

Page: 222-223

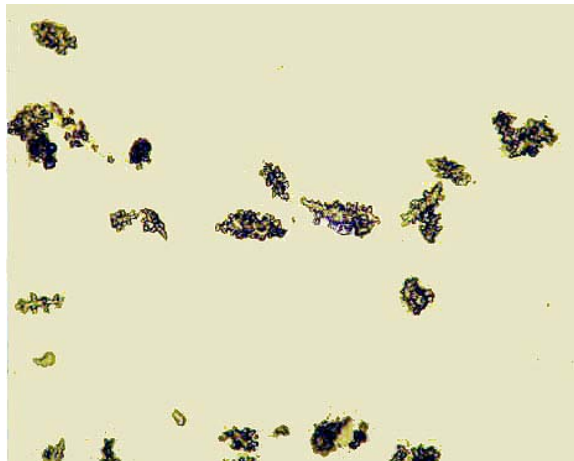
Group: Holaxonia  
Family: Gorgoniidae  
Genus:

## Guaiagorgia

Sampling: Polyp and Surface.

Sclerites: Colorless sclerites. Narrow or barrel shaped spindles in the surface. Polyp contains slender rods.

Notes: Colonies are blue in life from the presence of the chemical pigment Guanine, which also can occur in terrestrial trees. They can occasionally be Red. Branches show large polyp mounds when polyps are retracted. Preserved specimens are a cream white color.



Group: Calcaxonina

Family: Ellisellidae (No sclerites in the axis, only gorgonin. Solid central core. Shell shaped strands of Calcium carbonate in the concentric layers of gorgonin (pg.13 #M). Two main sclerite forms are double head capstan like and a club shaped sclerite with a pineapple-like club head.

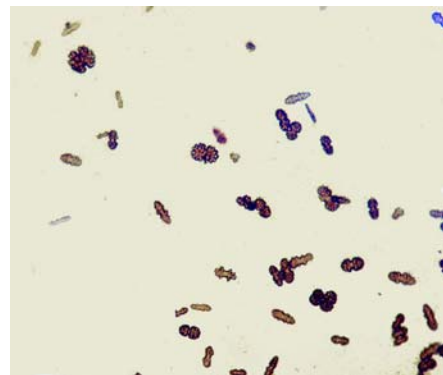
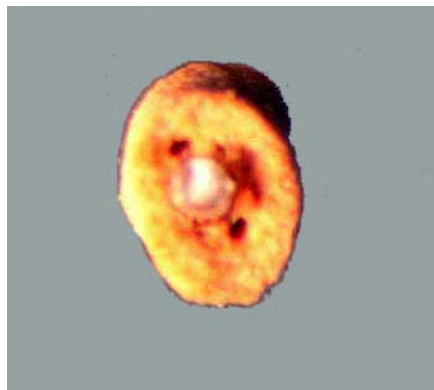
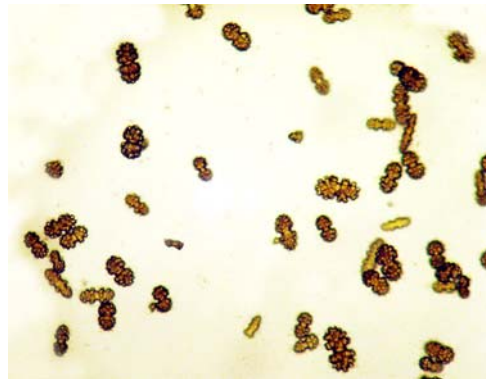
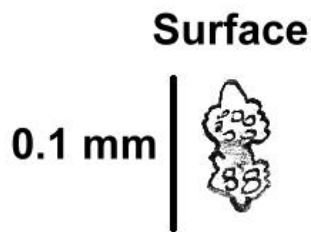
Genus:

## Ellisella

Sampling: Surface.

Sclerites: Colored sclerites at the surface, often orange. Spindle shaped with double heads. Surface of heads covered in large warts. The central axis is white due to calcium carbonate and is visible in broken branches.

Notes: Only difference right now between Ellisella and Viminella is the shape of branches. Genetic work is needed to better define this genus. Colonies occur in shallow and deep water and have a cosmopolitan distribution. Colonies are brightly colored. Polyps are evenly spaced and in rows on small branches.



