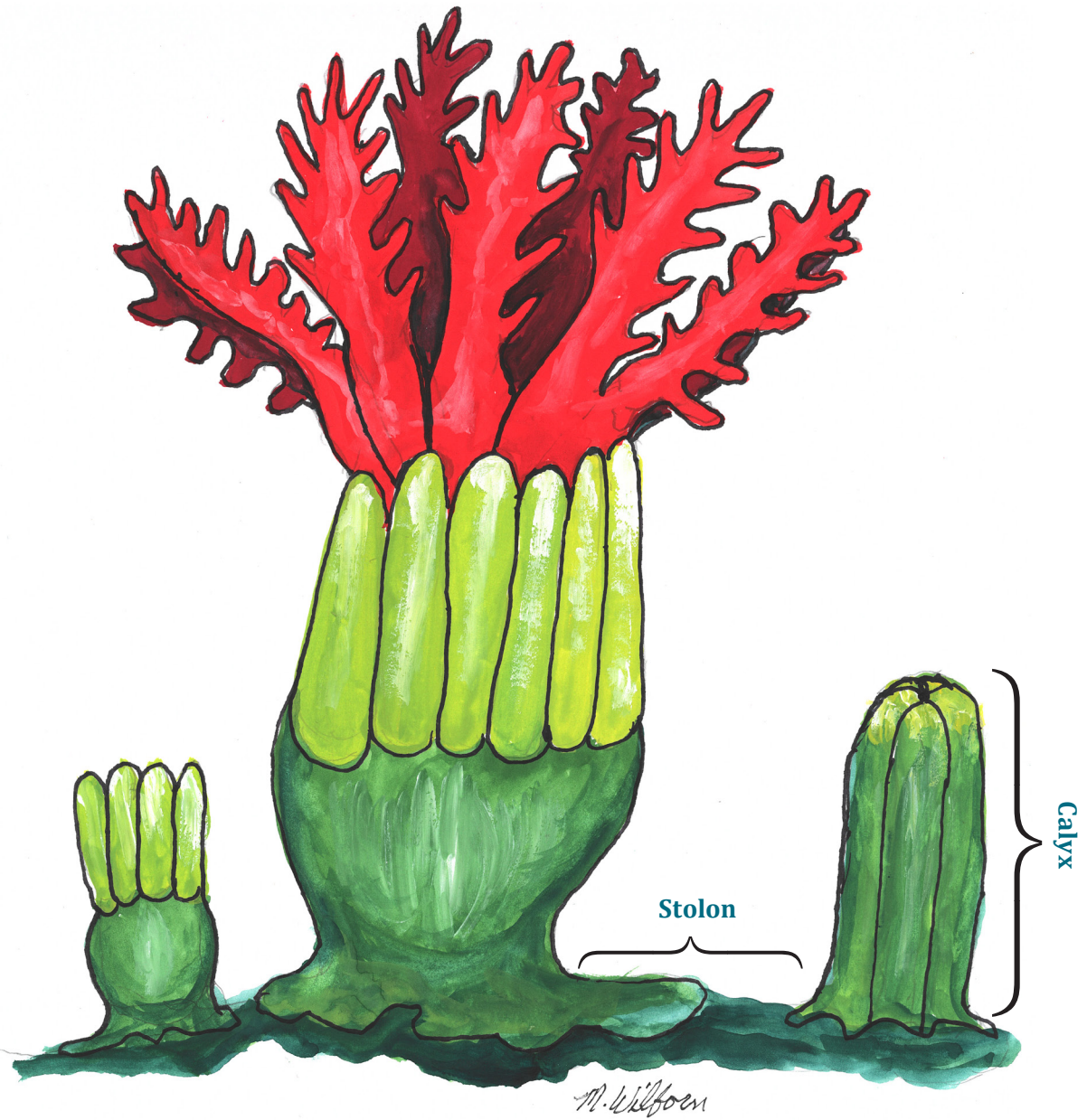


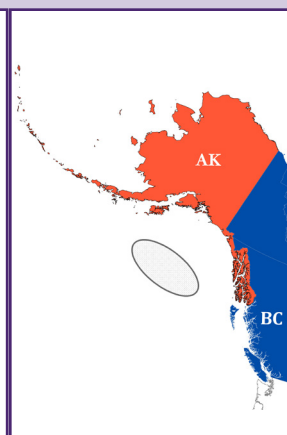
Illustration: Anatomy of a Clavulariidae



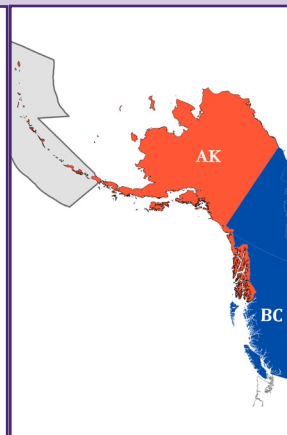
## Family CLAVULARIIDAE

*Clavularia armata*<sup>1,65</sup>**Armed Star Polyps****COLOR:** Blue-ish**SHAPE:** Membranous colonies; encrusting on various types of substrate (including *Keratoisis* spp.)**SIZE:** **Calyx** height to 4mm**DIAGNOSTIC FEATURES:** Spines that extend beyond polyps**POLYP DESCRIPTION:** **Retractile** into **calyx****REPORTED DISTRIBUTION:** GOA Seamounts**REPORTED DEPTH:** 1153-2730 mWoRMS Aphia ID: [517651](#)

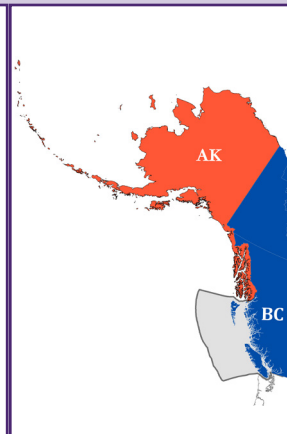
GFBio Code:

RACE Code: **41750 (genus)***Clavularia eburnea*<sup>1,66</sup>**Ivory Star Polyps****COLOR:** White**SHAPE:** Membranous colonies; encrusting on various types of substrate (including alcyonacean corals)**SIZE:** Height up to 12 mm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** **Calyx** has a coarse wall and 8 well-defined longitudinal furrows; upper part is cup-shaped**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 600-1200 mWoRMS Aphia ID: [517663](#)

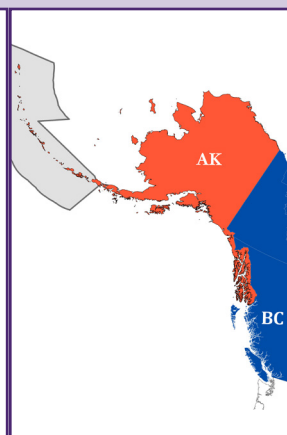
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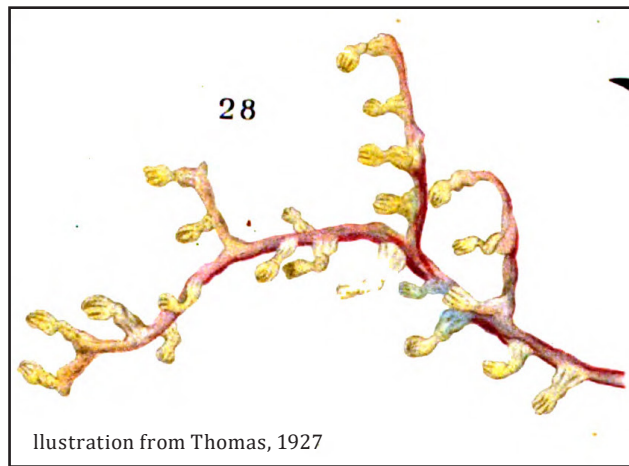
RACE Code: **41750 (genus)***Clavularia moresbii*<sup>68,47</sup>**Moresbii's Star Polyps****COLOR:** Whitish, possibly pink**SHAPE:** Membranous colonies; encrusting on various types of substrate (including *Primnoa*)**SIZE:** Height up to 10 mm**DIAGNOSTIC FEATURES:** **Calyx** 2 mm in diameter**POLYP DESCRIPTION:** Body wall smooth and cylindrical**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 183 mWoRMS Aphia ID: [286026](#)

GFBio Code:

RACE Code: **41750 (genus)***Clavularia rigida*<sup>1</sup>**Rigid Star Polyps****COLOR:** Unknown**SHAPE:** Membranous colonies; encrusting on various types of substrate**SIZE:** Height to ~8 mm**DIAGNOSTIC FEATURES:** Each **calyx** has 8 well-defined longitudinal rows, break off from the **stolon** easily**POLYP DESCRIPTION:** Cylindrical to slightly club-shaped**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 3277 mWoRMS Aphia ID: [759934](#)

GFBio Code:

RACE Code: **41750 (genus)**



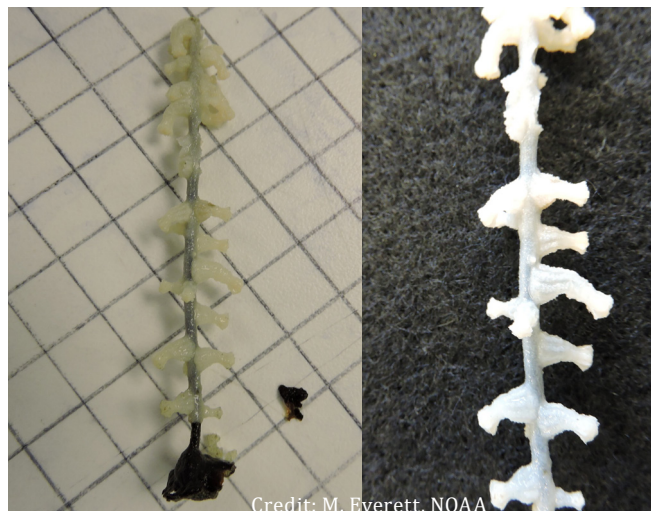
*Clavularia armata*

No Images On Record  
With DFO or AFSC

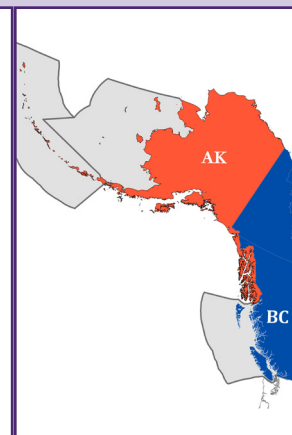
*Clavularia eburnea*



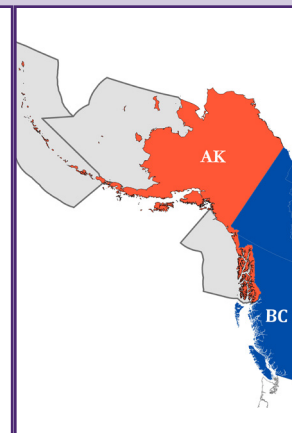
*Clavularia moresbii*

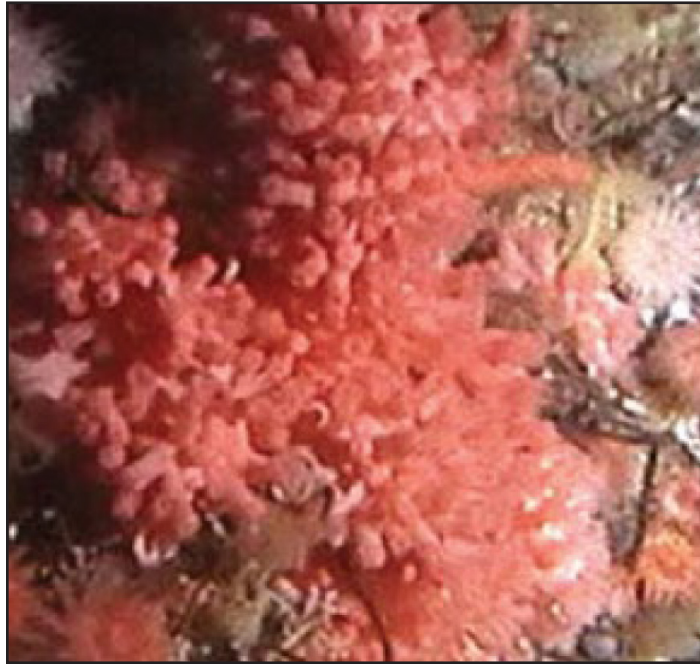


*Clavularia rigida*

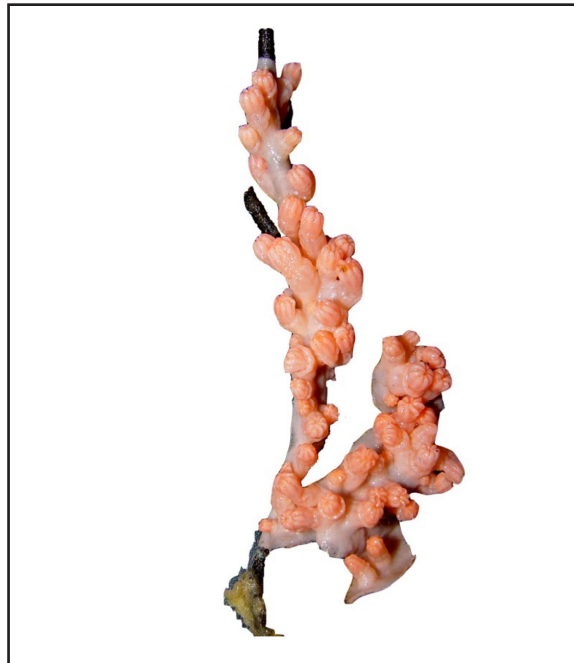
*Clavularia* spp. <sup>1</sup>**Unidentified Star Polyps**WoRMS Aphia ID: [125286](#)GFBio Code: **3Q5**RACE Code: **41750****COLOR:****SHAPE:** Membranous colonies; encrusting on various types of substrate**SIZE:****DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI, BS, BC**REPORTED DEPTH:** 50-200 m*Sarcodictyon incrustans* <sup>1,40</sup>**Encrusting Star Polyps**WoRMS Aphia ID: [759935](#)

GFBio Code:

RACE Code: **41752****COLOR:** Light orange or pink**SHAPE:** Thin, encrusting colonies**SIZE:** Height up to 6 mm**DIAGNOSTIC FEATURES:** **Stolon** narrow and ribbon-like; rarely membranous**POLYP DESCRIPTION:** Large and well spaced; length up to 6 mm and width up to 3 mm; universally distributed**REPORTED DISTRIBUTION:** AI, BS, EGOA**REPORTED DEPTH:** 15-397 m



*Clavularia* spp.



*Sarcodictyon incrustans*

## Identification Key to Order Pennatulacea

- Order Pennatulacea** ..... sea pens, sea whips, sea pansies
- Colonies pen- or whip-like; polyps large and spread out along axis  
**Family Anthoptilidae** ..... [pg. 66](#)
  - Colonies elongated and slender; polyps attached to **rachis** laterally; axis is quadrangular in cross-section  
**Family Funiculinidae** ..... [pg. 66](#)
  - Colonies stick- or whip-like; polyps encased in bifurcated (2 tooth) **calices**  
**Family Halipteridae** ..... [pg. 68](#)
  - Colonies unbranching (stick- or club-like); polyps occur along **rachis** biserially; **rachis** is naked along one axis  
**Family Kophobelemnidae** ..... [pg. 70](#)
  - Colonies stout and fleshy; pen- or quill-shaped; polyp leaves connect to stalk and host tubular polyps; **calices** form 1, 2, or 8 terminal teeth  
**Family Pennatulidae** ..... [pg. 70](#)
  - Colonies stick- or whip-like, **rachis** is long and slender; polyps in a single irregular series on each side  
**Family Protoptilidae** ..... [pg. 72](#)
  - Colonies stout and either club-like or slender; **rachis** lack polyps on dorsal and ventral sides; polyps occur bi-serially  
**Family Stachyptilidae** ..... [pg. 72](#)
  - Colonies with large and localized polyps situated at the end of the **rachis** making it look like a lily flower  
**Family Umbellulidae** ..... [pg. 74](#)
  - Colonies squat and toadstool or stick-shaped; polyps are **retractile** and evenly distributed  
**Family Veretillidae** ..... [pg. 74](#)
  - Colonies pen- or whip-like with distinct axis; polyps arranged in a bilaterally symmetrical form with polyp leaves emanating from both sides  
**Family Virgularidae (RACE Code: 42003)** ..... [pg. 74](#)

### List of species of Order Pennatulacea

Family Anthoptilidae <i>Anthoptilum grandiflorum</i> <i>Anthoptilum cf. lithophilum</i> <i>Anthoptilum murrayi</i>	Family Kophobelemnidae <i>Kophobelemnion affine</i> <i>Kophobelemnion sp.</i>	Family Umbellulidae <i>Umbellula lindahli</i>
Family Funiculinidae <i>Funiculina parkeri</i>	Family Pennatulidae <i>Pennatula phosphorea</i> <i>Pennatula spp.</i> <i>Ptilosarcus gurneyi</i>	Family Veretillidae <i>Cavernularia vansyoci</i>
Family Halipteridae <i>Halipteris californica</i> <i>Halipteris sp. A</i> <i>Halipteris sp. B</i> <i>Halipteris willemoesi</i>	Family Protoptilidae <i>Distichoptilum rigidum</i> <i>Protoptilum spp.</i>	Family Virgularidae <i>Acanthoptilum gracile</i> <i>Stylatula elongata</i> <i>Virgularia bromleyi</i> <i>Virgularia glacialis</i> <i>Virgularia spp.</i>
	Family Stachyptilidae <i>Stachyptilum superbum</i>	



Examples of Pennatulaceans

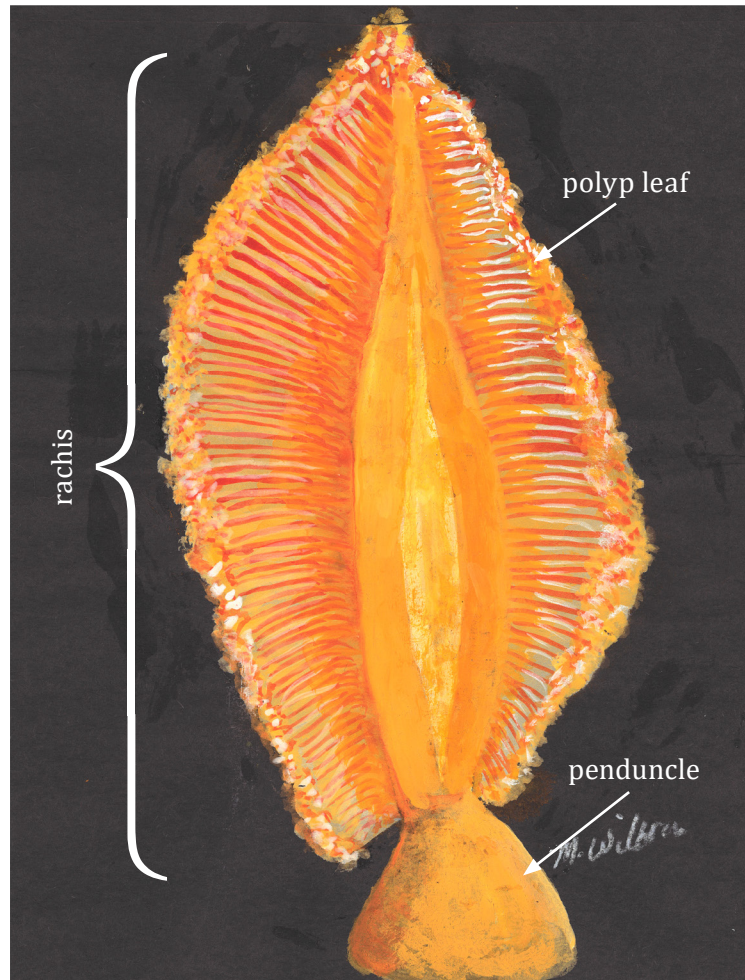
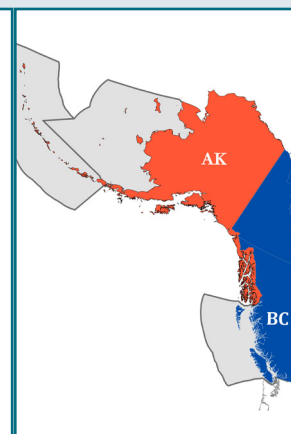


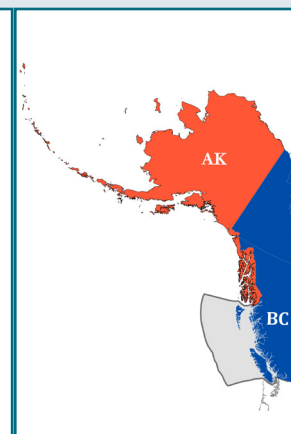
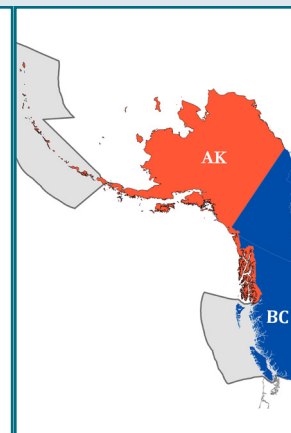
Illustration: Anatomy of a Pennatulacean

## Family ANTHOPTILIDAE

*Anthoptilum grandiflorum* <sup>1,2,55,56,74</sup>**Full-flowered Sea Pen****COLOR:** Reddish-brown**SHAPE:** Large fleshy, question mark-shaped sea pen**SIZE:** Height to 50 cm**DIAGNOSTIC FEATURES:** Colony thick**POLYP DESCRIPTION:** **Rachis** densely covered with long, thick, fleshy polyps**REPORTED DISTRIBUTION:** AI, BS, BC**REPORTED DEPTH:** 402-2511 mWoRMS Aphia ID: [128504](#)GFBio Code: **3Z4**RACE Code: **42020***Anthoptilum cf. lithophilum* <sup>55</sup>**Stone-Loving Sea Pen****COLOR:** Reddish-brown**SHAPE:** Large fleshy, question mark-shaped sea pen with suction cup **peduncle** (base)**SIZE:** 12 cm**DIAGNOSTIC FEATURES:** Modified **peduncle** to adhere to rocks**POLYP DESCRIPTION:** Length is 10-15 mm; 2-4 mm wide; closely packed**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 669- 700 mWoRMS Aphia ID: [955841](#)

GFBio Code:

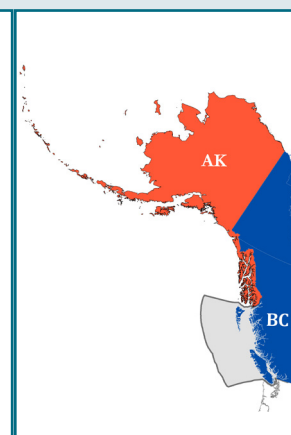
RACE Code:

*Anthoptilum murrayi* <sup>1,2,12,19,56,72</sup>**Murray's Sea Pen****COLOR:** Colony is pale yellow to brown-ish; polyps are red/purple-ish brown**SHAPE:** Medium-sized; question mark-shaped sea pen**SIZE:** Height to 44 cm**DIAGNOSTIC FEATURES:** Colony slender**POLYP DESCRIPTION:** Unilinear; large (up to 6 mm), fleshy and widely spaced (~5 mm)**REPORTED DISTRIBUTION:** AI, BC**REPORTED DEPTH:** 1068-2226 mWoRMS Aphia ID: [128505](#)GFBio Code: **3Z5**RACE Code: **42021**

## Family FUNICULINIDAE

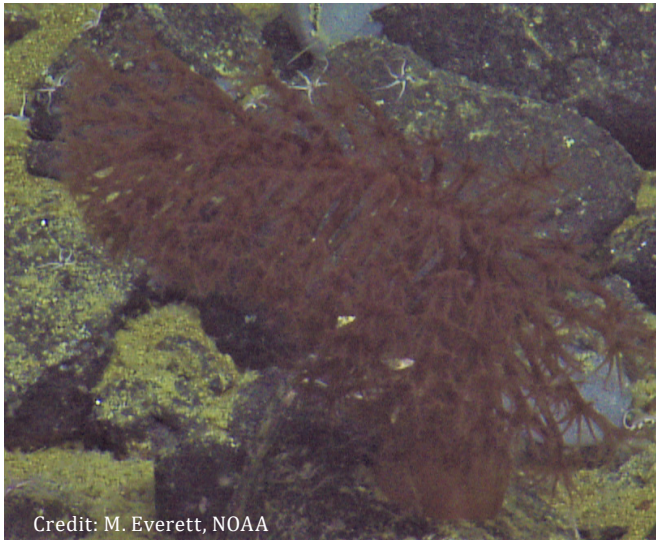
*Funiculina parkeri* <sup>47,57,72</sup>**Parker's Sea Pen****COLOR:** Colony is light brown; polyps are dark brown**SHAPE:** Stick- or whip-shaped sea pen; flexible and slightly curled at the top**SIZE:** Height to 50 cm**DIAGNOSTIC FEATURES:** Stem is 1/3 the polyp length**POLYP DESCRIPTION:** Length up to 8 mm; irregularly-spaced; smaller polyps and zooids between the main polyps**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 200-1409 mWoRMS Aphia ID: [286622](#)GFBio Code: **3Z9**

RACE Code:



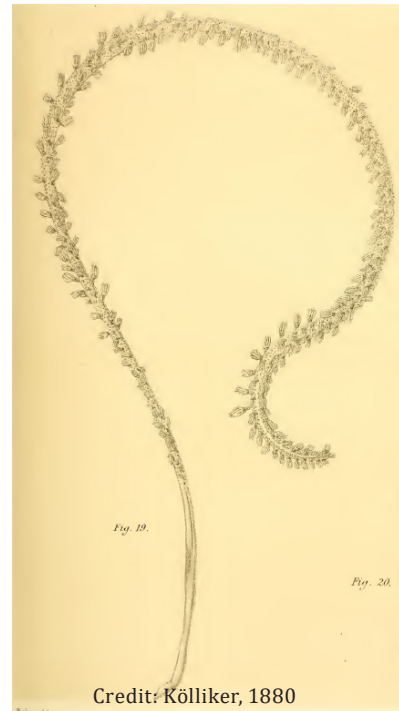


*Anthoptilum grandiflorum*



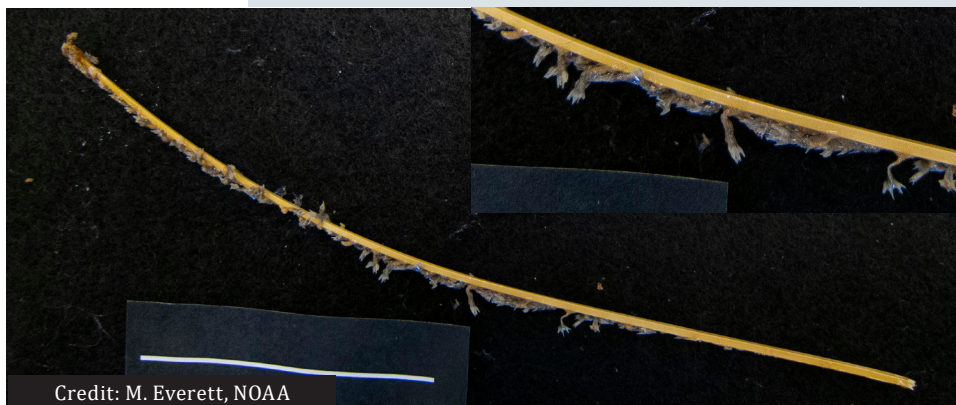
Credit: M. Everett, NOAA

*Anthoptilum cf. lithophilum*



Credit: Kölliker, 1880

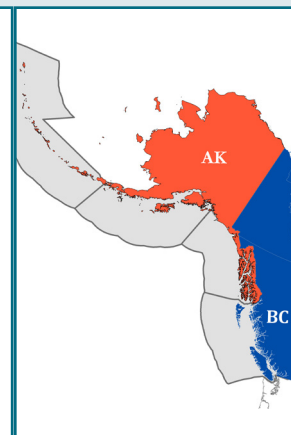
*Anthoptilum murrayi*



Credit: M. Everett, NOAA

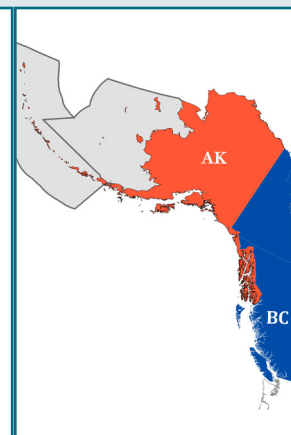
*Funiculina parkeri*



*Halipterus californica* <sup>1,64,72,76</sup>**California Sea Pen****COLOR:** Polyps are chocolate brown; bulb is reddish brown**SHAPE:** Medium-sized, thick sea whip**SIZE:** Height up to 100 cm**DIAGNOSTIC FEATURES:** **Rachis** very long compared to stem**POLYP DESCRIPTION:** Not retractile; 2-5 polyps/leaf and closely packed; rows 5-8 mm apart; 2 thorny spines thorny spines**REPORTED DISTRIBUTION:** AI, GOA, BC**REPORTED DEPTH:** 46-2780 mWoRMS Aphia ID: [286623](#)GFBio Code: **3XD**RACE Code: **42013***Halipterus* sp. A <sup>1</sup>**Sea Whip A****COLOR:** Reddish-brown to purple-ish**SHAPE:** Large, slender sea whip**SIZE:** Height to 1 m**DIAGNOSTIC FEATURES:** **Rachis** very long, slender and smooth; leaves short and in oblique lateral rows**POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI, BS**REPORTED DEPTH:** 284-1381 m

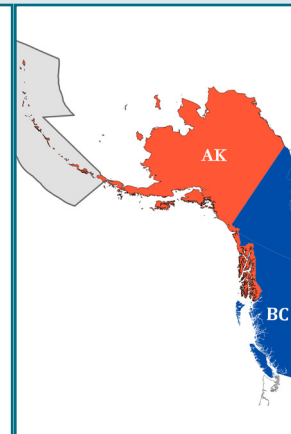
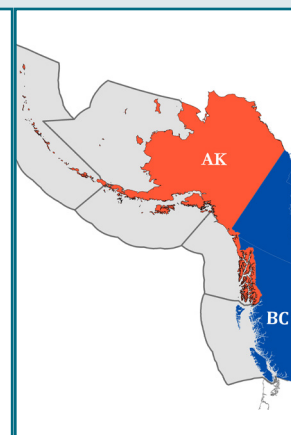
WoRMS Aphia ID:

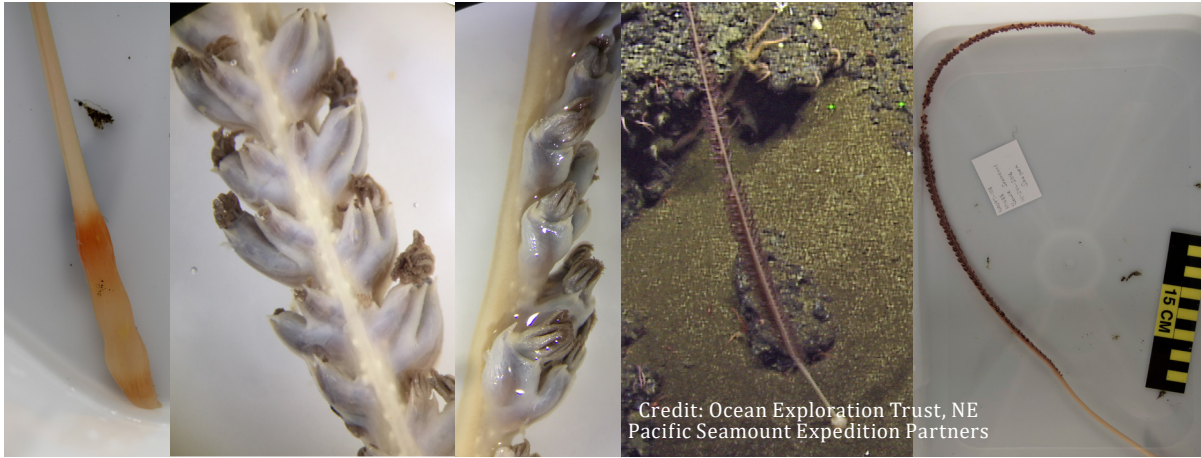
GFBio Code:

RACE Code: **42009***Halipterus* sp. B <sup>1</sup>**Sea Whip B****COLOR:****SHAPE:****SIZE:****DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 1667-2707 m

WoRMS Aphia ID:

GFBio Code:

RACE Code: **42008 (genus)***Halipterus willemoesi* <sup>1,56,72,76</sup>**Willemoe's White Sea Pen****COLOR:** Tan to white-ish**SHAPE:** Very large, thick sea whips**SIZE:** Height to 2.5 m**DIAGNOSTIC FEATURES:** **Rachis** very long; leaves very short**POLYP DESCRIPTION:** Polyps are in oblique rows with 2 broad teeth surrounding them**REPORTED DISTRIBUTION:** AI, BS, GOA, BC**REPORTED DEPTH:** 21-488 mWoRMS Aphia ID: [286626](#)GFBio Code: **3XF**RACE Code: **42012**



Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners

*Halipteris californica*



*Halipteris sp. A*

No Images On Record  
With DFO or AFSC

*Halipteris sp. B*



*Halipteris willemoesi*

## Family KOPHOBELEMNIDAE

*Kophobelemnion affine* <sup>40,47,51,53,75</sup>**Affine Sea Pen**

COLOR:

SHAPE: Elongated and cylindrical; bilateral symmetry

SIZE:

DIAGNOSTIC FEATURES:

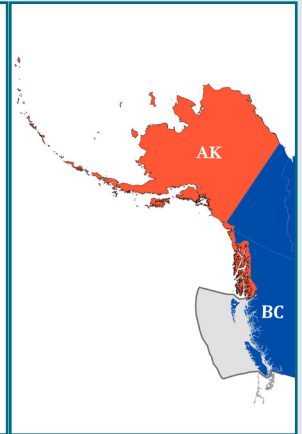
POLYP DESCRIPTION: Longitudinally arranged; not in rows; rising directing from the **rachis**

REPORTED DISTRIBUTION: BC

REPORTED DEPTH: 2430-2710 m

WoRMS Aphia ID: [286627](#)GFBio Code: **3ZG**

RACE Code:

*Kophobelemnion sp.* <sup>47</sup>**Hairy Sea Pen**

COLOR:

SHAPE:

SIZE:

DIAGNOSTIC FEATURES:

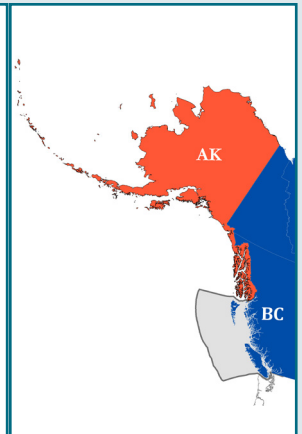
POLYP DESCRIPTION:

REPORTED DISTRIBUTION: BC

REPORTED DEPTH: 2800 m

WoRMS Aphia ID: [128492](#)GFBio Code: **3ZI**

RACE Code:



## Family PENNATULIDAE

*Pennatula phosphorea* <sup>47,57,67,72,76</sup>**Phosphorescent Sea Pen**

COLOR: Reddish-brown to purple leaves; stalk is orange to white

SHAPE: Small, slender sea pens

SIZE: Height to 20 cm

DIAGNOSTIC FEATURES: **Rachis** slender; leaves long, slender and in two lateral rows

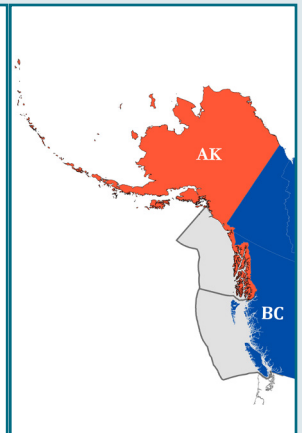
POLYP DESCRIPTION:

REPORTED DISTRIBUTION: EGOA, BC

REPORTED DEPTH: 800-3000 m

WoRMS Aphia ID: [128517](#)GFBio Code: **3XL**

RACE Code:

*Pennatula spp.* <sup>1</sup>**Unidentified Sea Pens**

COLOR:

SHAPE: Quill pen-shaped

SIZE:

DIAGNOSTIC FEATURES:

POLYP DESCRIPTION:

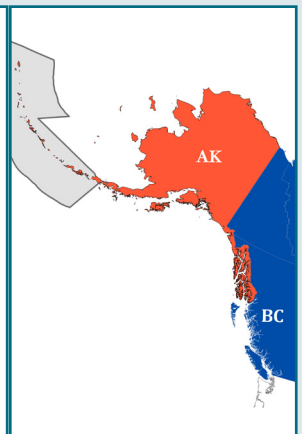
REPORTED DISTRIBUTION: AI

REPORTED DEPTH: 3-135 m

WoRMS Aphia ID: [128495](#)

GFBio Code:

RACE Code:



No Images On Record  
With DFO or AFSC

*Kophobelemnion affine*

No Images On Record  
With DFO or AFSC

*Kophobelemnion hispidum*

Family PENNATULIDAE

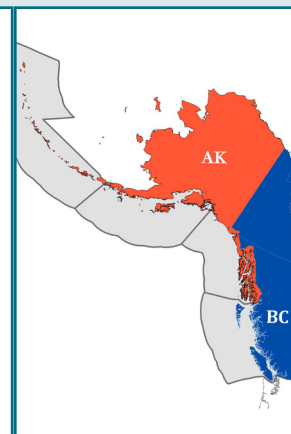


*Pennatula phosphorea*



*Pennatula spp.*

## Family PENNATULIDAE

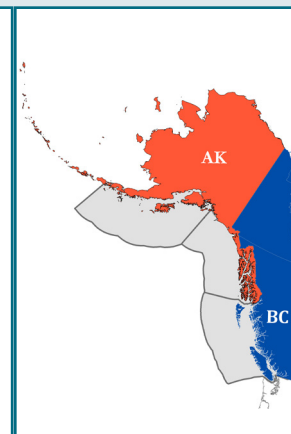
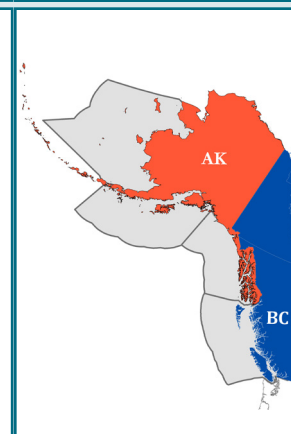
*Ptilosarcus gurneyi* <sup>1,2,47,67,72,76</sup>**Gurney's Sea Pen****COLOR:** Orange**SHAPE:** Large, thick sea pen; body very stout**SIZE:** Height to 60 cm**DIAGNOSTIC FEATURES:** Leaves large, broad, fleshy and in two lateral rows**POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI, GOA, BC**REPORTED DEPTH:** 3-135 mWoRMS Aphia ID: [290947](#)GFBio Code: [3U5](#)RACE Code: [42017](#)

## Family PROTOPTILIDAE

*Distichoptilum* spp. <sup>47</sup>**Sea Pen Unid.****COLOR:** Golden brown; **rachis** lighter; **calices** darker**SHAPE:** Axis stiff; whip-like**SIZE:** Reported height up to 21 cm**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:** Form 2 alternate rows; two spines project up to 2 mm past the polyp; 2.3 mm between polyps**REPORTED DISTRIBUTION:** GOA, BC**REPORTED DEPTH:** 1862-1937 mWoRMS Aphia ID: [128497](#)

GFBio Code:

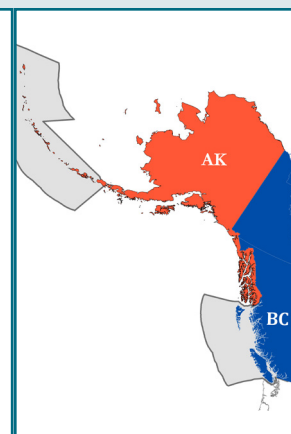
RACE Code:

*Protoptilum* spp. <sup>1,40,47,51</sup>**Unidentified Sea Pens****COLOR:** Beige to off white**SHAPE:** Stick-shaped**SIZE:****DIAGNOSTIC FEATURES:** Spines extending beyond **calices** holding the polyps**POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** BS, GOA, BC**REPORTED DEPTH:** 86-3306 mWoRMS Aphia ID: [128498](#)GFBio Code: [3ZV](#)RACE Code: [42007](#)

## Family STACHYPTILIDAE

*Stachyptilum superbum* <sup>1,47,57,64,72</sup>**Exquisite Sea Pen****COLOR:****SHAPE:** Whip-like**SIZE:** Height up 25 cm**DIAGNOSTIC FEATURES:** Terminal bulb is soft, slender and wrinkled**POLYP DESCRIPTION:** Length is 3.5-5 mm; rows of 4 on each side of the stem, tapering in form; slender; conspicuous spines (usually 4)**REPORTED DISTRIBUTION:** AI, BC**REPORTED DEPTH:** 388-1244 mWoRMS Aphia ID: [291109](#)GFBio Code: [3ZZ](#)

RACE Code:



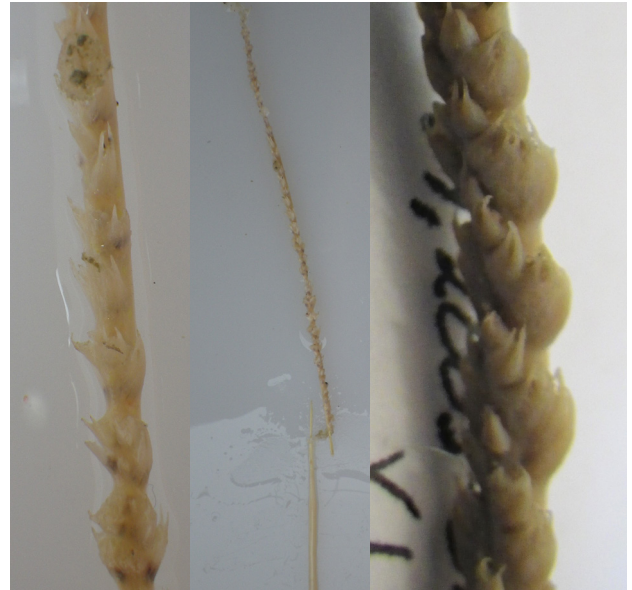


By Stan Shebs, CC BY-SA 3.0,

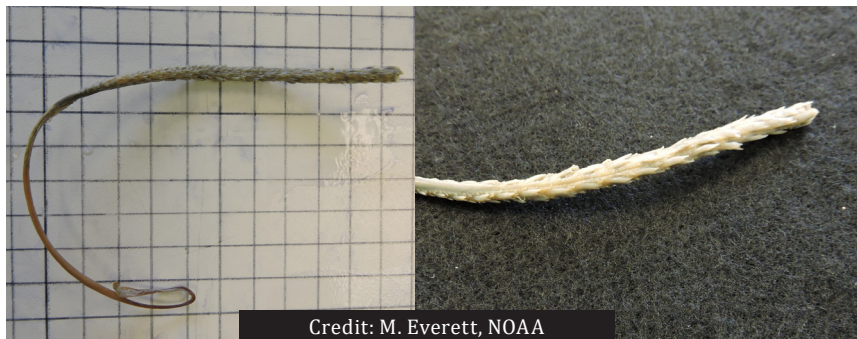
*Ptilosarcus gurneyi*



*Distichoptilum* spp.

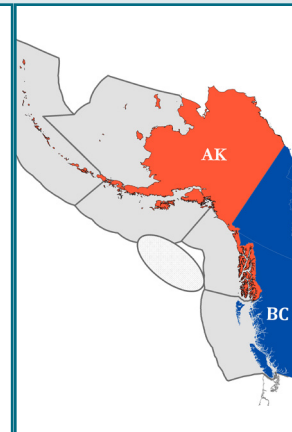


*Protoptilum* spp.

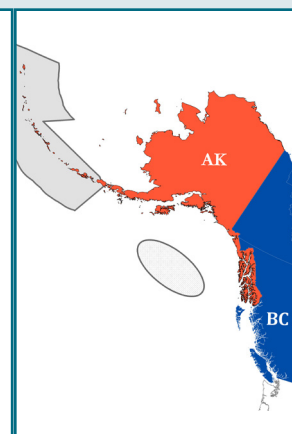


Credit: M. Everett, NOAA

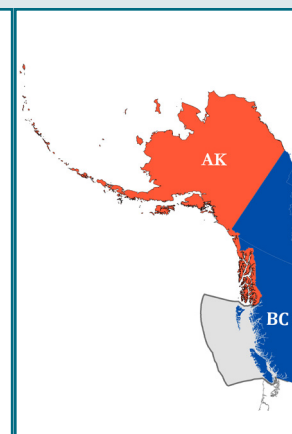
*Stachyptilum superbum*

*Umbellula lindahli*<sup>1,2,47,72,76</sup>**Lindahli's Droopy Sea Pen****COLOR:** Tan to reddish-brown**SHAPE:** Medium-sized, slender sea pen with a terminal cluster of polyps**SIZE:** Height to 35 cm**DIAGNOSTIC FEATURES:** Looks like a lily or a long stalk with a flower on the end**POLYP DESCRIPTION:** Cluster at the distal end of the slender **rachis****REPORTED DISTRIBUTION:** AI, BS, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 840-4656 mWoRMS Aphia ID: [128531](#)GFBio Code: **3ZP**RACE Code: **42014****Family VERETILLIDAE***Cavernularia vansyoci*<sup>1,23</sup>**Bob's Mushroom Coral****COLOR:** Orange**SHAPE:** Small, elongate, mushroom-like coral**SIZE:** Height to 4 cm**DIAGNOSTIC FEATURES:** Stalk relatively long; cylindrical cap is small and sub-spherical**POLYP DESCRIPTION:** Relatively large and well-spaced**REPORTED DISTRIBUTION:** AI, GOA Seamounts**REPORTED DEPTH:** 86-93 mWoRMS Aphia ID: [286684](#)

GFBio Code:

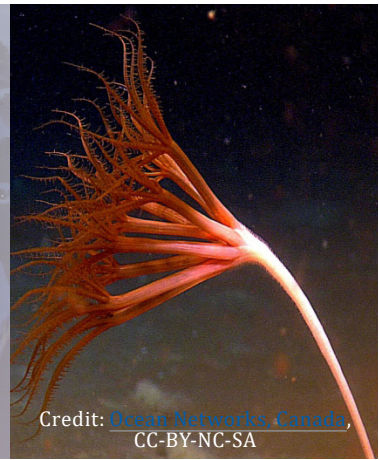
RACE Code: **41106****Family VIRGULARIIDAE***Acanthoptilum gracile*<sup>47,57,64,72,76</sup>**Delicate Sea Pen****COLOR:****SHAPE:** Slender with short branchlets**SIZE:****DIAGNOSTIC FEATURES:** Branchlets < 8 mm in length**POLYP DESCRIPTION:** **Retractile**, although most stay extended; up to 18 polyps/branchlet**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 5-2707 mWoRMS Aphia ID: [289324](#)GFBio Code: **3U9**

RACE Code:





Credit: M. Everett, NOAA



Credit: Ocean Networks Canada, CC-BY-NC-SA

*Umbellula lindahli*

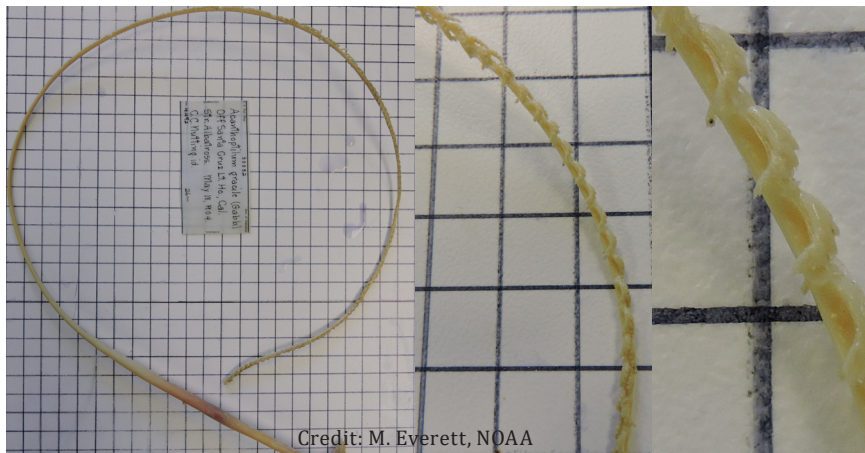


*Cavernularia vansyoci*



Credit: richardling, 674157, CC-BY-NC-3.0

*Cavernularia* example



Credit: M. Everett, NOAA

*Acanthoptilum gracile*

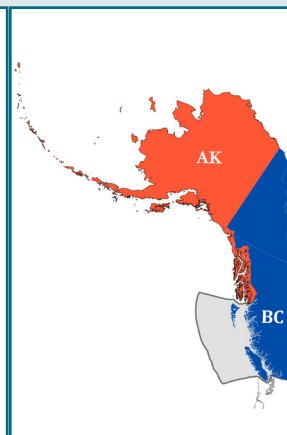
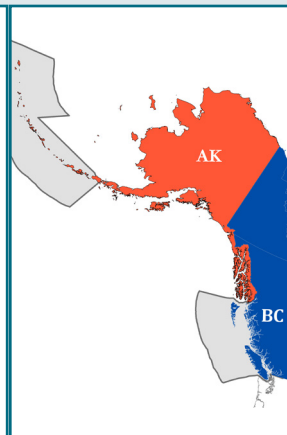


*Stylatula elongata* <sup>47,57,64,72,76</sup>**Slender Sea Pen**

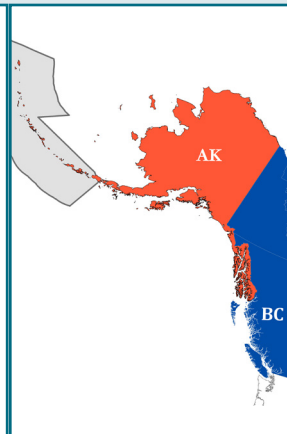
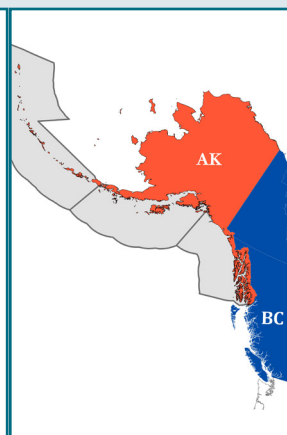
**COLOR:** *Rachis* is light grey-brown; polyps are white  
**SHAPE:** Stick- or whip-like; single stalked and slender colony  
**SIZE:** Height to ~30 cm

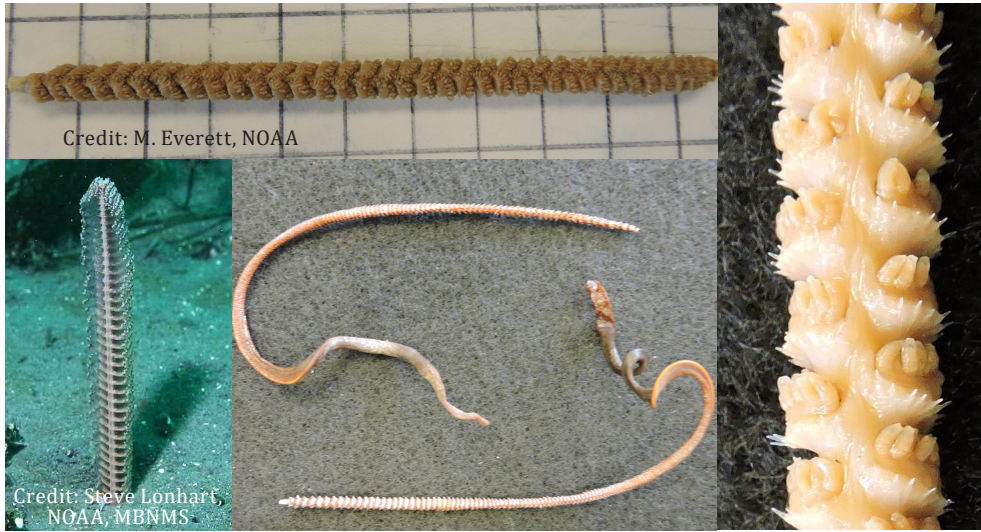
**DIAGNOSTIC FEATURES:**

**POLYP DESCRIPTION:** Length is ~2 mm; vertically oriented on distal edges of branchlets; ~ 4 polyps leaves/cm;

**20-24 POLYPS/LEAF****REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 30-100 mWoRMS Aphia ID: [286695](#)GFBio Code: [3T4](#)RACE Code: [42002](#)*Virgularia bromleyi* <sup>1,40,56,57,64,72,76</sup>**Bromley's Sea Pen****COLOR:****SHAPE:** Stick-shaped**SIZE:** Height reported up to 12 cm**DIAGNOSTIC FEATURES:** *Peduncle* bladder-like; round to oval; ventral side of stalk has groove**POLYP DESCRIPTION:** Leaves are closely packed, crescent-shaped, and short; 4-5 polyps/leaf**REPORTED DISTRIBUTION:** AI, BC**REPORTED DEPTH:** 1889 mWoRMS Aphia ID: [286705](#)GFBio Code: [3V0 \(genus\)](#)RACE Code: [42001 \(genus\)](#)*Virgularia glacialis* <sup>1,57,76,77</sup>**Glacial Sea Pen****COLOR:** *Rachis* is light brown; polyps light yellow**SHAPE:** Stick-shaped; stalk slender; elongate**SIZE:****DIAGNOSTIC FEATURES:** Polyp leaves are thick and fleshy; branching alternately from *rachis***POLYP DESCRIPTION:** 6-10 polyps/leaf**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 115-185 mWoRMS Aphia ID: [128538](#)

GFBio Code:

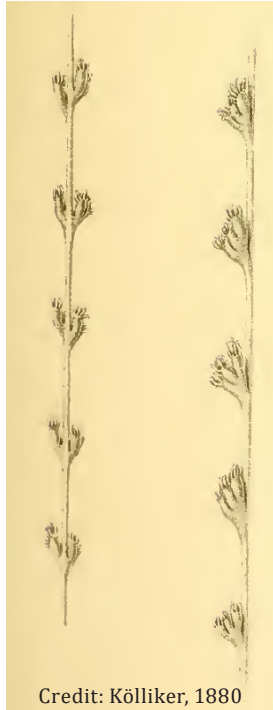
RACE Code: [42001 \(genus\)](#)*Virgularia spp.* <sup>1,40</sup>**Unidentified Stick Sea Pen****COLOR:** White**SHAPE:** Stick- or pen-shaped**SIZE:****DIAGNOSTIC FEATURES:** Polyp leaves bilaterally arranged on *rachis*; see image (next page)**POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI, GOA**REPORTED DEPTH:** 20-187 mWoRMS Aphia ID: [128503](#)GFBio Code: [3V0](#)RACE Code: [42001](#)



Credit: M. Everett, NOAA

Credit: Steve Lonhart, NOAA, MBNMS

*Stylatula elongata*



Credit: Kölliker, 1880

*Virgularia bromleyi*

No Images On Record  
With DFO or AFSC

*Virgularia glacilis*



*Virgularia* spp.

## Identification Key to Order Antipatharia

- Colonies branched or unbranched; although currently only unbranched species identified in BC/AK waters; can be fan-shaped to bushy or whip-like; polyps are large with long tentacles  
**Family Antipathidae**..... [pg. 80](#)
- Colonies are **monopodial** or branched and **pinnulate** (branching); polyps are  $\geq 2$  mm transverse diameter (<sup>31</sup>Opresko, 2003)  
**Family Cladopathidae**..... [pg. 80](#)
- Colonies **monopodial** or branched; bushy to **pinnulate**; pinnules simple or complexly subpinnulate; polyps elongated transversely ( $\geq 2$  mm) (<sup>33</sup>Opresko, 2002)  
**Family Schizopathidae (GFBio Code: 5H1)**..... [pg. 82](#)

## List of species of Order Antipatharia

### Family Antipathidae

*Stichopathes spiessi*

### Family Cladopathidae

*Chrysopathes formosa*

*Chrysopathes speciosa*

*Heteropathes pacifica*

*Trissopathes pseudotristicha*

### Family Schizopathidae

*Alternatipathes alternata*

*Bathypathes patula*

*Bathypathes* spp.

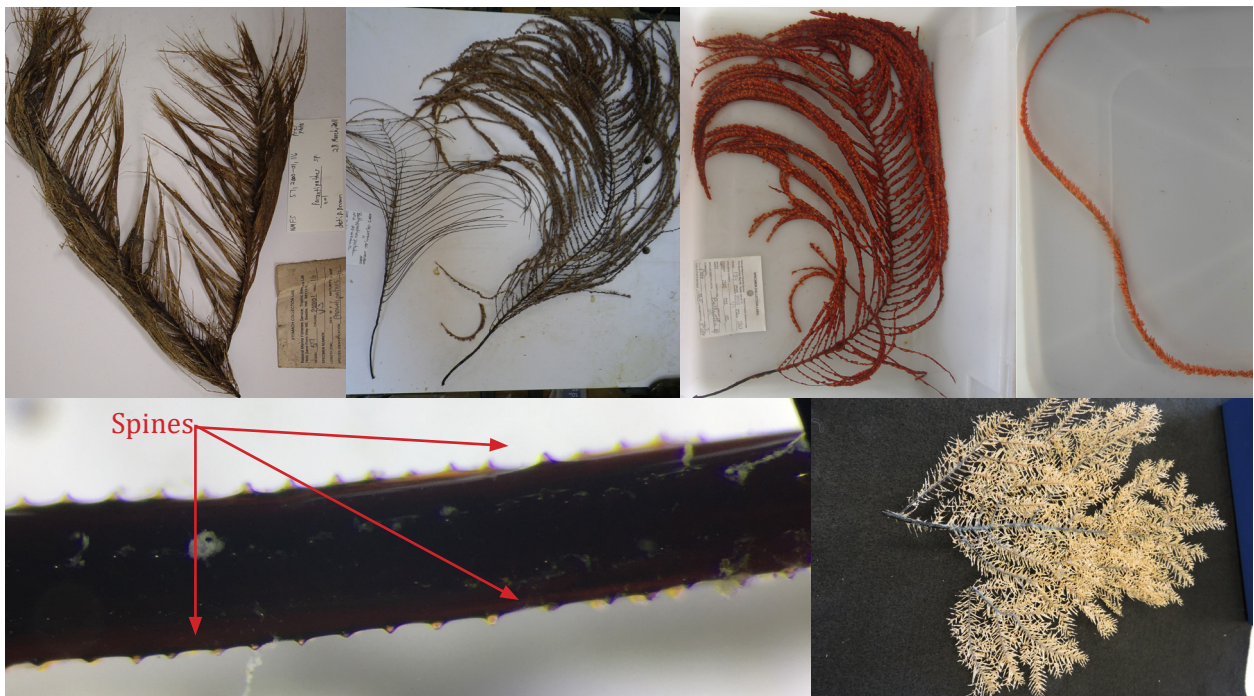
*Dendrobathypathes boutillieri*

*Lillipathes wingi*

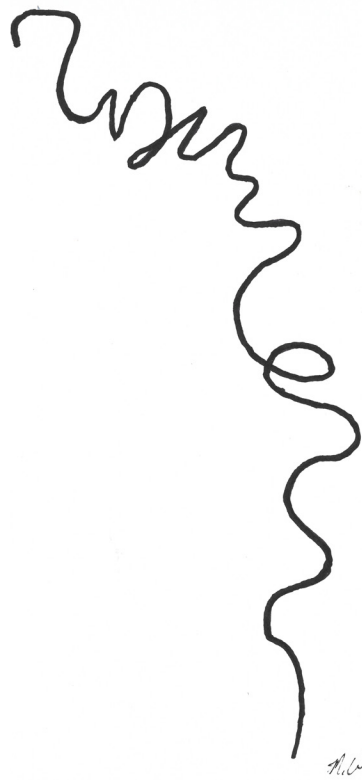
*Parantipathes euantha*

*Parantipathes* spp.

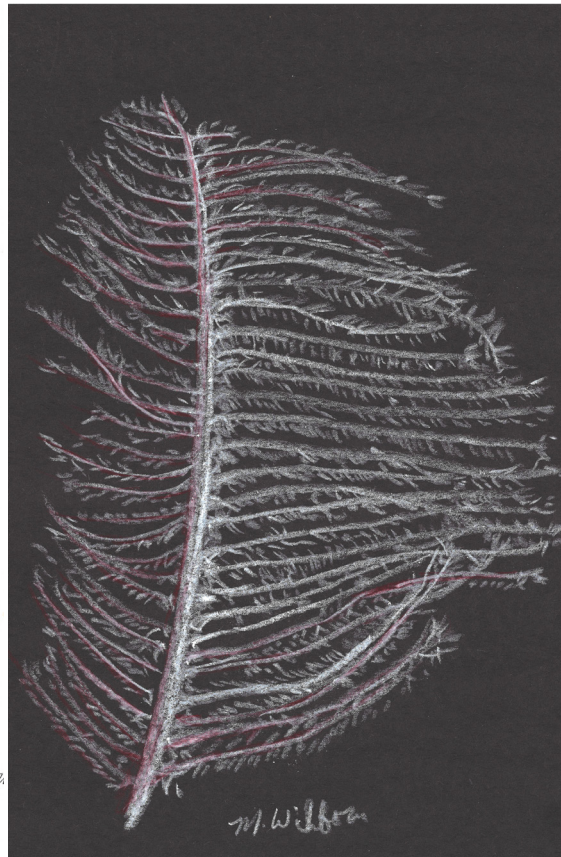
*Umbellapathes* sp. A



Antipatharia Examples: Clockwise starting top left. *Parantipathes* sp., *Bathypathes* spp., *Bathypathes* sp., *Stichopathes spiessi*, *Chrysopathes* sp., close up of spines on antipatharian.



M. Wilborn

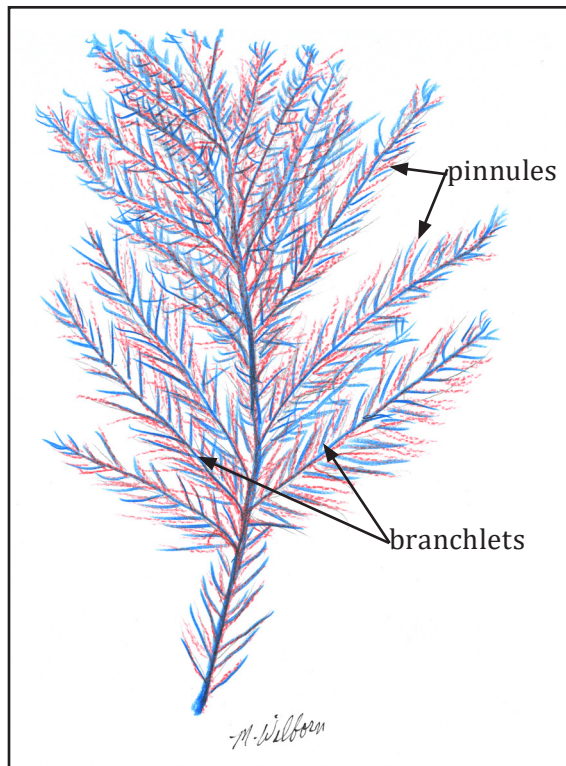


M. Wilborn



M. Wilborn

Illustration: Antipatharian Morphotypes (not comprehensive)



M. Wilborn

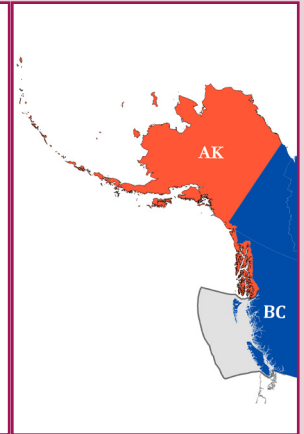
Illustration: Anatomy of an Antipatharian

## Family ANTIPATHIDAE

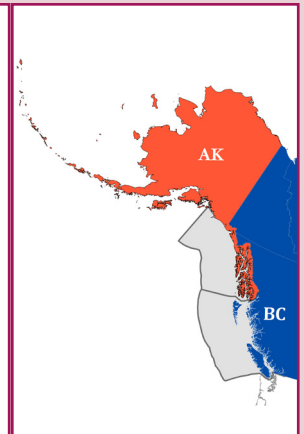
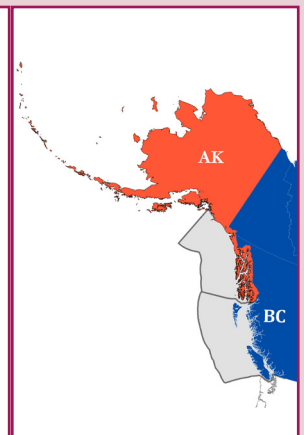
*Stichopathes spiessi*<sup>58,78</sup>**Spiess' Stick Coral****COLOR:** Fresh or in situ bright to light orange; white to light brown preserved**SHAPE:** Unbranched; whip-like; curving slightly in loose irregular spirals**SIZE:** Height to 1.5+ m**DIAGNOSTIC FEATURES:** Axis diameter is 2-2.5 mm**POLYP DESCRIPTION:** Unilinear arrangement with 3-5 polyps/cm; 1.2-1.8 mm in diameter**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 630 mWoRMS Aphia ID: [283982](#)

GFBio Code:

RACE Code:

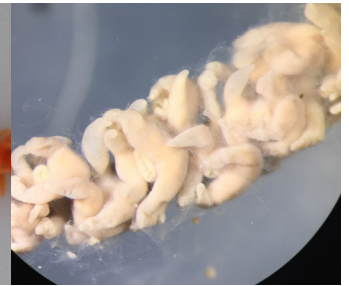


## Family CLADOPATHIDAE

*Chrysopathes formosa*<sup>1,31,72</sup>**Handsome Shiny Coral****COLOR:** Colony is white/cream; skeleton is shiny dark brown/black**SHAPE:** Uniplanar to secondarily bushy; primary pinnules straight, stiff and in 6 rows; often subpinnulate**SIZE:** Height to 53 cm**DIAGNOSTIC FEATURES:** Branches bi-serially arranged in up to 6 rows of 2-3 pinnules each; lateral primary pinnules are < 2.0 cm in length**POLYP DESCRIPTION:** Diameter is 1.8-3.0 mm**REPORTED DISTRIBUTION:** EGOA, BC**REPORTED DEPTH:** 417-800 mWoRMS Aphia ID: [289659](#)GFBio Code: **5H6**RACE Code: **41531 (genus)***Chrysopathes speciosa*<sup>1,2,31,47,72</sup>**Beautiful Shiny Coral****COLOR:** Skeleton shiny black; polyps cream to tan**SHAPE:** Uniplanar to secondarily bushy; branching is **pinnulate** to highly subpinnulate**SIZE:** Height to 25+ cm**DIAGNOSTIC FEATURES:** Primary pinnules in 4 rows distally (6 rows proximally); 18-27 pinnules/cm; primary pinnules usually < 1.0 cm long**POLYP DESCRIPTION:** Diameter is 2.0-3.3 mm; 3-4 polyps/cm**REPORTED DISTRIBUTION:** EGOA, BC**REPORTED DEPTH:** 626-914 mWoRMS Aphia ID: [289661](#)GFBio Code: **5H7**RACE Code: **41530**



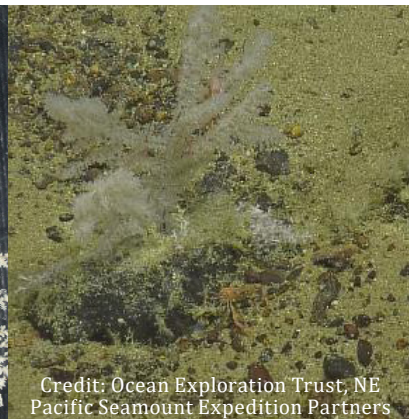
Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners



*Stichopathes spiessi*



*Chrysopathes formosa*



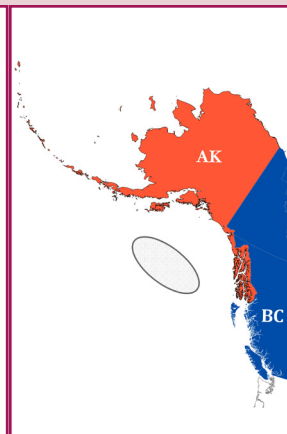
Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners

*Chrysopathes speciosa*

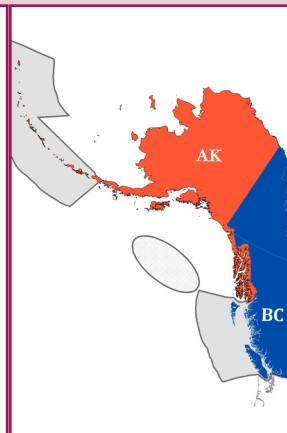
*Heteropathes pacifica*<sup>1,30</sup>**Pacific Tree Coral****COLOR:** Light brown to reddish-brown**SHAPE:** Largely planar; branching occurs to the 4th order or more**SIZE:** Height to 22 cm**DIAGNOSTIC FEATURES:** Pinnules arranged in 2 lateral rows and 1-2 irregular anterior rows**POLYP DESCRIPTION:** Diameter is 4-6 mm; highly modified with reduced or absent tentacles**REPORTED DISTRIBUTION:** GOA Seamounts**REPORTED DEPTH:** 3263-4511 mWoRMS Aphia ID: [723306](#)

GFBio Code:

RACE Code:

*Trissopathes pseudotristicha*<sup>1,31,72</sup>**False 3-Branded Tree Coral****COLOR:** Pale orange**SHAPE:** Planar to secondarily bushy; branches **pinnulate** to subpinnulate; primary pinnules in 4 rows**SIZE:** Height to 34 cm**DIAGNOSTIC FEATURES:** Secondary pinnules 0.5-1.5 cm in length**POLYP DESCRIPTION:** Diameter is 2-4 mm; arranged uniserially on the upper and lateral sides of the pinnules and subpinnules; 3-4 polyps/cm**REPORTED DISTRIBUTION:** AI, GOA Seamounts, BC**REPORTED DEPTH:** 2828-4477 mWoRMS Aphia ID: [291243](#)GFBio Code: [5H8](#) (genus)

RACE Code:

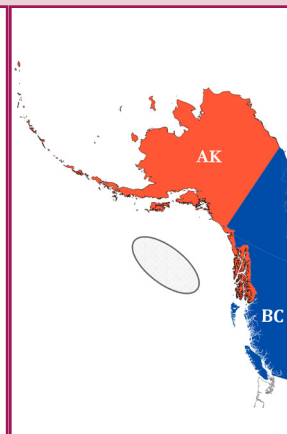
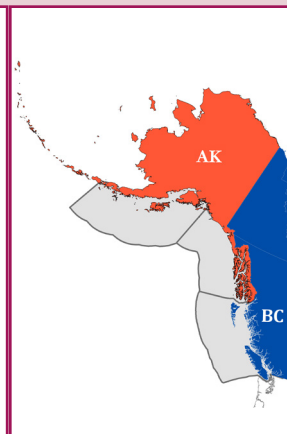


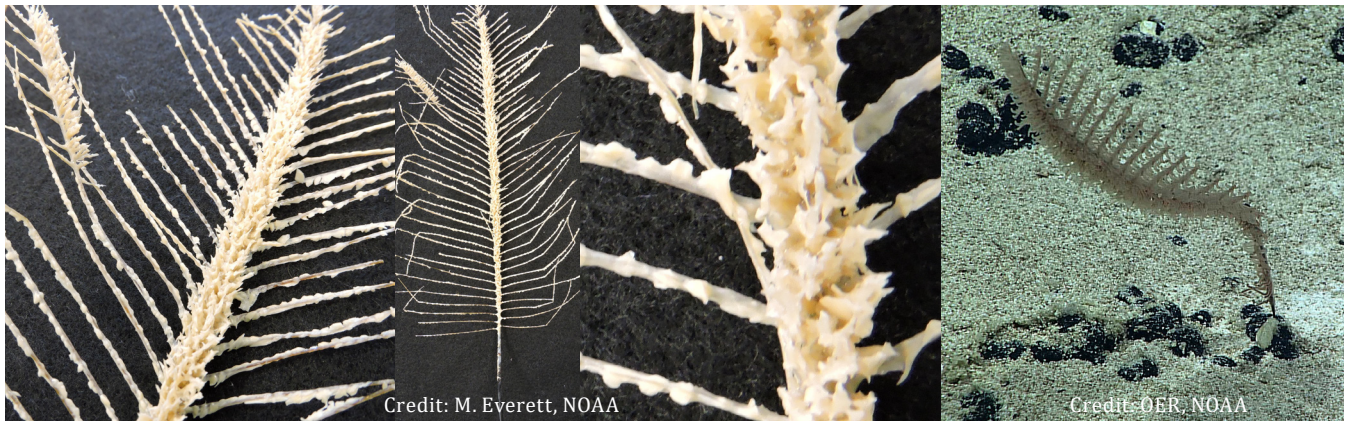
## Family SCHIZOPATHIDAE

*Alternatipathes cf. alternata*<sup>1,2,32</sup>**Alternating Quill Pen Coral****COLOR:** Skeleton black; polyps peach to white**SHAPE:** **Monopodial**; pinnules simple and in 2 rows; not further subdivided; bilateral and alternately arranged**SIZE:** Height to 30 cm**DIAGNOSTIC FEATURES:** Pinnules create **ovate** shape (longest pinnules nearest to base of frond) and recurve basally; pinnules 10-12 cm in length; 10-11 pinnules per 3 cm, increasing distally**POLYP DESCRIPTION:** Diameter is 3-4 mm; 7-8 polyps per 3 cm**REPORTED DISTRIBUTION:** GOA Seamounts**REPORTED DEPTH:** 2670-5089 mWoRMS Aphia ID: [994319](#)

GFBio Code:

RACE Code:

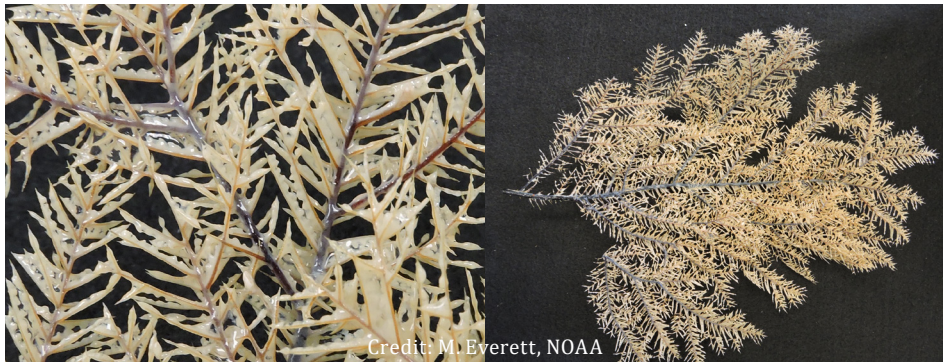
*Bathypathes patula*<sup>1,2,33,72</sup>**Common Quill Pen Coral****COLOR:** Skeleton shiny black; polyps cream to tan**SHAPE:** **Monopodial**; pinnules simple and in 2 rows; bilateral arrangement; pinnules are recurved**SIZE:** Height to 45 cm**DIAGNOSTIC FEATURES:** Pinnules create **elliptical** shape (longest pinnules midway between base and distal end of frond); pinnules ~ 9mm apart**POLYP DESCRIPTION:** Diameter is 2.0-3.3 mm; 3-4 polyps/cm**REPORTED DISTRIBUTION:** GOA, BC**REPORTED DEPTH:** 401-4492 mWoRMS Aphia ID: [103323](#)GFBio Code: [5IC](#)RACE Code: [41541](#)



Credit: M. Everett, NOAA

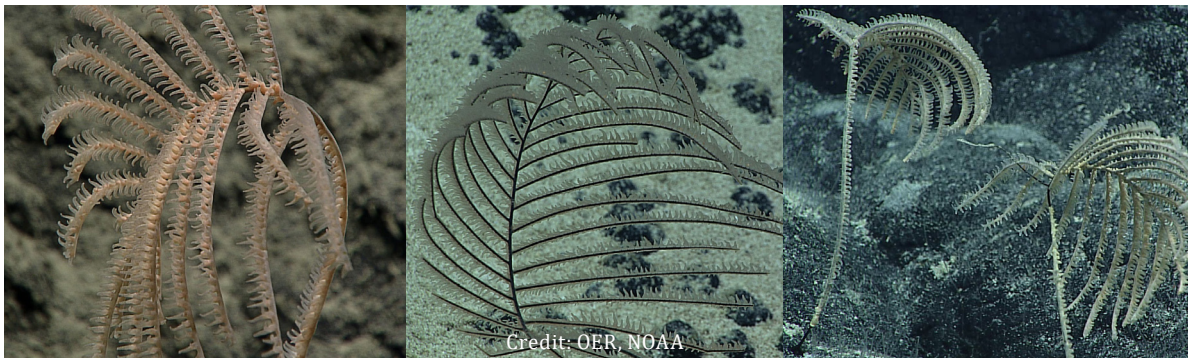
Credit: OER, NOAA

*Heteropathes pacifica*



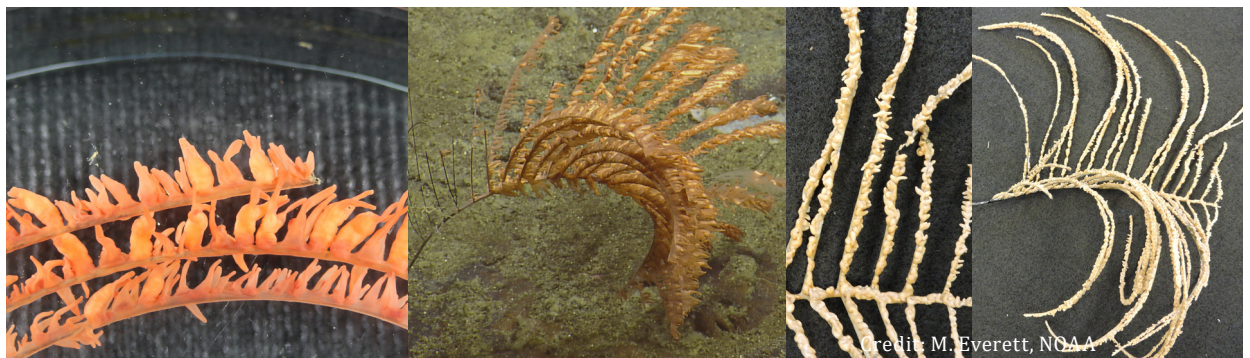
Credit: M. Everett, NOAA

*Trissopathes pseudotristicha*



Credit: OER, NOAA

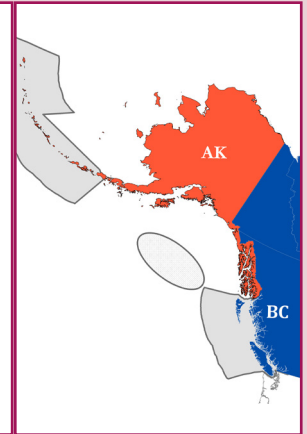
*Alternatipathes cf. alternata*



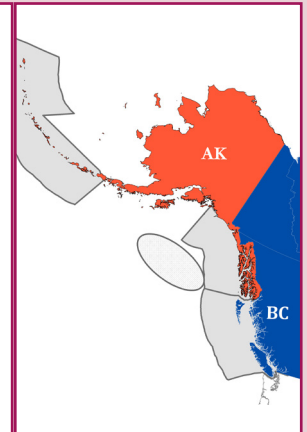
Credit: M. Everett, NOAA

*Bathypathes patula*

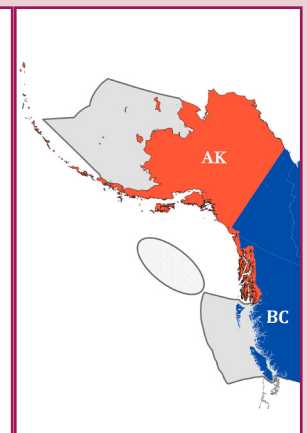


*Bathypathes* spp. <sup>1,72</sup>**Quill Pen Corals Unid.****COLOR:****SHAPE:** **Monopodial**; pinnules simple and in 2 rows**SIZE:****DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** AI, GOA Seamounts, BC**REPORTED DEPTH:** 274-4664 mWoRMS Aphia ID: [103304](#)GFBio Code: **51B**RACE Code: **41540***Dendrobathypathes boutillieri* <sup>1,17,30,47,72</sup>**Jim's Quill Pen****COLOR:** Orange**SHAPE:** **Monopodial**; relatively planar; very **pinnulate** with subpinnules making it look secondarily bushy**SIZE:** Height to 45 cm**DIAGNOSTIC FEATURES:** Pinnules are recurved and arranged alternately; spaced 5-8 mm apart**POLYP DESCRIPTION:** Diameter 3.5-5.0 mm; uniserial distribution; 2-3 polyps/cm**REPORTED DISTRIBUTION:** AI, EGOA, GOA Seamounts, BC**REPORTED DEPTH:** 401-4492 mWoRMS Aphia ID: [289787](#)GFBio Code: **51E**

RACE Code:

*Lillipathes wingi* <sup>1,2,30,47,72</sup>**Short-branched Black Coral****COLOR:** Skeleton shiny black; polyps orange**SHAPE:** Mostly planar; primary pinnules are simple and in 4 rows**SIZE:** Height to 51 cm**DIAGNOSTIC FEATURES:** Pinnules in 4 lateral rows (2 per side); up to 5 cm in length**POLYP DESCRIPTION:** Diameter is 2.4-3.6 mm**REPORTED DISTRIBUTION:** BS, GOA Seamounts (Dickens, Welker, Giacomini, Murray), BC**REPORTED DEPTH:** 518-2083 mWoRMS Aphia ID: [290293](#)GFBio Code: **51L**

RACE Code:





*Bathypathes* spp.



Credit: Stone, 2014

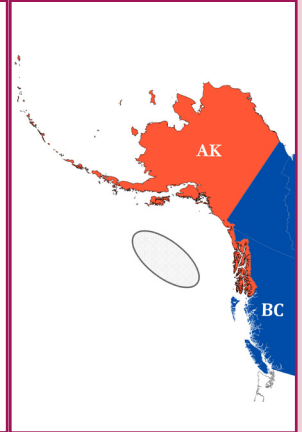
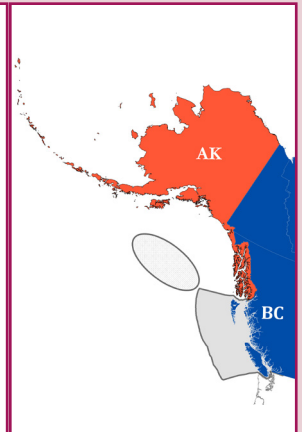
*Dendrobathypathes boutillieri*



Credit: M. Everett, NOAA

Credit: Ocean Exploration Trust, NE Pacific Seamount Expedition Partners

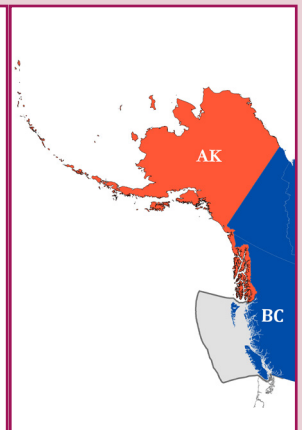
*Lillipathes wingi*

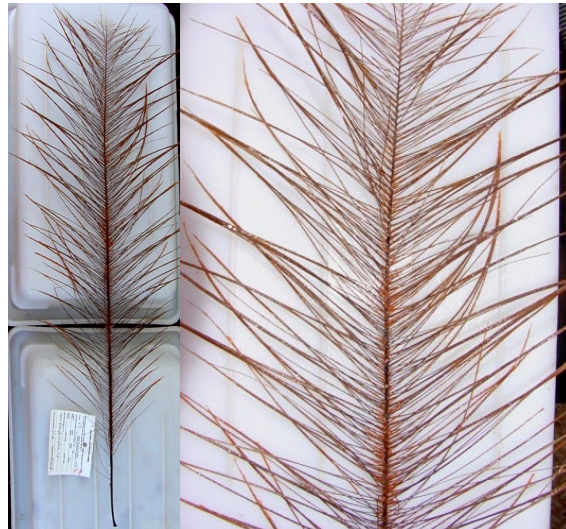
*Parantipathes euantha*<sup>1,40,59</sup>**Flowering Black Coral**WoRMS Aphia ID: [472933](#)GFBio Code: [5H1 \(genus\)](#)RACE Code: [41550 \(genus\)](#)**COLOR:** Colony is reddish-brown to black; pinnules are pale brown and semi-transparent**SHAPE:** **Monopodial** and **pinnulate**; shaped like an ostrich plume**SIZE:** Height to 32 cm**DIAGNOSTIC FEATURES:** Pinnules simple; arranged bilaterally in 4-6 rows; spines are simple, smooth and rounded (0.07-0.1 mm tall)**POLYP DESCRIPTION:** Diameter is 1.9-2.7 mm; elongated; ~2.5-3.5 polyps/cm**REPORTED DISTRIBUTION:** GOA Seamounds (Pratt)**REPORTED DEPTH:** 862-2761 m*Parantipathes* spp.<sup>1,33,72</sup>**Black Corals Unid.**WoRMS Aphia ID: [103306](#)GFBio Code: [5H1](#)RACE Code: [41550](#)**COLOR:****SHAPE:** **Monopodial** to branching and **pinnulate**; primary pinnules in 6 or more rows**SIZE:** Height to 1 m**DIAGNOSTIC FEATURES:****POLYP DESCRIPTION:****REPORTED DISTRIBUTION:** GOA Seamounds (Giacomini), BC**REPORTED DEPTH:** 854-2819 m*Umbellapathes* sp. A<sup>72</sup>**Parasol Coral Unid.**

WoRMS Aphia ID:

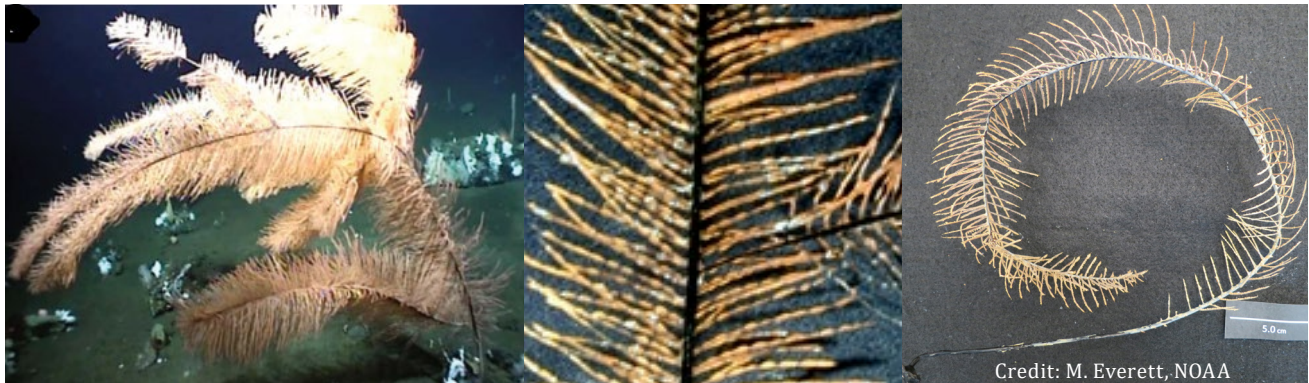
GFBio Code: [5IM](#)

RACE Code:

**COLOR:****SHAPE:** **Monopodial** and complexly **pinnulate** with long stalk**SIZE:** Height to 35 cm**DIAGNOSTIC FEATURES:** Pinnules arranged alternately; subpinnules arranged uni- to bi-serially**POLYP DESCRIPTION:** Diameter is 3-4 mm; 2-3 polyps/cm**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 1205-1383 m



*Parantipathes euantha*



*Parantipathes* spp.