Group: Calcaxonia  
Family: Ellisellidae  
Genus:

## Junceella

Sampling: Surface and Subsurface.

Sclerites: Pineapple topped clubs are located in the surface tissue. Capstans can be found in the subsurface layer. Sclerites are usually about 0.08 mm long. They can be pigmented or colorless.

Notes: Colonies form long branches. Often reproduces asexually covering large patches of substrate. This process occurs by dissolution of the coenenchyme 10 cm below the branch tip. The branch tip then falls off and forms a new colony. Colonies are colored. Polyps are layered along the branches pressed up against it.

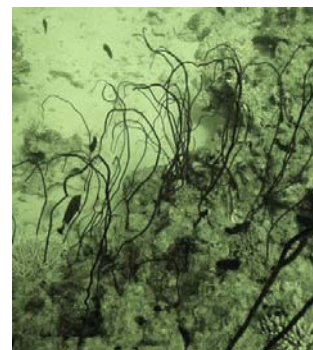
**Surface**



**Subsurface**



0.1 mm



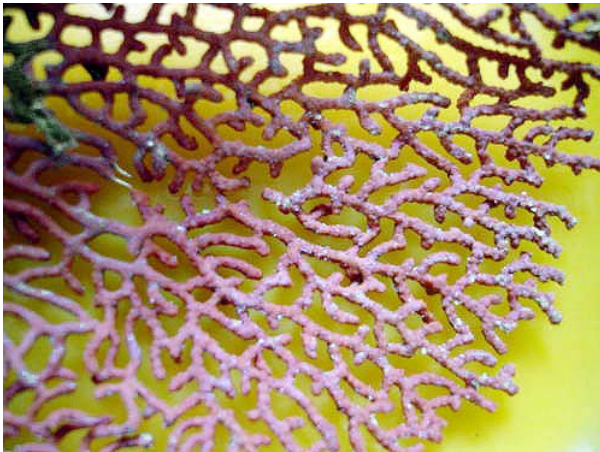
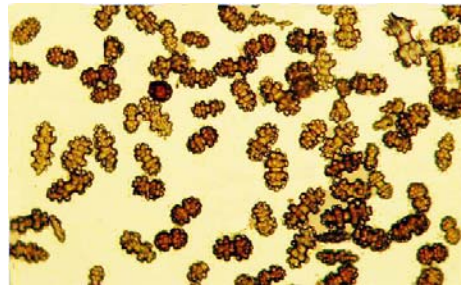
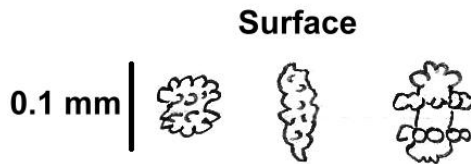
Group: Calcaxonia  
Family: Ellisellidae  
Genus:

## Verrucella

Sampling: Surface.

Sclerites: Sclerites range from strongly double headed too more elongate. Some are dumbbell shaped with a warty coating on both heads. Others are spindle like with a wart like surface. Up to 0.1 mm long. Double headed forms are not as prominent as in Ellisella.

Notes: Colonies are anastomose, net shaped and very sea fan like. When polyps retract they form mounds on the branches.



Group: Calcaxonia

Family: Ifalukellidae (Named after Ifaluk Atoll. Only one nominal species of genus Ifalukella. Genera and species have a very hard, calcareous holdfast.)

Genus:

## Plumigorgia

Sampling: Surface.

Sclerites: Star shaped sclerites are present in the thick growth forms. Thin growth form has biscuit shaped flat platelets similar to xeniid sclerites. Clear to opaque.

Notes: Two growth forms, one has thin tissue coating the axis, the other has thick tissue. The axis is highly calcified giving the axis a golden color.



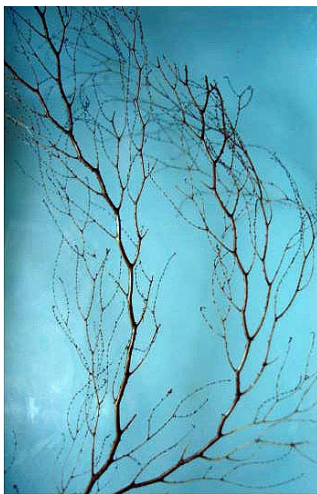
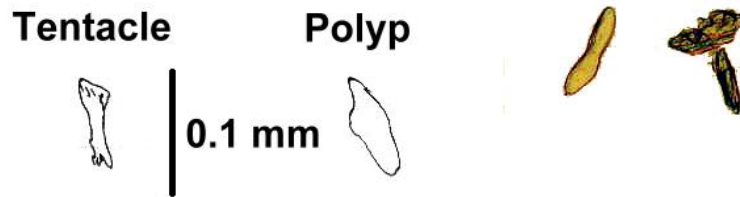
Group: Calcaxonina  
Family: Chrysogorgiidae  
Genus:

## Stephanogorgia

Sampling: Polyp and Tentacles.

Sclerites: Flat scales are numerous in the polyp. They are almost 0.1 mm long. Small narrow rods in the tentacles are slightly warty. Sclerites are colorless.

Notes: Colonies have a zigzag branching pattern. Branches are very fine and almost hydroid like. Coenenchyme is very thin. The main axis of the branches has a metallic gold color that is visible in life.



Group: Calcaxonia

Family: Isididae

Genus:

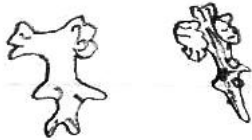
## Isis

Sampling: Surface, Subsurface

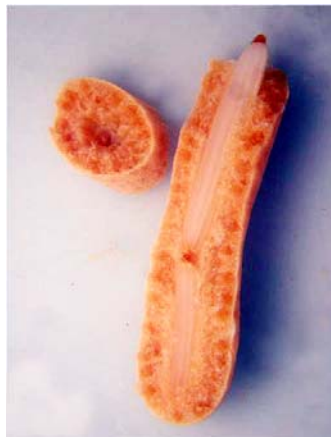
Sclerites: Small surface clubs about 0.07 mm long. Subsurface capstans are larger, over 0.1 mm long on average. Sclerites are always colorless.

Notes: Smooth branches with dense, retractile polyps. Colonies are Monomorphic.

**Surface**



**Subsurface**



# Atlantic Octocorals

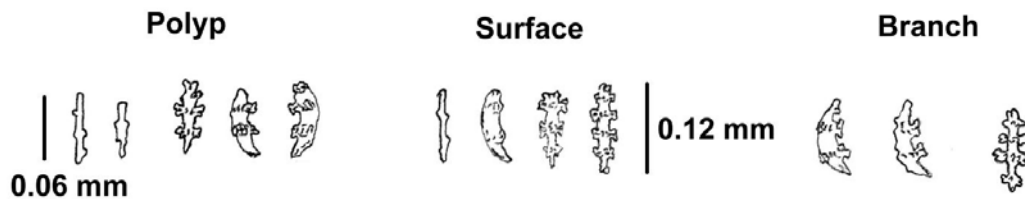
Group: Holaxonia  
Family: Gorgoniidae  
Genus:

## Gorgonia

**Sampling:** Polyp, Surface and Branch. Not all regions need to be sampled separately. One small section of a branch usually reveals all the sclerite forms.

**Sclerites:** Spindles with concentric rows of tubercles. Scaphoid sclerites have larger warts on the concave side. Polyps contain rods with a few irregular warts. Rods are clear, scaphoids and spindles can be clear or lavender to maroon in color.

**Notes:** Colonies are zooxanthellate. Branches grow into one another forming a lattice like growth form known as anastomosis. There are two common Caribbean species, *G. ventalina* and *G. flabellum*.