No Images On Record  
With DFO or AFSC

*Umbellapthes* sp. A

## Identification Key to Order Scleractinia

- Corallum solitary; cylindrical, trochoid, or ceratoid in shape; **calyx** is circular, **elliptical**, or compressed; **septa** are hexamerally symmetrical with 4 cycles; common in deep water  
**Family Caryophylliidae (RACE Code: 44004)** ..... [pg. 90](#)
- Corallum solitary; turbinate to trochoid in shape, **septa** arrange in a Pourtales plan; wide ranging depth distribution  
**Family Dendrophylliidae** ..... [pg. 92](#)
- Corallum solitary; ceratoid, calceoloid, or compressed in shape  
**Family Flabellidae (RACE Code: 44009)** ..... [pg. 94](#)
- Corallum solitary; discoidal in shape  
**Family Fungiacyathidae** ..... [pg. 96](#)
- Corallum solitary; discoidal in shape; extremely fragile; found in deep water  
**Family Micrabaciidae** ..... [pg. 96](#)

## List of species of Order Scleractinia

## Family Caryophylliidae

*Caryophyllia alaskensis*  
*Caryophyllia arnoldi*  
*Crispatotrochus foxi*  
*Desmophyllum dianthus*  
*Desmophyllum pertusum*  
*Labyrinthocyathus quaylei*  
*Paracyathus stearnsii*

## Family Dendrophylliidae

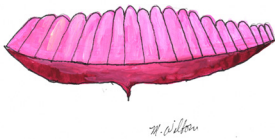
*Balanophyllia elegans*  
 Family Flabellidae  
*Flabellum* sp. A sensu  
*Javania borealis*  
*Javania cailleti*

## Family Fungiacyathidae

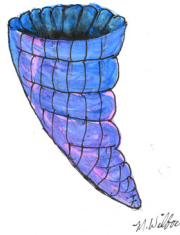
*Fungiacyathus marezzelleri*

## Family Micrabaciidae

*Leptopenus discus*



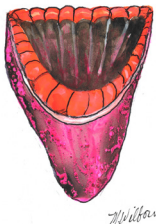
Discoid



Trochoid



Turbinate



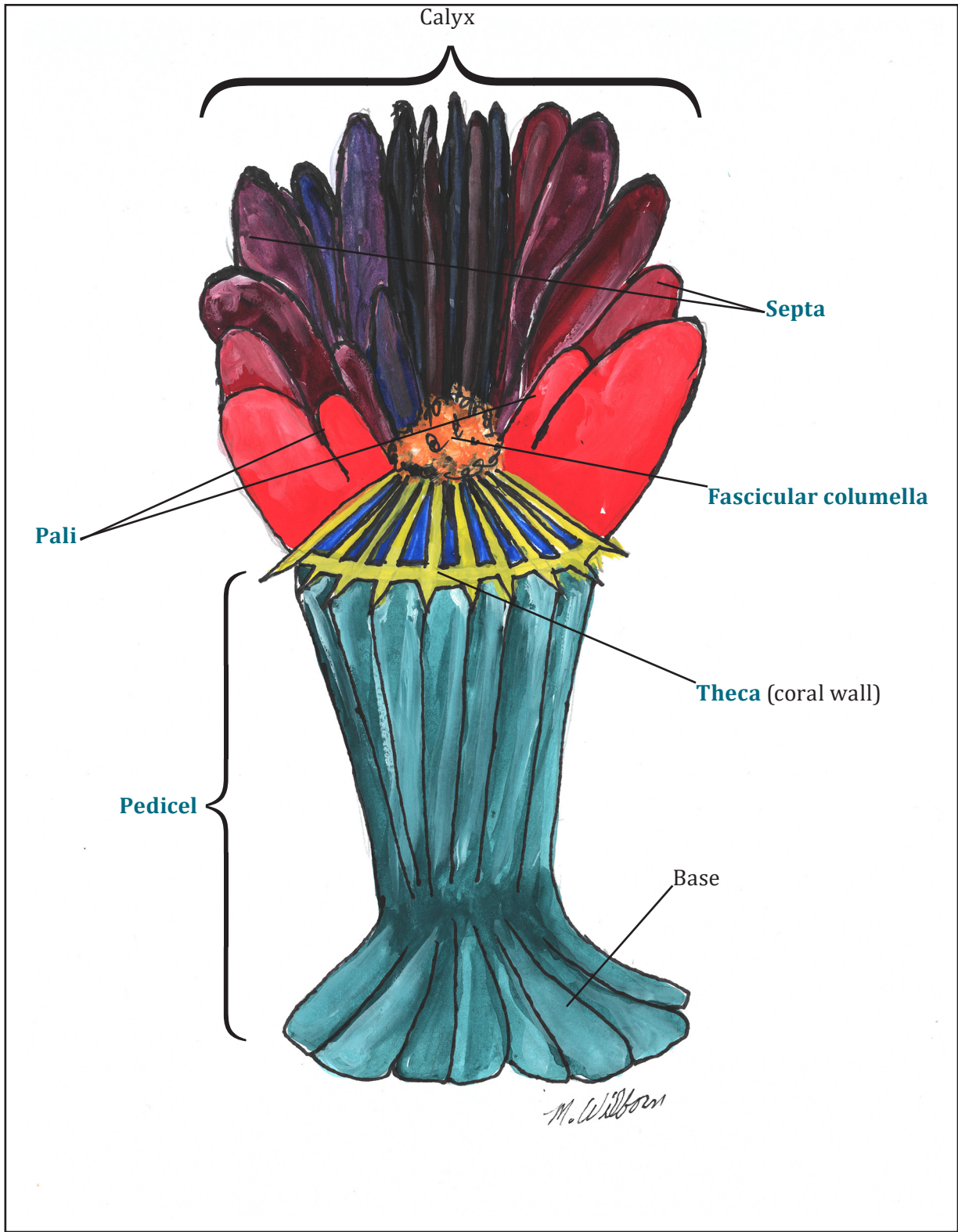
Calceoloid



Cylindrical

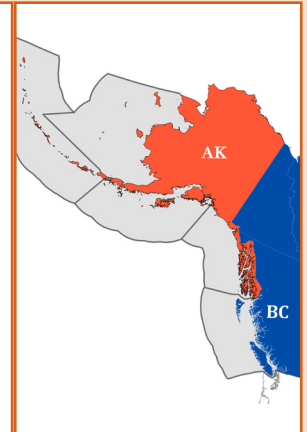
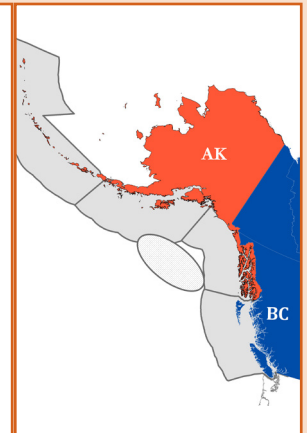
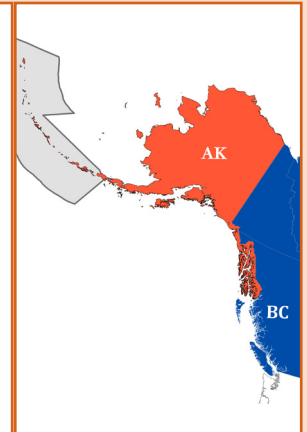
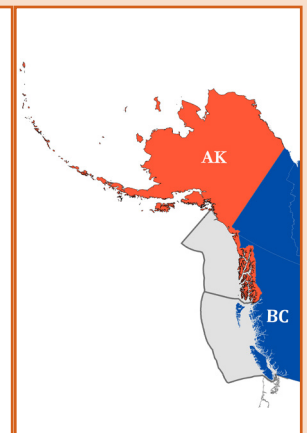


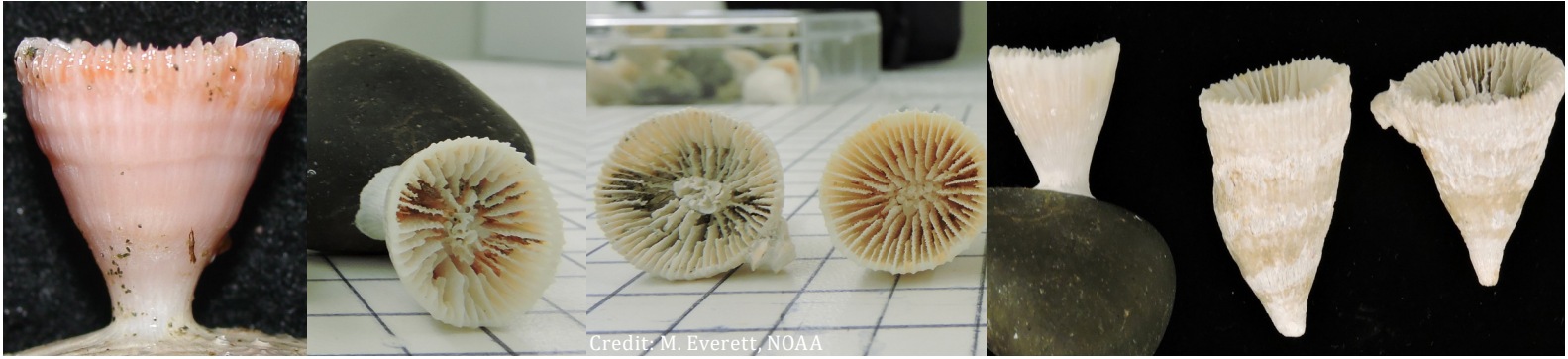
Ceratoid



SCLERACTINIA

Illustrated version of Cairns, 1994: Anatomy of a Scleractinian

*Caryophyllia alaskensis*<sup>1,2,34,47,72</sup>**Alaska Stony Coral****COLOR:** White to pale pink**SHAPE:** Small and solitary; ceratoid to trochoid-shaped**SIZE:** Diameter to 2.5 cm; height to 1.8 cm**SEPTA ARRANGEMENT:** **Septa** hexamerally arranged in 4 or 5 cycles**OTHER CHARACTERISTICS:** **Fascicular columella** fairly large and twisted**REPORTED DISTRIBUTION:** AI, BS, GOA, BC**REPORTED DEPTH:** 27-960 mWoRMS Aphia ID: [286724](#)GFBio Code: [3J7](#)RACE Code: [44023](#)*Caryophyllia arnoldi*<sup>1,2,35,47,72</sup>**Arnold's Stony Coral****COLOR:** **Theca** white or pale pink; tissue reddish-brown**SHAPE:** Small and solitary; ceratoid to trochoid-shaped; **pedicel** robust; **calyx** is circular to **elliptical****SIZE:** Diameter to 1.8 cm; height to 1.7 cm**SEPTA ARRANGEMENT:** **Septa** project slightly above coral wall; 48 **septa** in 4 cycles (12 join the columella)**OTHER CHARACTERISTICS:****REPORTED DISTRIBUTION:** AI, GOA, GOA Seamounts, BC**REPORTED DEPTH:** 17-1702 mWoRMS Aphia ID: [286728](#)GFBio Code: [3JB](#)RACE Code: [44022](#)*Crispatotrochus foxi*<sup>1,2,36,37</sup>**Earl's Stony Coral****COLOR:** **Theca** white to pale pink; tissue orange**SHAPE:** Small and solitary; trochoid-shaped; **calyx** relatively thin and circular; **pedicel** stout**SIZE:** Diameter to 1.5 cm; height to 1.9 cm**SEPTA ARRANGEMENT:** 96 **septa** arranged hexamerally in 5 cycles (smaller **septa** not obvious)**OTHER CHARACTERISTICS:** Similar to *L. quaylei* (pg 92); **pali** absent**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 82-702 mWoRMS Aphia ID: [289737](#)GFBio Code: [3JD](#)RACE Code: [44019](#)*Desmophyllum dianthus*<sup>1,2,37,38,47,72</sup>**Cockscomb Stony Coral****COLOR:** **Theca** pale tan to light brown; tissue pale orange to light brown**SHAPE:** Very large; solitary or colonial; funnel- or trumpet- shaped; **calyx elliptical**-shaped**SIZE:** Diameter to 6 cm; height to 5 cm**SEPTA ARRANGEMENT:** ~192 **septa** hexamerally arranged in 5-6 cycles**OTHER CHARACTERISTICS:** **Pali** and **fascicular columella** usually absent**REPORTED DISTRIBUTION:** EGOA, BC**REPORTED DEPTH:** 35-2460 mWoRMS Aphia ID: [135159](#)GFBio Code: [3JF](#)RACE Code: [44017](#)



Credit: M. Everett, NOAA

*Caryophyllia alaskensis*



Credit: M. Everett, NOAA

*Caryophyllia arnoldi*



Credit: M. Everett, NOAA

*Crispatotrochus foxi*



Credit: M. Everett, NOAA

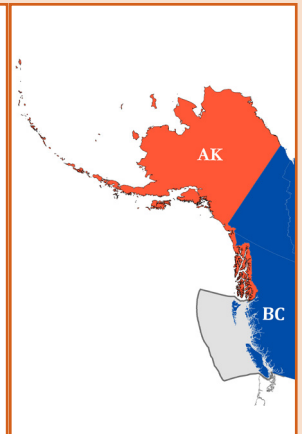
*Desmophyllum dianthus*

SCLERACTINIA



*Desmophyllum pertusum*<sup>37,47,72</sup>**White Stony Coral**(formerly *Lophelia pertusa*)**COLOR:** White**SHAPE:** Colonial; irregularly-shaped branching colony; corallites ceratoid**SIZE:** Colonial height to 25 cm**SEPTA ARRANGEMENT:** **Septa** are irregularly arranged with 6-12 primary **septa****OTHER CHARACTERISTICS:** Profuse and dense budding**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 39-2775 mWoRMS Aphia ID: [1245747](#)GFBio Code: **3JJ**

RACE Code:

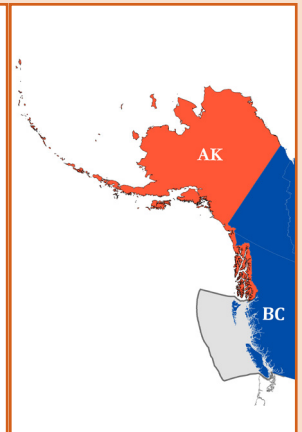
*Labyrinthocyathus quaylei*<sup>37,47</sup>

(unverified; debate exists over this distribution)

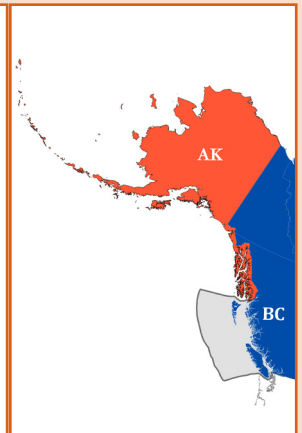
**COLOR:** White**SHAPE:** Solitary or colonial; ceratoid- to cylindrical-shaped; **calyx** is circular to **elliptical**; slender **pedicel****SIZE:** Diameter to 1.6 cm; height to 2.1 cm**SEPTA ARRANGEMENT:** **Septa** hexamerally arranged in 5 cycles**OTHER CHARACTERISTICS:** Similar to *C. foxi* (pg 90)**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 37-293 mWoRMS Aphia ID: [290268](#)

GFBio Code:

RACE Code:

*Paracyathus stearnsii*<sup>37,47,72</sup>**Brown Stony Coral****COLOR:** Light to dark brown**SHAPE:** Corallum trochoid; robust **pedicel**; **calyx elliptical****SIZE:** Diameter to 2.7 cm; height to 1.8 cm**SEPTA ARRANGEMENT:** **Septa** hexamerally arranged in 5 cycles**OTHER CHARACTERISTICS:****REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 6-835 mWoRMS Aphia ID: [286830](#)GFBio Code: **3JK**

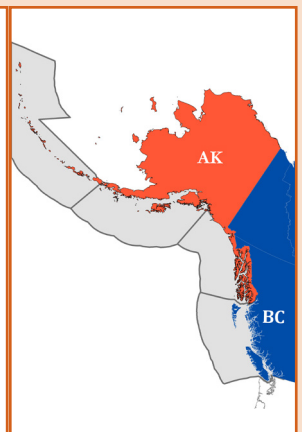
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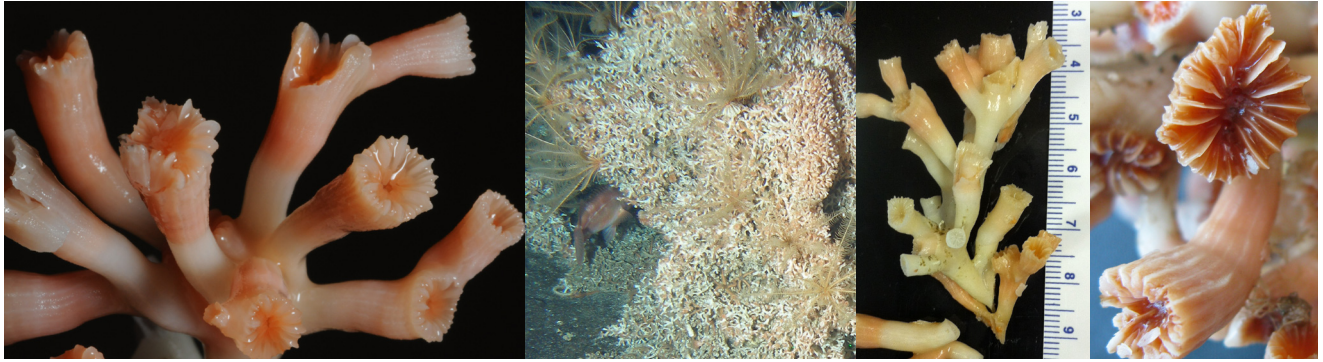


## Family DENDROPHYLLIIDAE

*Balanophyllia elegans*<sup>1,2,37,72</sup>**Orange Stony Coral****COLOR:** Polyps are vivid red-orange or bright red; **theca** is white**SHAPE:** Solitary; cylindrical- to trochoid-shaped; sometimes calceoloid; robust **pedicel****SIZE:** Diameter to 1.7 cm; height to 1.7 cm**SEPTA ARRANGEMENT:** **Septa** in a stellate pattern; ~48 arranged hexamerally in 4-5 incomplete cycles**OTHER CHARACTERISTICS:****REPORTED DISTRIBUTION:** AI, GOA, BC**REPORTED DEPTH:** 22-1553 mWoRMS Aphia ID: [286920](#)GFBio Code: **3J4**

RACE Code:





*Desmophyllum pertusum*



Credit: M. Everett, NOAA

*Labyrinthocyathus quaylei*



Credit: M. Everett, NOAA

*Paracyathus stearnsii*



Credit: Steve Lonhart, NOAA MBNMS

Credit: M. Everett, NOAA

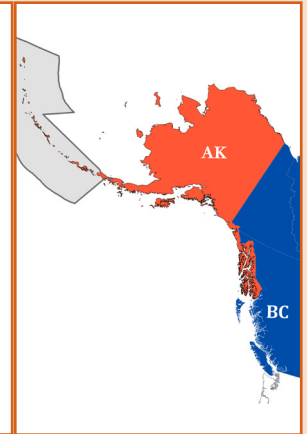
*Balanophyllia elegans*

*Flabellum* sp. A sensu <sup>1,2,37</sup>**Tan Trumpet Coral****COLOR:** Light to dark brown**SHAPE:** Ceratoid- shaped solitary coral; **pedicel** thin and narrow; **calyx** is **elliptical**-shaped**SIZE:** Diameter to 2.6 cm; height to 38.5 mm**SEPTA ARRANGEMENT:** **Septa** arranged hexamerally in 5 cycles**OTHER CHARACTERISTICS:** **Fascicular columella** absent or rudimentary**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 55-507 m

WoRMS Aphia ID:

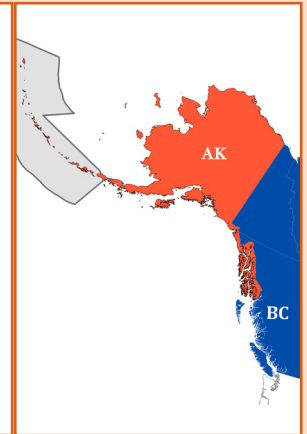
GFBio Code:

RACE Code: 44005

*Javania borealis* <sup>1,2,37</sup>**Northern Trumpet Coral****COLOR:** **Theca** white; tissue pale orange**SHAPE:** Large and solitary; trochoid-shaped; **pedicel** slender; calyx is **elliptical**-shaped**SIZE:** Diameter 3.6 cm; height to 3.5 cm**SEPTA ARRANGEMENT:** **Septa** arranged hexamerally in 5 cycles**OTHER CHARACTERISTICS:****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 17-348 mWoRMS Aphia ID: [287032](#)

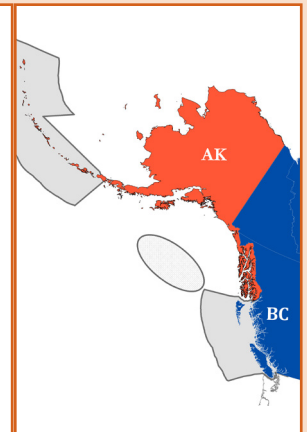
GFBio Code:

RACE Code: 44010

*Javania cailleti* <sup>1,2,39,47,72</sup>**Caillet's Trumpet Coral****COLOR:** **Theca** white to pale pink; tissue pale orange to pink**SHAPE:** Small, solitary; ceratoid-shaped; **pedicel** stout; calyx circular to oval-shaped**SIZE:** Diameter to 3.1 cm; height to 2.9 cm**SEPTA ARRANGEMENT:** **Septa** arranged hexamerally in 4 cycles**OTHER CHARACTERISTICS:** **Pali** and **fascicular columella** absent**REPORTED DISTRIBUTION:** AI, GOA Seamounts (Giacomini), BC**REPORTED DEPTH:** 30-2165 mWoRMS Aphia ID: [135198](#)

GFBio Code: 3K7

RACE Code: 44011





*Flabellum* sp. A sensu



*Javania borealis*

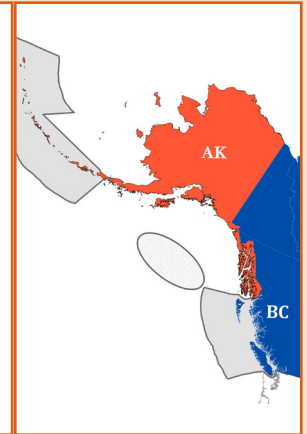


Credit: M. Everett, NOAA

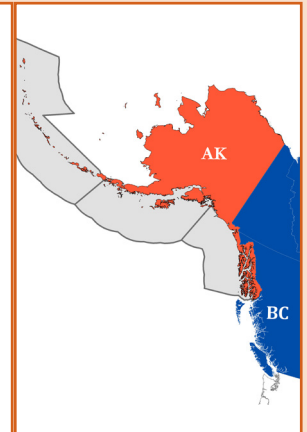
*Javania cailleti*

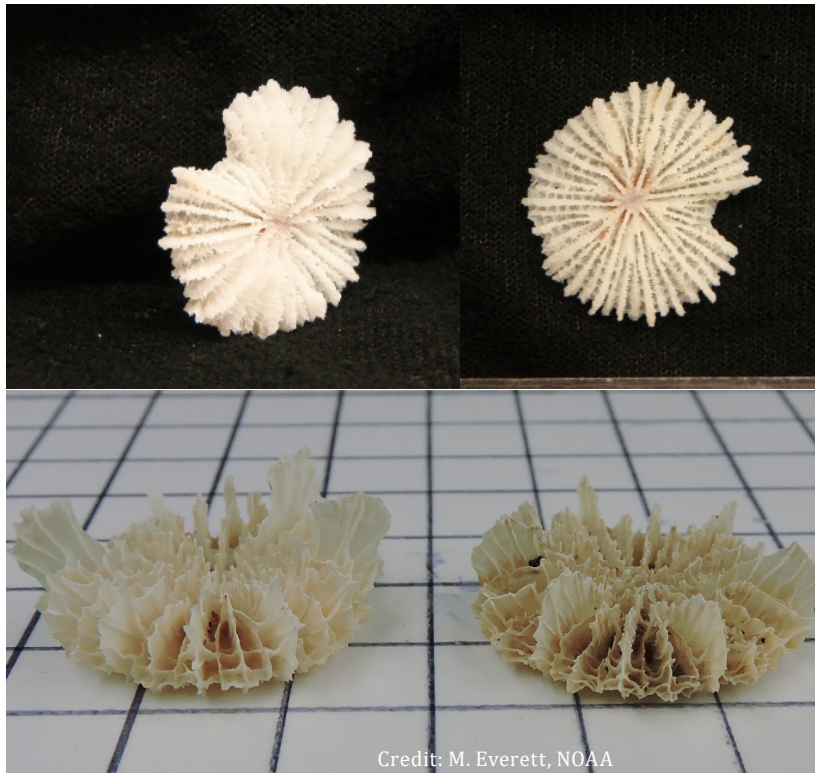
*Fungiacyathus marenzelleri*<sup>1,37,72</sup>**Marenzeller's Stony Coral****COLOR:** White to light brown**SHAPE:** Large and solitary; discoidal-shaped**SIZE:** Diameter to 2.7 cm**SEPTA ARRANGEMENT:** 48 **septa** with few ridges and in 4 cycles**OTHER CHARACTERISTICS:** **Pali** absent; fragile with delicate base**REPORTED DISTRIBUTION:** AI, GOA Seamounts, BC**REPORTED DEPTH:** 300-6328 mWoRMS Aphia ID: [135205](#)GFBio Code: **3KV**

RACE Code:

**Family MICRABACIIDAE***Leptopenus discus*<sup>1,37,72</sup>**Discoid Delicate Web Coral****COLOR:****SHAPE:** Large and solitary; discoidal-shaped**SIZE:** Diameter to 2.5 cm; height to 0.4 cm**SEPTA ARRANGEMENT:** **Costae** and 72 **septa** alternate in position; **septa** arranged hexamerally**OTHER CHARACTERISTICS:** Six major **costae** subdivide twice; fragile**REPORTED DISTRIBUTION:** AI, GOA**REPORTED DEPTH:** 2842-5000 mWoRMS Aphia ID: [287466](#)GFBio Code: **3KY**

RACE Code:





Credit: M. Everett, NOAA

*Fungiacyathus marenzelleri*

No Images On Record  
With DFO or AFSC

*Leptopenus discus*

## Identification Key to Class Hydrozoa (Order Anthoathecata)

- Colonies uniplanar to slightly **arborescent**; usually small and fragile; form calcium carbonate skeletons that are frequently pigmented orange, red, blue, or violet

**Family Stylasteridae (RACE Code: 44028)** .....pg. 100

### List of species of Family Stylasteridae

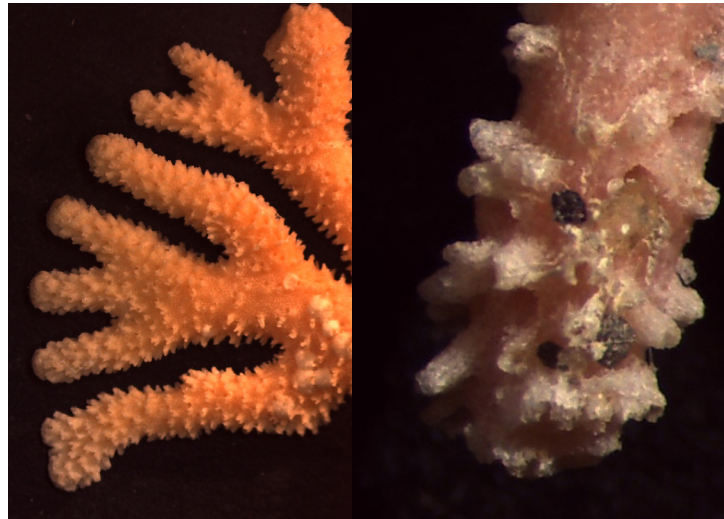
- |                               |  |
|-------------------------------|--|
| <i>Crypthelia trophostega</i> | <i>Stylaster alaskanus</i>             |
| <i>Cyclohelix lamellata</i>   | <i>Stylaster brochi</i>                |
| <i>Distichopora borealis</i>  | <i>Stylaster campylecus</i>            |
| <i>Errinopora dichotoma</i>   | <i>Stylaster crassiseptum</i>          |
| <i>Errinopora disticha</i>    | <i>Stylaster elassotomus</i>           |
| <i>Errinopora fisheri</i>     | <i>Stylaster leptostylus</i>           |
| <i>Errinopora nanneca</i>     | <i>Stylaster parageus columbiensis</i> |
| <i>Errinopora pourtalesii</i> | <i>Stylaster parageus parageus</i>     |
| <i>Errinopora undulata</i>    | <i>Stylaster repandus</i>              |
| <i>Errinopora zarhyncha</i>   | <i>Stylaster stejnegeri</i>            |
| <i>Stylantheca papillosa</i>  | <i>Stylaster trachystomus</i>          |
|                               | <i>Stylaster venustus</i>              |
|                               | <i>Stylaster verrillii</i>             |



Illustration: Stylasteridae Morphotypes (not comprehensive)

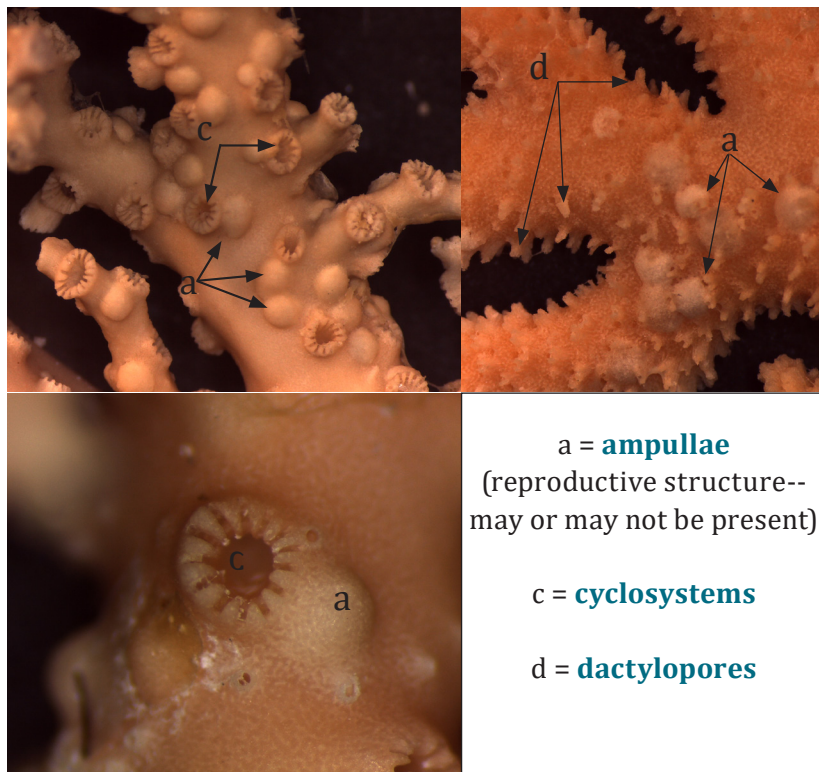


Stylaster



Errinopora

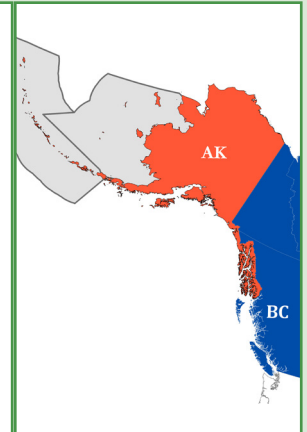
Anatomy of a Hydrocoral



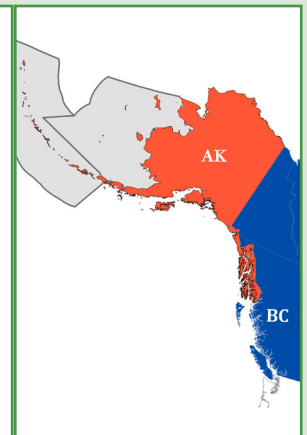


*Crypthelia trophostega*<sup>1,2,60</sup>**Capped Hydrocoral****COLOR:** White**SHAPE:** Usually uniplanar to bushy; branching is irregularly **dichotomous****SIZE:** Height to 20 cm**CYCLOSISTEMS:** Large and evenly spaced; abundant on front of colony; have cap-like lids**NEMATO/DACTYLO-PORES:** Common on branches and **cyclosystem** lids; typically flush or with very low rim**REPORTED DISTRIBUTION:** AI, BS**REPORTED DEPTH:** 146-1913 mWoRMS Aphia ID: [285799](#)

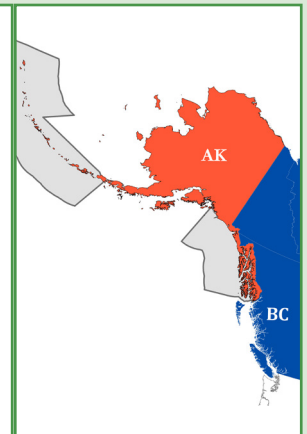
GFBio Code:

RACE Code: **44036***Cyclohelia lamellata*<sup>1,2,61</sup>**Undulating Plate Hydrocoral****COLOR:** Rose to pink-orange**SHAPE:** Lamellate and undulated, but some observations of a digitate form**SIZE:** Height to 10 cm**CYCLOSISTEMS:** Disassociated**NEMATO/DACTYLO-PORES:** Nematopores are absent; 2-4 **dactylopores** near each gastropore**REPORTED DISTRIBUTION:** AI, BS**REPORTED DEPTH:** 27-691 mWoRMS Aphia ID: [289768](#)

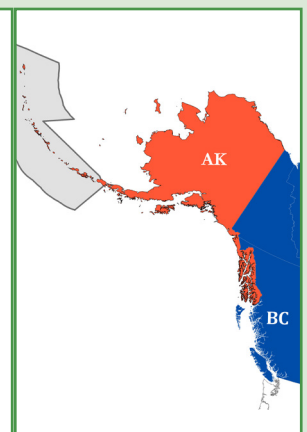
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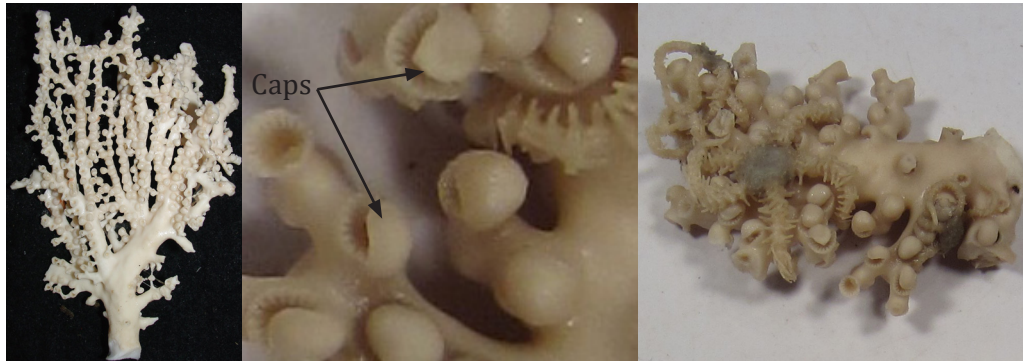
RACE Code: **44040***Distichopora borealis*<sup>1,2,60</sup>**Grooved Hydrocoral****COLOR:** White to light orange**SHAPE:** Uniplanar to **arborescent**; branching irregularly **dichotomous**; terminal branches flattened-looking; branch tips blunt and rounded**SIZE:** Height to 15 cm**CYCLOSISTEMS:** Located in narrow groove along edges of branches**NEMATO/DACTYLO-PORES:****REPORTED DISTRIBUTION:** AI, EGOA**REPORTED DEPTH:** 143-1361 mWoRMS Aphia ID: [288320](#)

GFBio Code:

RACE Code: **44061***Errinopora dichotoma*<sup>1,2,60</sup>**Branching Hydrocoral****COLOR:** Orange**SHAPE:** Upright; **arborescent**; sparsely **dichotomous** branching; branches do not **anastomose** (reconnect); branches circular to **elliptical** in cross-section ending in thick, blunt tips; wide "U" shape between branches**SIZE:** Height to 12 cm**CYCLOSISTEMS:****NEMATO/DACTYLO-PORES:** **Dactylopores** spines occur on all surfaces and are compound**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 178-217 mWoRMS Aphia ID: [592149](#)

GFBio Code:

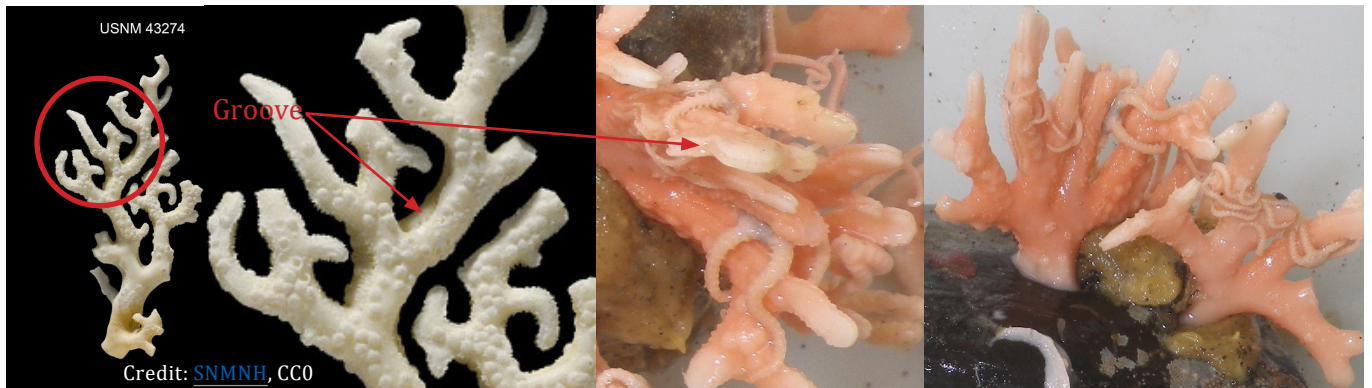
RACE Code: **44121**



*Crypthelia trophostega*



*Cyclohelicia lamellata*



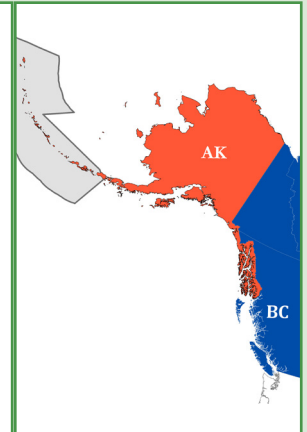
*Distichopora borealis*



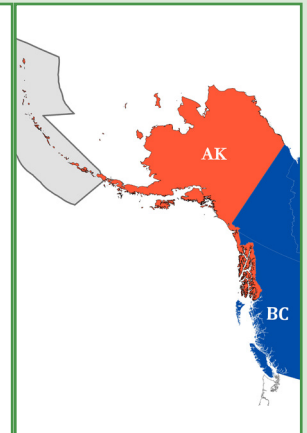
*Errinopora dichotoma*

*Errinopora disticha*<sup>1,2,60</sup>**Blunt-tipped Hydrocoral****COLOR:** Light orange to orange**SHAPE:** Upright; uniplanar; **dichotomous** branching and ending in blunt tips; branches flattened in cross section; narrow "U" shape between branches**SIZE:** Height to 25 cm**CYCLOSISTEMS:****NEMATO/DACTYLO-PORES:** **Dactylopore** spines arranged in long bi-lateral rows flanking a gastropore row**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 178-536 mWoRMS Aphia ID: [592148](#)

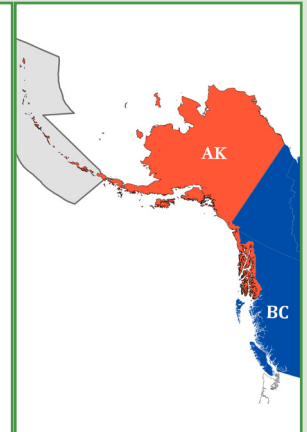
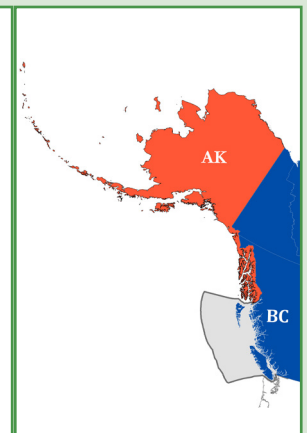
GFBio Code:

RACE Code: **44076***Errinopora fisheri*<sup>1,2,60</sup>**Walter's Hydrocoral****COLOR:** Light orange**SHAPE:** Upright; uniplanar; irregularly **dichotomous** branching; circular to **elliptical** in cross-section**SIZE:** Height to 9 cm**CYCLOSISTEMS:****NEMATO/DACTYLO-PORES:** **Dactylopore** spines oriented horizontally and on one side of colony with crescent-shaped terraces**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 455-458 mWoRMS Aphia ID: [592146](#)

GFBio Code:

RACE Code: **44120***Errinopora nanneca*<sup>1,2,60</sup>**Warty Hydrocoral****COLOR:** Light orange to light pink**SHAPE:** Uniplanar, **lobate**, or multiplanar colonies; **dichotomous** branching looks large and flat or slender**SIZE:** Height to 21 cm**CYCLOSISTEMS:****NEMATO/DACTYLO-PORES:** **Dactylopores** on 1 side of colony; scoop-like projections arranged in rows on distal branches; **ampullae** universally distributed when present**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 21-517 mWoRMS Aphia ID: [289914](#)

GFBio Code:

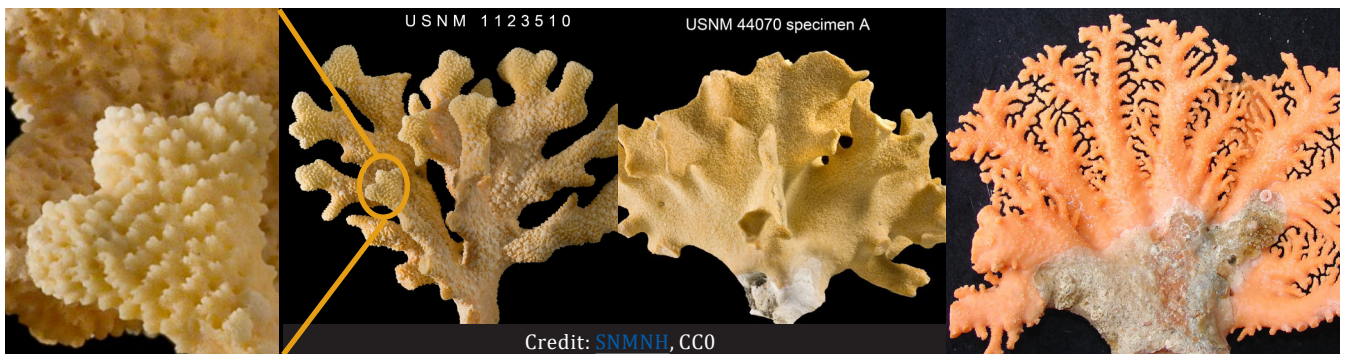
RACE Code: **44082***Errinopora pourtalesii*<sup>47,63,72</sup>**Pourtales's Lace Hydrocoral****COLOR:** Pinkish orange; except tips are white**SHAPE:** Lamellate to bushy; rigid; branches robust and round in cross section; typically w/encrusting base**SIZE:** Height to 18 cm**CYCLOSISTEMS:****NEMATO/DACTYLO-PORES:** **Dactylopore** spines up to 1.2mm; fused and grooved towards the nearest gastropore**REPORTED DISTRIBUTION:** BC**REPORTED DEPTH:** 49-183 mWoRMS Aphia ID: [289915](#)GFBio Code: **3SC**RACE Code: **44079**



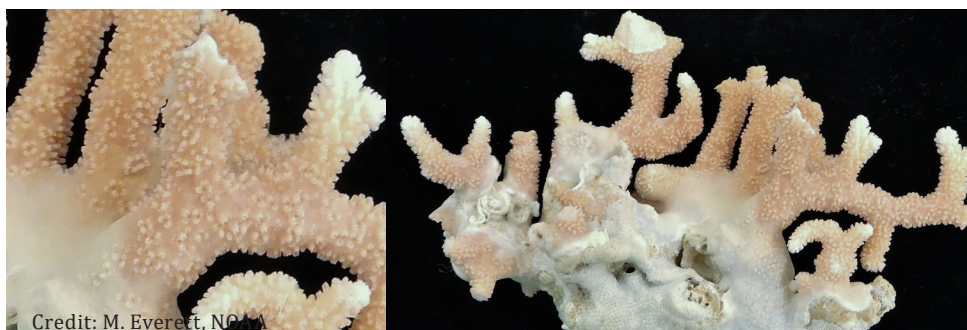
*Errinopora disticha*



*Errinopora fisheri*



*Errinopora nanneca*

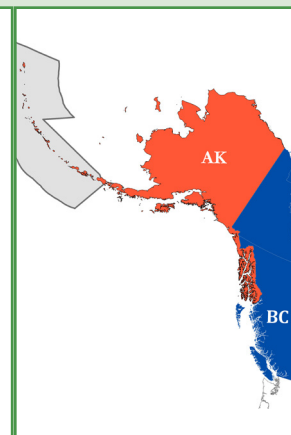


*Errinopora pourtalesii*

*Errinopora undulata*<sup>1,2,60</sup>**Wavy Hydrocoral****COLOR:** Pale orange**SHAPE:** Undulate or sinusoidal; fan-shaped**SIZE:** Height to 25 cm**CYCLOSYSTEMS:****NEMATO/DACTYLO-PORES:** **Dactylopores** on both sides of branches; reduced abundance proximally; 3-5 **dactylopores** near each gastropore**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 350-640 mWoRMS Aphia ID: [592147](#)

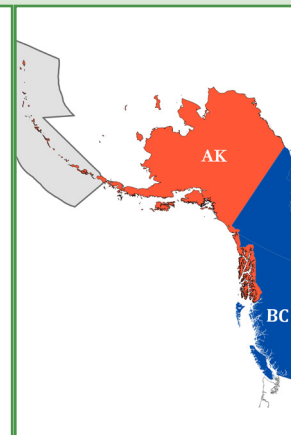
GFBio Code:

RACE Code: 44042

*Errinopora zarhyncha*<sup>1,2,60</sup>**Rough Hydrocoral****COLOR:** Orange**SHAPE:** Upright and uniplanar to multiplanar; abundant **dichotomous** branching; branches circular to slightly flattened in cross-section with thick blunt tips**SIZE:** Height to 30 cm**CYCLOSYSTEMS:** Crowded**NEMATO/DACTYLO-PORES:** Colony rough; **dactylopores** spines on all surfaces; **dactylopores** scoops profuse and long**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 207-658 mWoRMS Aphia ID: [289917](#)

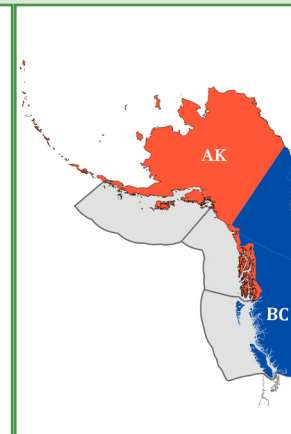
GFBio Code:

RACE Code: 44080

*Stylanthea papillosa*<sup>1,2,60,72</sup>**Corrugated Lace Hydrocoral**(formerly *S. petrograpta*)**COLOR:** Purple, pink, red, and occasionally white with faded branch tips**SHAPE:** Encrusting to upright with knobby, **digitiform** protrusions**SIZE:** Height to 2 cm**CYCLOSYSTEMS:** Diameters are 0.9-1.2 mm; uniformly arranged on all surfaces of colony**NEMATO/DACTYLO-PORES:** **Dactylopores** range 2-12 per **cyclosystem** (4-8 most common)**REPORTED DISTRIBUTION:** GOA, BC**REPORTED DEPTH:** 11-18 mWoRMS Aphia ID: [291143](#)

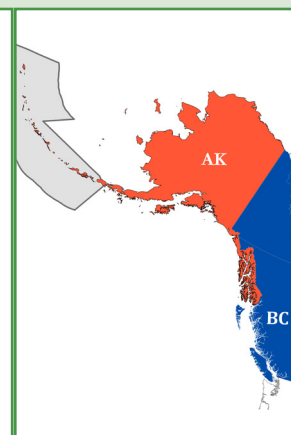
GFBio Code: 3SE

RACE Code: 44050

*Stylaster alakanus*<sup>1,2,60</sup>**Alaska Hydrocoral****COLOR:** Light orange, pink or white**SHAPE:** Upright and uniplanar to multiplanar; branches **anastomose** creating a sieve-like matrix; distal branches are circular to rectangular in cross-section**SIZE:** Height to 30 cm**CYCLOSYSTEMS:** Diameters are 0.9-1.3 mm; found exclusively on branch edges**NEMATO/DACTYLO-PORES:** **Ampullae** diameter up to 0.9 mm with prominent warts; 7-14 **dactylopores/cyclosystem****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 146-582 mWoRMS Aphia ID: [285846](#)

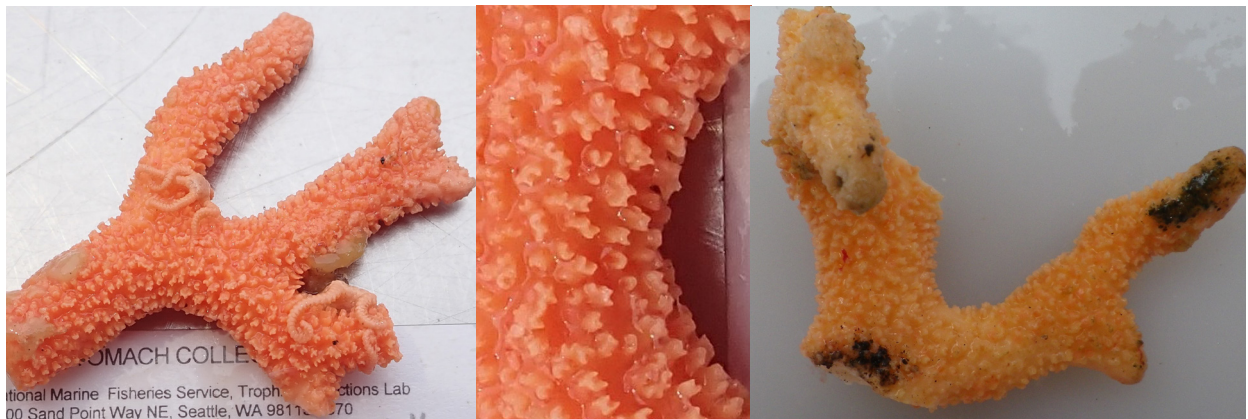
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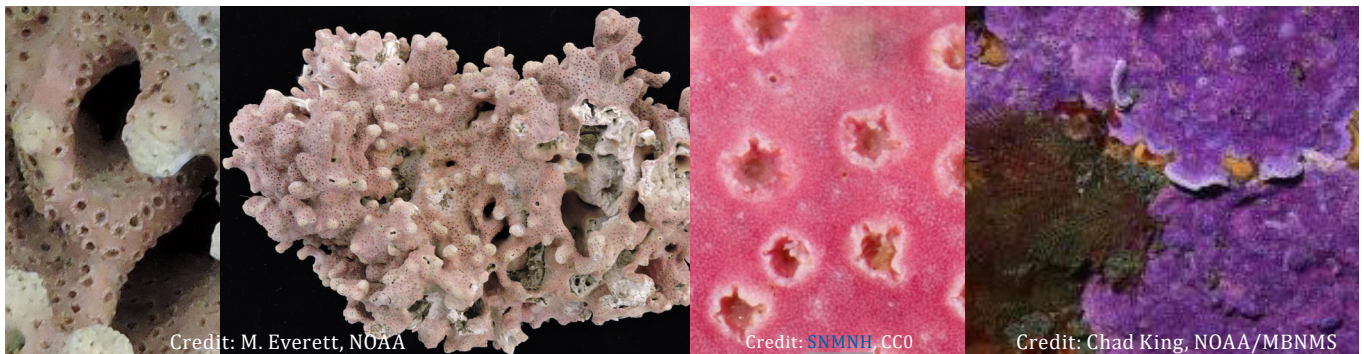




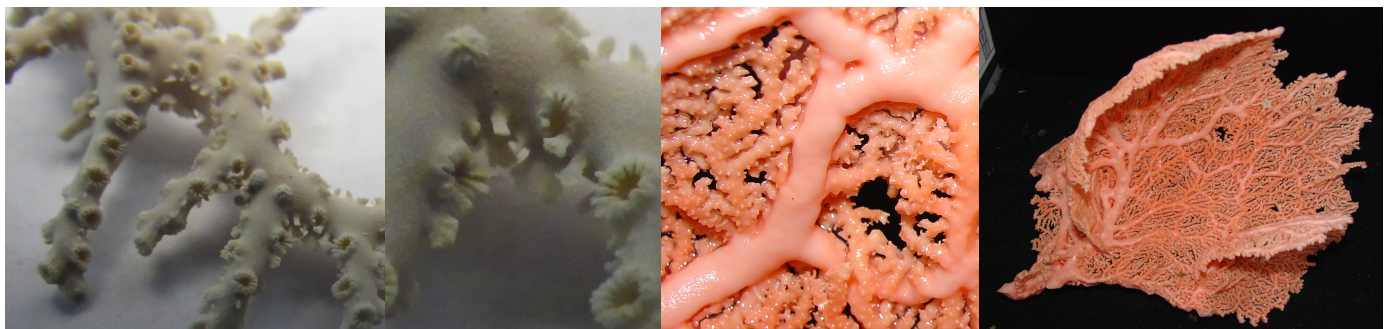
*Errinopora undulata*



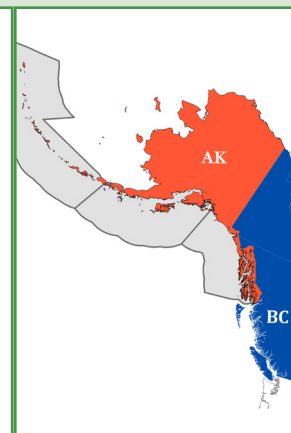
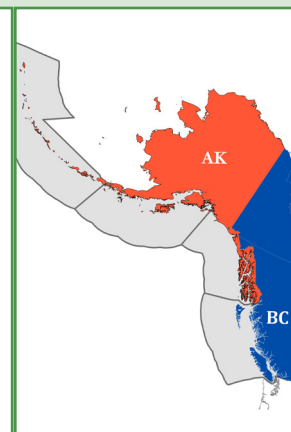
*Errinopora zarhyncha*



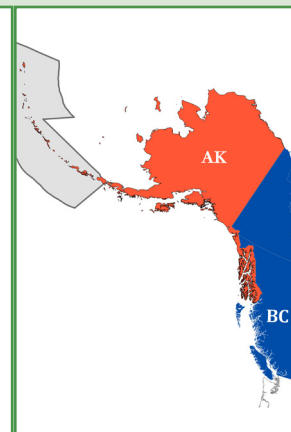
*Stylanthea papillosa*



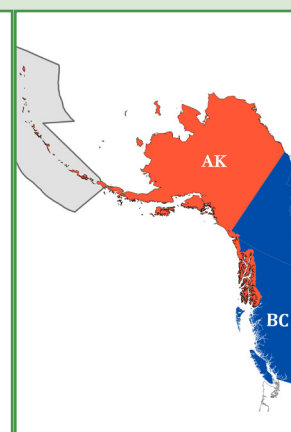
*Stylaster alaskanus*

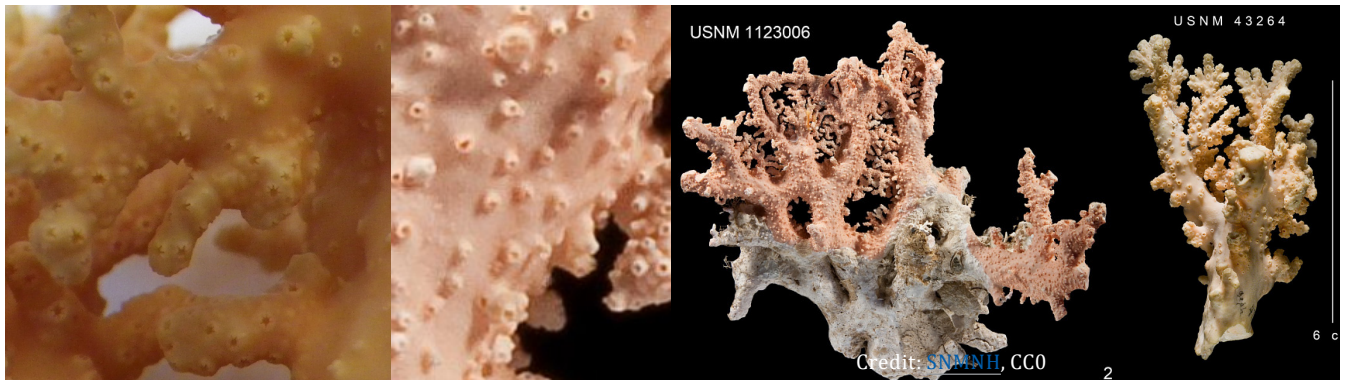
*Stylaster brochi*<sup>1,2,60</sup>**Rough Orange Hydrocoral****COLOR:** Pale orange**SHAPE:** Upright and planar to multiplanar (bushy); branches blunt and circular to slightly flattened in cross-section; branch **anastomosis** (reconnecting) not uncommon; often found with spionid polychaetes**SIZE:** Height to 28 cm**CYCLOSISTEMS:** On all surfaces and slightly raised creating a rough surface**NEMATO/DACTYLO-PORES:** **Dactylopores** range 6-13 per **cyclosystem****REPORTED DISTRIBUTION:** AI, GOA**REPORTED DEPTH:** 75-351 mWoRMS Aphia ID: [285858](#)GFBio Code: **3S2**RACE Code: **44032***Stylaster campylecus*<sup>1,2,60,72</sup>**Common Hydrocoral****COLOR:** White, pale orange, and pale pink**SHAPE:** Upright and uniplanar to multiplanar; branches large, thick, somewhat flattened, and **anastomosis** common**SIZE:** Height to 50 cm**CYCLOSISTEMS:** Linearly arranged; diameters are 1.0-1.3 mm; slightly protruding**NEMATO/DACTYLO-PORES:** **Ampullae** diameters are 1.0-1.1 mm; 7-17 **dactylopores/cyclosystem**)**REPORTED DISTRIBUTION:** AI, GOA, BC**REPORTED DEPTH:** 82-1011 mWoRMS Aphia ID: [346433](#)GFBio Code: **3SH**RACE Code: **44037***Stylaster crassiseptum*<sup>1,2,60</sup>**Thick-walled Hydrocoral****COLOR:** Pale orange**SHAPE:** Upright and uniplanar; branches circular in cross-section; branches do not **anastomose****SIZE:** Height to 24 cm**CYCLOSISTEMS:** Diameters are 0.7-1.0 mm; circular and well-spaced; protrude slightly on branch edges**NEMATO/DACTYLO-PORES:** **Ampullae** are smooth and diameters are 0.9-1.1 mm; 6-12 **dactylopores/cyclosystem****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 291-531 mWoRMS Aphia ID: [592254](#)

GFBio Code:

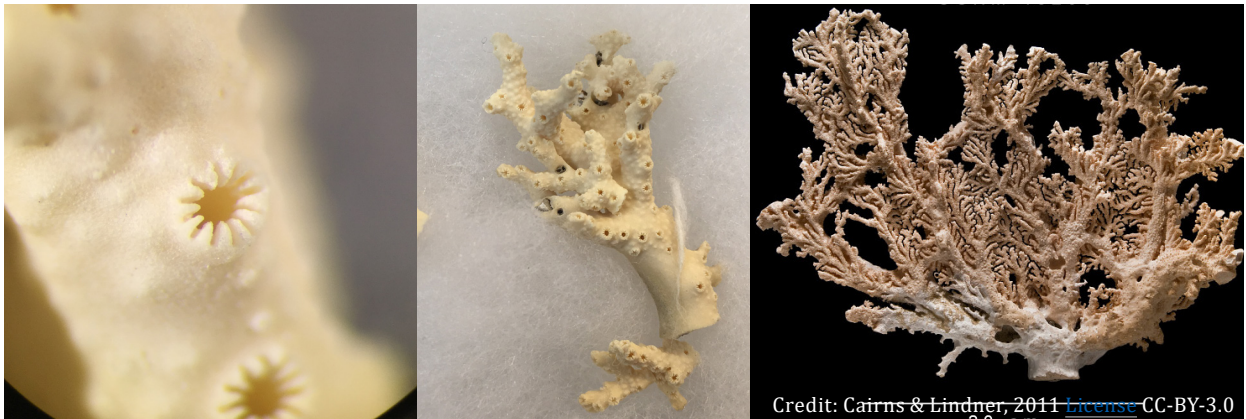
RACE Code: **44122***Stylaster elassotomus*<sup>1,2,60</sup>**Smooth-tube Hydrocoral****COLOR:** White to cream**SHAPE:** Upright and bushy; branches are circular in cross-section**SIZE:** Height to 6 cm**CYCLOSISTEMS:** Diameters are 1.0-1.2 mm; located on branch edges; projecting perpendicular to branch**NEMATO/DACTYLO-PORES:** **Ampullae** are unknown; 11-17 **dactylopores/cyclosystem****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 882 mWoRMS Aphia ID: [285874](#)

GFBio Code:

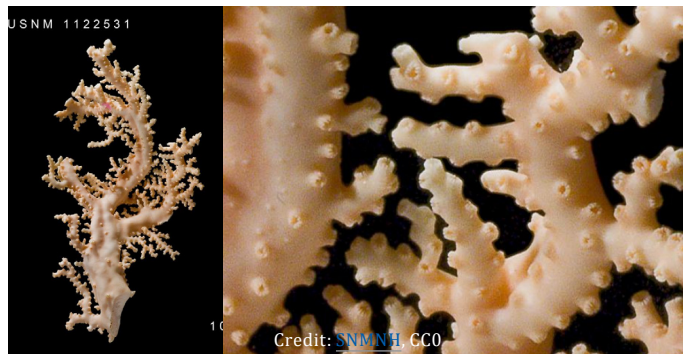
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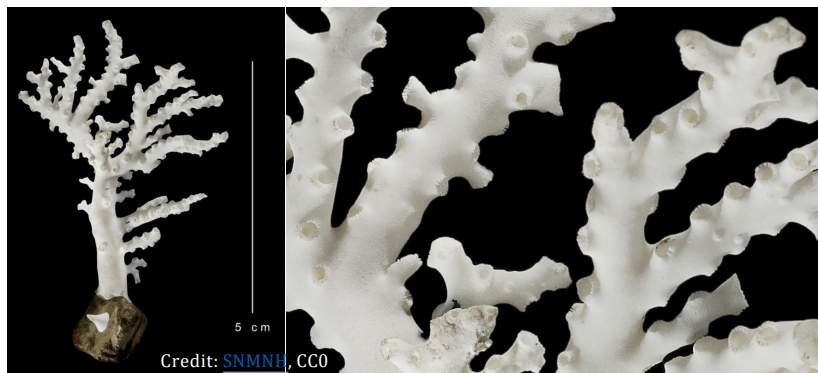
*Stylaster brochi*



*Stylaster campylecus*



*Stylaster crassiseptum*



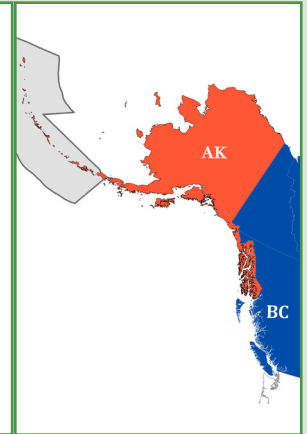
*Stylaster elassotomus*



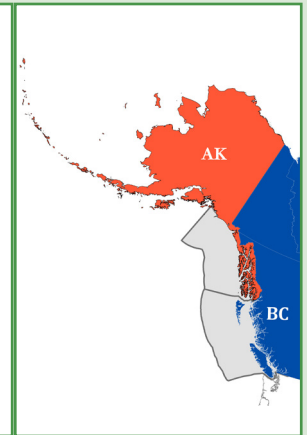
*Stylaster leptostylus*<sup>1,2,60</sup>**Thin Pen Hydrocoral****COLOR:** White**SHAPE:** Upright and uniplanar; branching equal and **dichotomous**; circular in cross-section; no **anastomosis****SIZE:** Height to 7 cm**CYCLOSYSTEMS:** Diameters are 1.0-1.1 mm; on branch edges and anterior surface; rarely on posterior; raised slightly**NEMATO/DACTYLO-PORES:** **Ampullae** diameters are 0.9-1.1 mm; evenly distributed on front and back of colonies; 7-12 **dactylopores/cyclosystem****REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 518 mWoRMS Aphia ID: [592248](#)

GFBio Code:

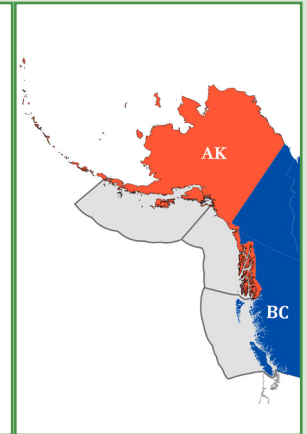
RACE Code:

*Stylaster parageus columbiensis*<sup>1,2,60</sup>**COLOR:** White**COLOR:** White**SHAPE:** Upright and bushy or flattened with delicate terminal branches**SIZE:** Height to 7 cm**CYCLOSYSTEMS:** Diameters are 1.1-1.5 mm; on distal branch edges and anterior of large diameter branches; slightly raised**NEMATO/DACTYLO-PORES:** **Ampullae** diameters are 0.9-1.0 mm; 6-13 **dactylopores/cyclosystem****REPORTED DISTRIBUTION:** EGOA, BC**REPORTED DEPTH:** 23-401 mWoRMS Aphia ID: [592252](#)

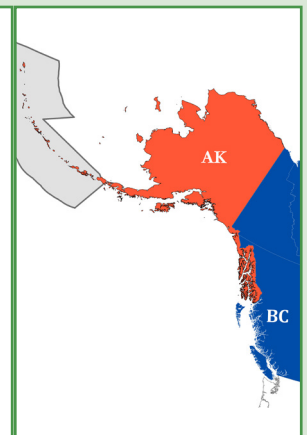
GFBio Code:

RACE Code: **44049 (species)***Stylaster parageus parageus*<sup>1,2,60</sup>**COLOR:** White, light orange**SHAPE:** Upright and branching; prickly; main branches large and thick; branchlets irregular, twig-like and growing on several planes**SIZE:** Height to 13 cm**CYCLOSYSTEMS:** Diameters are 0.9-1.0 mm; on branch edges and anterior face, rarely on posterior; slightly raised**NEMATO/DACTYLO-PORES:** **Ampullae** diameters are 0.8-1.0 mm; 5-11 **dactylopores/cyclosystem****REPORTED DISTRIBUTION:** GOA, BC**REPORTED DEPTH:** 23-401 mWoRMS Aphia ID: [592251](#)

GFBio Code:

RACE Code: **44049 (species)***Stylaster repandus*<sup>1,2,60</sup>**Folded Hydrocoral****COLOR:** Light orange with a light pink core**SHAPE:** Undulate; branching into 2-3 lamellar sheets**SIZE:** Height to 23 cm**CYCLOSYSTEMS:** Diameters are 1.0-1.15 m; occur on both sides of colony; not protruding**NEMATO/DACTYLO-PORES:** **Dactylopores** ~1-11 per **cyclosystem**; **ampullae** are present and slightly raised**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 375-475 mWoRMS Aphia ID: [592243](#)

GFBio Code:

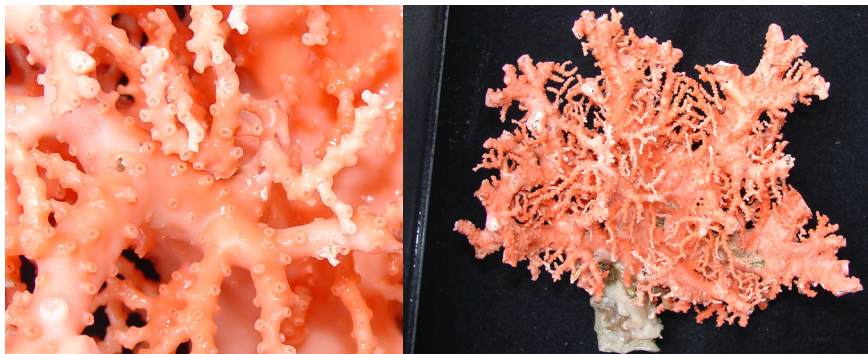
RACE Code: **44048**

No Images On Record  
With DFO or AFSC

*Stylaster leptostylus*



*Stylaster parageus columbiensis*



*Stylaster parageus parageus*

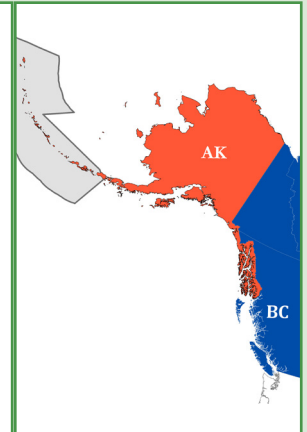


*Stylaster repandus*

*Stylaster stejnegeri*<sup>1,2,60</sup>**Stejneger's Hydrocoral****COLOR:** Light orange to pink**SHAPE:** Upright and branching with blunt tips**SIZE:** Height to 6 cm**CYCLOSISTEMS:** Located on all surfaces and fairly flush**NEMATO/DACTYLO-PORES:** **Dactylopores** ~5-11 per **cyclosystem**; **ampullae** present and slightly raised with low ridges radiating from center**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 79-90 mWoRMS Aphia ID: [285910](#)

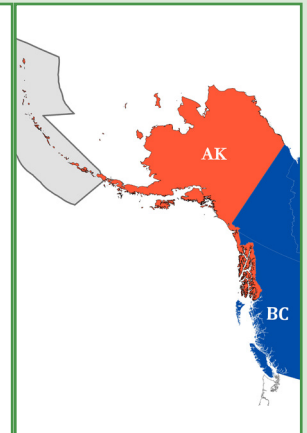
GFBio Code:

RACE Code: 44046

*Stylaster trachystomus*<sup>1,2,60</sup>**Rough Hydrocoral****COLOR:** Pale pink-orange**SHAPE:** Upright and largely uniplanar; large basal branches sometimes **anastomose**; distal branches circular to slightly flattened in cross-section**SIZE:** Height to 12 cm**CYCLOSISTEMS:** Uniformly distributed on branches and anterior surfaces; a few on posterior surfaces**NEMATO/DACTYLO-PORES:** **Dactylopores** ~8-18 per **cyclosystem**; **ampullae** 1.0-1.3 mm in diameter and warty**REPORTED DISTRIBUTION:** AI**REPORTED DEPTH:** 115-366 mWoRMS Aphia ID: [592249](#)

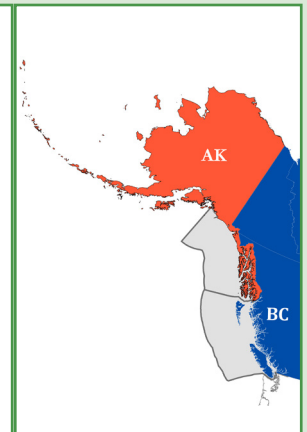
GFBio Code:

RACE Code: 44051

*Stylaster venustus*<sup>1,60,47,72</sup>**Fuschia Lace Hydrocoral****COLOR:** Violet to pink**SHAPE:** Upright and planar to slightly bushy; branches thick and blunt-tipped**SIZE:****CYCLOSISTEMS:** Occur on all sides of branches; 0.7-0.9 mm in diameter; slightly raised**NEMATO/DACTYLO-PORES:** **Dactylopores** range 4-8 per **cyclosystem**; **ampullae** not visible**REPORTED DISTRIBUTION:** EGOA, BC**REPORTED DEPTH:** 20 mWoRMS Aphia ID: [285914](#)

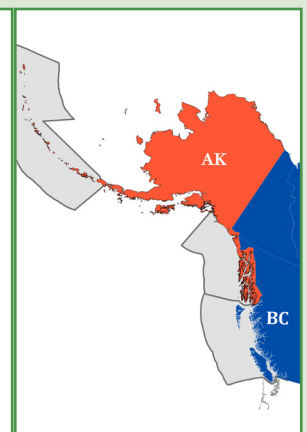
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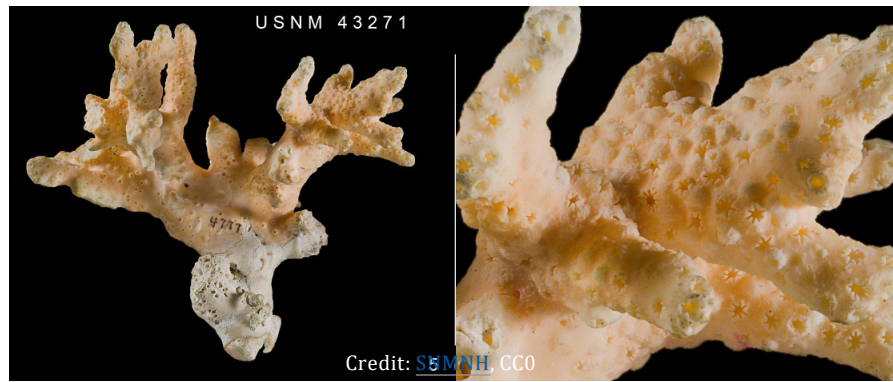
RACE Code: 44047

*Stylaster verrillii*<sup>1,2,3,72</sup>**Pink Branching Lace Hydrocoral****COLOR:** Light orange to pink**SHAPE:** Upright and branching in three dimensions; branch tips blunt**SIZE:** Height to 5 cm**CYCLOSISTEMS:** Occur on all surfaces; 1.0-1.2 mm in diameter; generally not protruding**NEMATO/DACTYLO-PORES:** **Dactylopores** ~5-10 per **cyclosystem**; **ampullae** not typically visible**REPORTED DISTRIBUTION:** AI, EGOA, BC**REPORTED DEPTH:** 21-393 mWoRMS Aphia ID: [285915](#)

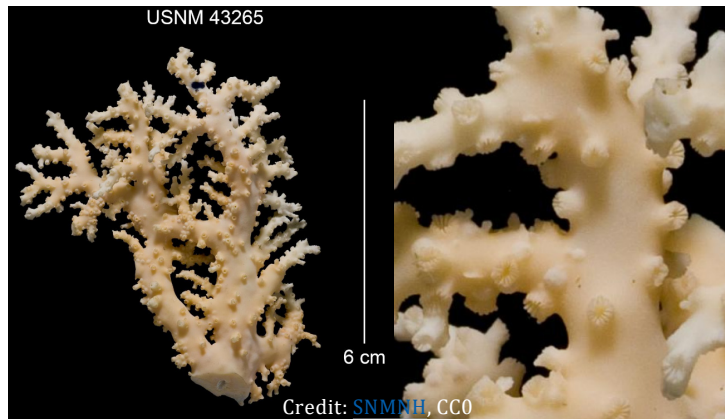
GFBio Code: 3S3

RACE Code: 44031

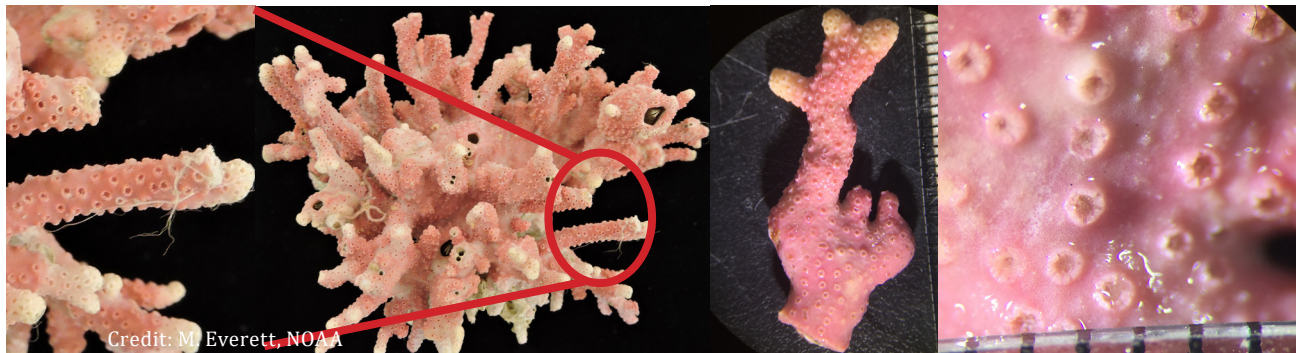




*Stylaster stejneri*



*Stylaster trachystomus*



*Stylaster venustus*



*Stylaster verrillii*

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## Glossary of Terms

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### A

**Ampullae** — warty reproductive bumps on stylasterid hydrocorals

**Anastomosis (Anastomose)** — union or joining of individual branches creating an interconnected mesh

**Arborescent** — resembling a tree in growth or appearance

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### B

**Basal Disc** — an expanded base portion by which certain stalked sessile organisms are attached to the substrate

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### C

**Calyx (plural Calices)** — a cuplike cavity or structure, the rigid part of a polyp stiffened by sclerites

**Capitate** — ending in a distinct compact head

**Coenenchyme (“see nin kim”)** — common tissue that surrounds and links polyps of an octocoral

**Costa (plural Costae)** — one of the vertical plates lying outside the corallite wall, a continuation of a septum (plural septa) which lies inside the wall

**Cyclosystem** — the opening from which a hydroid polyp opens on a hydrocoral; polyp orifice

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### D

**Dactylopore** — the pores of a hydrocoral that surround the **cyclosystem** (polyp orifice)

**Dichotomous** — branching in which 2 branches divide off of stem (axis)

**Digitiform** — formed, shaped like or having the function of a finger

**Dimorphic** — colonies are composed of 2 types of polyps: autozooids (8 septa) and siphonozooids (reduced size and rudimentary tentacles)

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### E

**Elliptical** — oval- or ellipse-shaped leaf, twice as long as broad, with the widest part of the leaf at the middle

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### F

**Fascicular Columella** — central structure of the calyx formed by the fusion of all the lower elements of the septa

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## G

**Gorgonin** — complex protein that makes up the horny skeleton of several suborders of Alcyonacean corals

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## L

**Lobate** — having lobes or divisions extending less than halfway to the middle of the base

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## M

**Monomorphic** — colonies are composed of 1 type of polyp

**Monopodial** — growing upward with a single main stem or axis

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## O

**Ovate** — an egg-shaped leaf with the broader end at the base

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## P

**Pali** — vertical pillars developed along the inner edges of the septa, structurally distinct

**Peduncle** — a stalk-like part by which an organism is attached to a substrate

**Pedicel** — a small stalk bearing a solitary coral

**Pinnate** — having branches, tentacles on each side of an axis, like the vanes of a feather

**Pinnule (Pinnulate)** — secondary division of a branch; subdivided

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## R

**Rachis** — the stem of a sea pen, sometimes bearing leaf-like structures.

**Retractile** — refers to the ability of coral polyps to deflate in size by pulling all the soft body parts of a polyp flush with the body wall of the colony

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## S

**Sclerite** — mineralised spicules of silica or calcium carbonate that are of importance structurally and in defense

**Septa** — a dividing wall, membrane, or the like, in a plant or animal structure

**Stolon** — the branched stem-like structure of some colonial hydroid coelenterates, attaching the colony to the substrate

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## T

**Theca** — corallite wall

**Tubercle** — a small rounded projection or protuberance

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# Appendix

## Table 1. WoRMS Aphia ID, DFO GFBio and NMFS RACE Codes

Order	Family	Genus Species	WoRMS Aphia ID	GFBio Code	RACE Code
Order Alcyonacea					
Family Alcyoniidae					
		<i>Alcyonium pacificum</i>	<a href="#">287373</a>		
		<i>Alcyonium</i> spp.	<a href="#">125284</a>	5B3	41102
		<i>Discophyton rudyi</i>	<a href="#">289828</a>	5B8	
		<i>Heteropolypus japonicus</i>	<a href="#">724714</a>	5B4 (genus)	41333
		<i>Heteropolypus ritteri</i>	<a href="#">724715</a>	5BP	
		<i>Pseudoanthomastus</i> sp.	<a href="#">267770</a>		
		<i>Thrombophyton trachydermum</i>	<a href="#">291219</a>	5BH	
		Unidentified Alcyoniidae	<a href="#">125269</a>		
Family Nephtheidae					
		<i>Gersemia</i> cf. <i>juliepackardae</i>		5BM	41201 (genus)
		<i>Gersemia</i> cf. <i>lambi</i>		5BN	41201 (genus)
		<i>Gersemia rubiformis</i>	<a href="#">156103</a>	5BF	41221
Family Chrysogorgiidae					
		<i>Chrysogorgia</i> sp. B		3TU (genus)	
		<i>Chrysogorgia</i> sp. C		3TU (genus)	
		<i>Pseudochrysogoriga</i> sp.	<a href="#">882825</a>		
		<i>Radicipes stonei</i>	<a href="#">1034980</a>	3TV (genus)	
Family Isididae					
		<i>Bathygorgia profunda</i>	<a href="#">883744</a>		44084
		<i>Isidella</i> spp.	<a href="#">125305</a>	5C4	44085
		<i>Isidella tentaculum</i>	<a href="#">582522</a>	5C4 (genus)	44065
		<i>Keratoisis</i> spp.	<a href="#">125306</a>	5C5	44088
		<i>Lepidisis</i> spp.	<a href="#">125307</a>	5C7	44110
Family Primnoidae					
		<i>Acanthoprimnoa</i> sp.	<a href="#">267188</a>		
		<i>Arthrogorgia kinoshitai</i>	<a href="#">289457</a>		44115
		<i>Arthrogorgia otsukai</i>	<a href="#">289458</a>		44114
		<i>Arthrogorgia utinomii</i>	<a href="#">289459</a>		44099
		<i>Callogorgia compressa</i>	<a href="#">292043</a>		44090
		<i>Callogorgia fraseri</i>	<a href="#">292044</a>		44091
		<i>Callogorgia</i> cf. <i>kinoshitai</i>	<a href="#">1055877</a>	3QD	41601
		<i>Calyptrophora laevispinosa</i>	<a href="#">409579</a>	3QI	
		<i>Narella abyssalis</i>	<a href="#">409560</a>		
		<i>Narella alaskensis</i>	<a href="#">409561</a>	3QP (genus)	

## Worms Aphia ID, GFBio and RACE Codes

Order	Family	Genus Species	WoRMS Aphia ID	GFBio Code	RACE Code
		<i>Narella arbuscula</i>	<a href="#">409558</a>		
		<i>Narella bayeri</i>	<a href="#">409557</a>		
		<i>Narella bowersi</i>	<a href="#">286512</a>	3QP (genus)	
		<i>Narella cristata</i>	<a href="#">409559</a>		
		<i>Parastenella doederleini</i>	<a href="#">290683</a>	3QS	
		<i>Parastenella gymnogaster</i>	<a href="#">409580</a>	3QT	
		<i>Parastenella pacifica</i>	<a href="#">409581</a>	3QU	
		<i>Parastenella ramosa</i>	<a href="#">290684</a>	3QV	
		<i>Plumarella aleutiana</i>	<a href="#">574236</a>		44101
		<i>Plumarella echinata</i>	<a href="#">574239</a>		44102
		<i>Plumarella hapala</i>	<a href="#">574235</a>		44103
		<i>Plumarella nuttingi</i>	<a href="#">574238</a>		44097
		<i>Plumarella profunda</i>	<a href="#">574234</a>		
		<i>Plumarella robusta</i>	<a href="#">574240</a>		44111
		<i>Plumarella spicata</i>	<a href="#">287675</a>		
		<i>Plumarella superba</i>	<a href="#">574237</a>		44075
		<i>Primnoa pacifica</i>	<a href="#">286539</a>	3T1	41521
		<i>Primnoa pacifica</i> var. <i>willei</i>	<a href="#">409549</a>	3T2	41522
		<i>Primnoa wingi</i>	<a href="#">286540</a>		44107
		<i>Thouarella cristata</i>	<a href="#">574232</a>		44106
		<i>Thouarella trilineata</i>	<a href="#">574233</a>		44070
	<b>Acanthogorgiidae</b>				44116
		<i>Acanthogorgia</i> cf. <i>spissa</i>	<a href="#">286087</a>	3TD (genus)	44100
		<i>Calcigorgia beringi</i>	<a href="#">520678</a>	3UI	41573
		<i>Calcigorgia gigantea</i>	<a href="#">1337212</a>		41700 (genus)
		<i>Calcigorgia japonica</i>	<a href="#">517641</a>		41700 (genus)
		<i>Calcigorgia matua</i>	<a href="#">1296112</a>		41700 (genus)
		<i>Calcigorgia spiculifera</i>	<a href="#">378316</a>	3TF	41701
	<b>Plexauridae</b>				41584
		<i>Alaskagorgia aleutiana</i>	<a href="#">289377</a>		41591
		<i>Alaskagorgia splendicitrina</i>	<a href="#">1310065</a>		41576
		<i>Cryogorgia koolsae</i>	<a href="#">289747</a>		41595
		<i>Muriceides cylindrica</i>	<a href="#">286358</a>		
		<i>Muriceides nigra</i>	<a href="#">286365</a>		44093 (genus)
		<i>Swiftia pacifica</i>	<a href="#">1036537</a>		44092
		<i>Swiftia simplex</i>	<a href="#">1036547</a>	3UK	41571
		<i>Swiftia spauldingi</i>	<a href="#">286420</a>	3UL	41570
		<i>Swiftia torreyi</i>	<a href="#">1036552</a>	3UM	

## Worms Aphia ID, GFBio and RACE Codes

Order	Family	Genus Species	WoRMS Aphia ID	GFBio Code	RACE Code
	<b>Anthothelidae</b>			3UN	
		<i>Anthothela pacifica</i>	<a href="#">286579</a>		
	<b>Coralliidae</b>			3SX	
		<i>Hemicorallium regale</i>	<a href="#">1311260</a>		
	<b>Paragorgiidae</b>				41581
		<i>Paragorgia pacifica</i>	<a href="#">517887</a>	3S7	41583
		<i>Paragorgia stephencairnsi</i> spp. complex		3S9	41580 (genus)
		<i>Paragorgia yutlinux</i>	<a href="#">286612</a>	3SA	41580 (genus)
		Unknown <i>Paragorgiidae</i>	<a href="#">125281</a>		41581 (family)
		<i>Sibogogorgia cauliflora</i>	<a href="#">517784</a>		
	<b>Clavulariidae</b>				
		<i>Clavularia armata</i>	<a href="#">517651</a>		41750 (genus)
		<i>Clavularia eburnean</i>	<a href="#">517663</a>		41750 (genus)
		<i>Clavularia moresbii</i>	<a href="#">517663</a>		41750 (genus)
		<i>Clavularia rigida</i>	<a href="#">759934</a>		41750 (genus)
		<i>Clavularia</i> spp.	<a href="#">125286</a>	3Q5 (genus)	41750 (genus)
		<i>Sarcodictyon incrustans</i>	<a href="#">759935</a>		41752
<b>Order Pennatulacea</b>					
	<b>Anthoptilidae</b>				41752
		<i>Anthoptilum grandiflorum</i>	<a href="#">128504</a>	3Z4	42020
		<i>Anthoptilum</i> cf. <i>lithophilum</i>	<a href="#">955841</a>		
		<i>Anthoptilum murrayi</i>	<a href="#">128505</a>	3Z5	42021
	<b>Funiculinidae</b>				
		<i>Funiculina parkeri</i>	<a href="#">286622</a>	3Z9	
	<b>Halipteridae</b>			3Z9	
		<i>Halipteris californica</i>	<a href="#">286623</a>	3XD	42013
		<i>Halipteris</i> sp. A			42009
		<i>Halipteris</i> sp. B			42008 (genus)
		<i>Halipteris willemoesi</i>	<a href="#">286626</a>	3XF	42012
	<b>Kophobelemnidae</b>				
		<i>Kohobelemnion affine</i>	<a href="#">286627</a>	3ZG	
		<i>Kophobelemnion</i> sp.	<a href="#">286629</a>	3ZI	
	<b>Pennatulidae</b>				42018
		<i>Pennatula phosphorea</i>	<a href="#">128517</a>	3XL	
		<i>Pennatula</i> spp.	<a href="#">128495</a>		
		<i>Ptilosarcus gurneyi</i>	<a href="#">290947</a>	3U5	42017

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Order	Family	Genus Species	WoRMS Aphia ID	GFBio Code	RACE Code
	<b>Protoptilidae</b>				
		<i>Distichoptilum rigidum</i>	<a href="#">128497</a>		
		<i>Protoptilum</i> spp.	<a href="#">128498</a>	3ZV	42007
	<b>Stachyptilidae</b>				
		<i>Stachyptilum superbum</i>	<a href="#">291109</a>	3ZZ	
	<b>Umbellulidae</b>				
		<i>Umbellula lindahli</i>	<a href="#">128531</a>	3ZP	42014
	<b>Veretillidae</b>				
		<i>Cavernularia vansyoci</i>	<a href="#">286684</a>		41106
	<b>Virgularidae</b>				
		<i>Acanthoptilum gracile</i>	<a href="#">289324</a>	3U9	
		<i>Stylatula elongata</i>	<a href="#">286695</a>	3T4	42002
		<i>Virgularia bromleyi</i>	<a href="#">286705</a>	3V0 (genus)	42001 (genus)
		<i>Virgularia glacialis</i>	<a href="#">128538</a>	3V0 (genus)	42001 (genus)
		<i>Virgularia</i> spp.	<a href="#">128503</a>		42001
<b>Order Antipatharia</b>					
	<b>Antipathidae</b>				
		<i>Stichopathes spiessi</i>	<a href="#">283982</a>		
	<b>Cladopathidae</b>				
		<i>Chrysopathes formosa</i>	<a href="#">289659</a>	5H6	41531 (genus)
		<i>Chrysopathes speciosa</i>	<a href="#">289661</a>	5H7	41530
		<i>Heteropathes pacifica</i>	<a href="#">723306</a>		
		<i>Trissopathes pseudotrística</i>	<a href="#">291243</a>	5H8 (genus)	
	<b>Schizopathidae</b>				
		<i>Alternatipathes</i> cf. <i>alternata</i>	<a href="#">994319</a>		
		<i>Bathypathes patula</i>	<a href="#">103323</a>	5IC	41541
		<i>Bathypathes</i> spp.	<a href="#">103304</a>	5IB	41540
		<i>Dendrobathypathes boutillieri</i>	<a href="#">289787</a>	5IE	
		<i>Lillipathes wingi</i>	<a href="#">290293</a>	5IL	
		<i>Parantipathes euantha</i>	<a href="#">472933</a>	5H1 (genus)	41550 (genus)
		<i>Parantipathes</i> spp.	<a href="#">103306</a>	5H1	41550
		<i>Umbellapathes</i> sp. A		5IM	
<b>Order Scleractinia</b>					
	<b>Caryophylliidae</b>				
		<i>Caryophyllia alaskensis</i>	<a href="#">286724</a>	3J7	44004
		<i>Caryophyllia arnoldi</i>	<a href="#">286728</a>	3JB	44023
		<i>Crispatotrochus foxi</i>	<a href="#">289737</a>	3JD	44022
		<i>Desmophyllum dianthus</i>	<a href="#">135159</a>	3JF	44019
		<i>Desmophyllum pertusum</i>	<a href="#">1245747</a>	3JJ	44017

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Order	Family	Genus Species	WoRMS Aphia ID	GFBio Code	RACE Code
		<i>Labyrinthocyathus quaylei</i>	<a href="#">290268</a>		
		<i>Paracyathus stearnsii</i>	<a href="#">286728</a>	3JK	
	<b>Dendrophylliidae</b>				
		<i>Balanophyllia elegans</i>	<a href="#">286920</a>	3J4	
	<b>Flabellidae</b>				44009
		<i>Flabellum</i> sp. A sensu			44005
		<i>Javania borealis</i>	<a href="#">287032</a>		44010
		<i>Javania cailleti</i>	<a href="#">135198</a>	3K7	44011
	<b>Fungiacyathidae</b>				
		<i>Fungiacyathus marenzelleri</i>	<a href="#">135205</a>	3KV	
	<b>Micrabaciidae</b>				
		<i>Leptopenus discus</i>	<a href="#">287466</a>	3KY	
	<b>Order Stylasteridae</b>				
	<b>Stylasteridae</b>				44028
		<i>Cryptelia trophostega</i>	<a href="#">285799</a>		44036
		<i>Cyclohelia lamellata</i>	<a href="#">289768</a>		44040
		<i>Distichopora borealis</i>	<a href="#">288320</a>		44061
		<i>Errinopora dichotoma</i>	<a href="#">592149</a>		44121
		<i>Errinopora disticha</i>	<a href="#">592148</a>		44076
		<i>Errinopora fisheri</i>	<a href="#">592146</a>		44120
		<i>Errinopora nanneca</i>	<a href="#">289914</a>		44082
		<i>Errinopora pourtalesii</i>	<a href="#">289915</a>	3SC	44079
		<i>Errinopora undulata</i>	<a href="#">592147</a>		44042
		<i>Errinopora zarhyncha</i>	<a href="#">289917</a>		44080
		<i>Stylanthea papillosa</i>	<a href="#">291143</a>	3SE	44050
		<i>Stylaster alaskanus</i>	<a href="#">285846</a>		44045
		<i>Stylaster brochi</i>	<a href="#">285858</a>	3S2	44032
		<i>Stylaster campylecus</i>	<a href="#">346433</a>	3SH	44037
		<i>Stylaster crassiseptum</i>	<a href="#">592254</a>		44122
		<i>Stylaster elassotomus</i>	<a href="#">285874</a>		44034
		<i>Stylaster leptostylus</i>	<a href="#">592248</a>		
		<i>Stylaster parageus columbiensis</i>	<a href="#">592252</a>		44049 (species)
		<i>Stylaster parageus parageus</i>	<a href="#">592251</a>		44049 (species)
		<i>Stylaster repandus</i>	<a href="#">592243</a>		44048
		<i>Stylaster stejneri</i>	<a href="#">285910</a>		44046
		<i>Stylaster trachystomus</i>	<a href="#">592249</a>		44051
		<i>Stylaster venustus</i>	<a href="#">285914</a>	3SL	44047
		<i>Stylaster verrillii</i>	<a href="#">285915</a>	3S3	44031