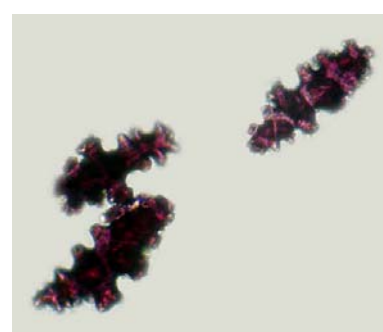
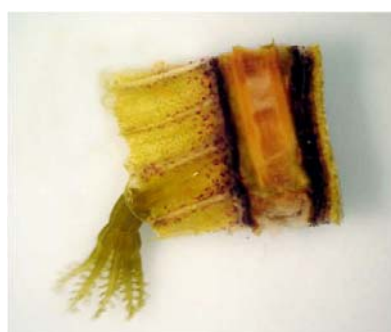
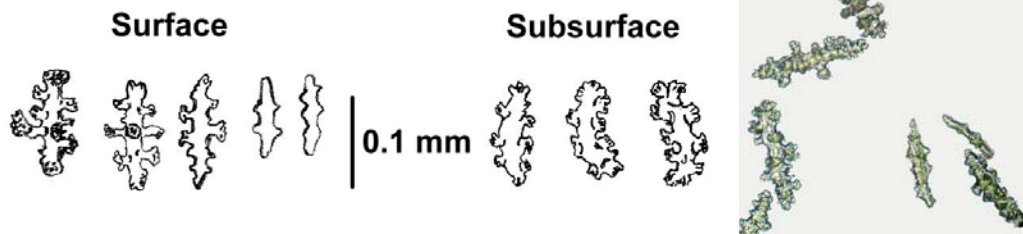
Group: Holaxonia  
Family: Gorgoniidae  
Genus:

## Pterogorgia

Sampling: Surface and Subsurface.

Sclerites: Calyces rarely present. No polyp sclerites. Surface contains spindles with warty tubercles. Flattened rods are also present in the surface. Subsurface sclerites are colored scaphoids and spindles. They have a gentle curve with multiple rows of tubercles.

Notes: Colonies have distinct, flat-sided branches with polyp bearing margins. Polyps emerge from narrow channels or grooves. Zooxanthellate. Bushy and somewhat planar growth forms. There are 2 common Caribbean species that differ mainly in growth form.



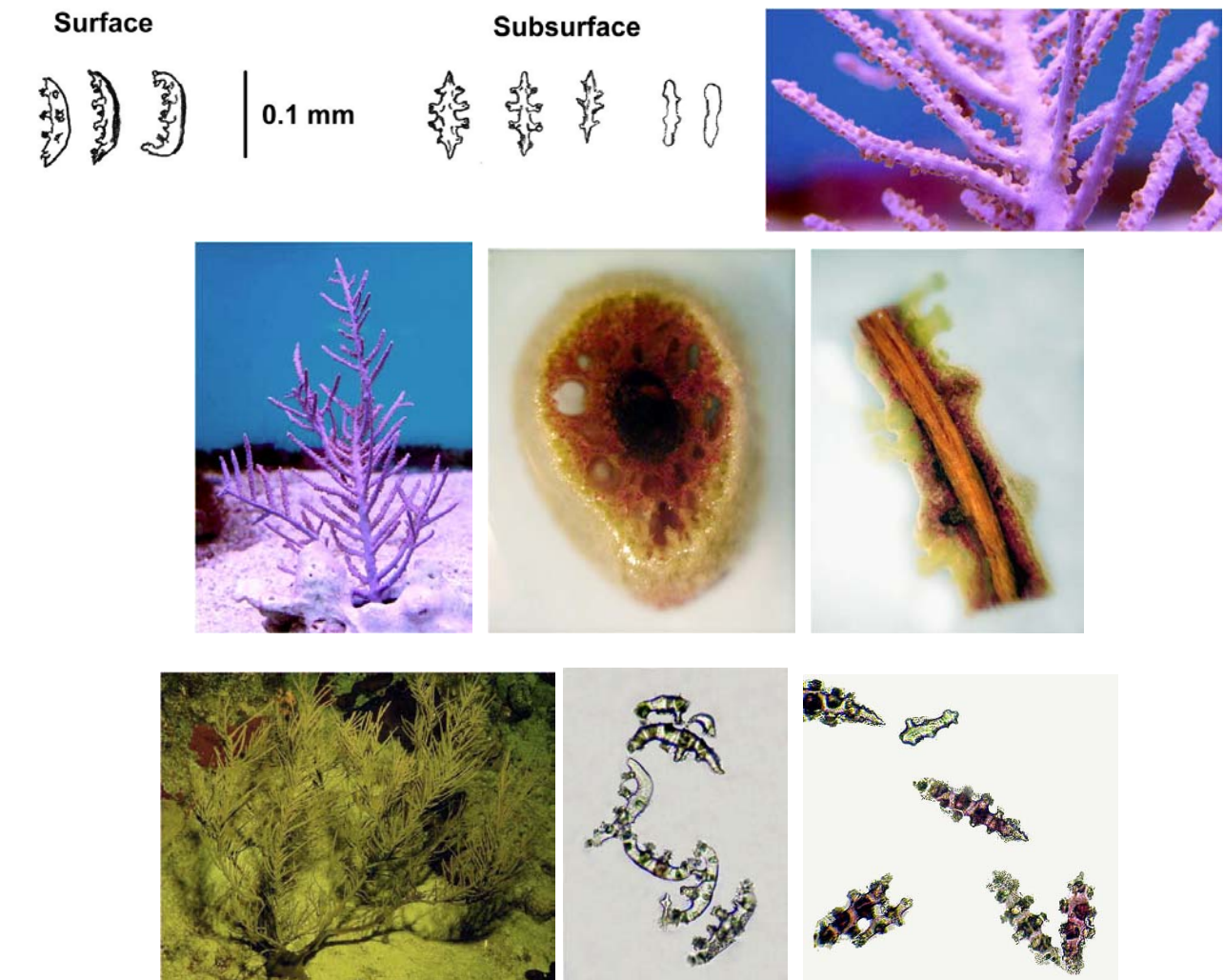
Group: Holaxonia  
Family: Gorgoniidae  
Genus:

## Pseudopterogorgia

Sampling: Surface and Subsurface.

Sclerites: In most species calyces are absent. Colorless scaphoids occur in the surface. Scaphoids have a smooth convex side with 2 rows of evenly spaced tubercles on the concave side. Subsurface spindles have pointed tips, are colored, and have slightly warty tubercles. Flattened rods may be present in the subsurface near retracted polyps.

Notes: Soft, plume like colonies with pinnate secondary branches often evenly spaced. Zooxanthellate. Polyps line the secondary branches in evenly spaced rows.



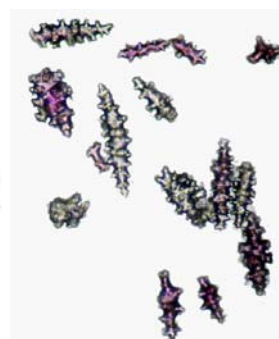
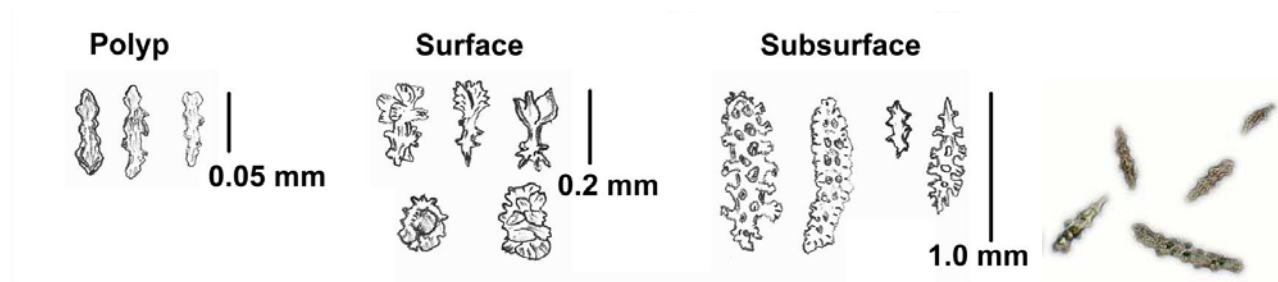
Group: Holaxonia  
Family: Plexauridae  
Genus:

## Eunicea

Sampling: Polyp, Surface, and Subsurface.

Sclerites: Calyces range in size. They can be cylindrical or shelf-like. Polyps often supported by a “chevron” shaped arrangement of sclerites. Polyps contain small-flattened rods up to 0.07 mm long. Surface sclerites are mostly tuberculate, spiny, or foliate clubs and torches. Foliate spheroids are also present in the surface. Large, warty colored spindles are common in the subsurface.

Notes: Many species have a candelabrum-shaped growth form. Zooxanthellae.



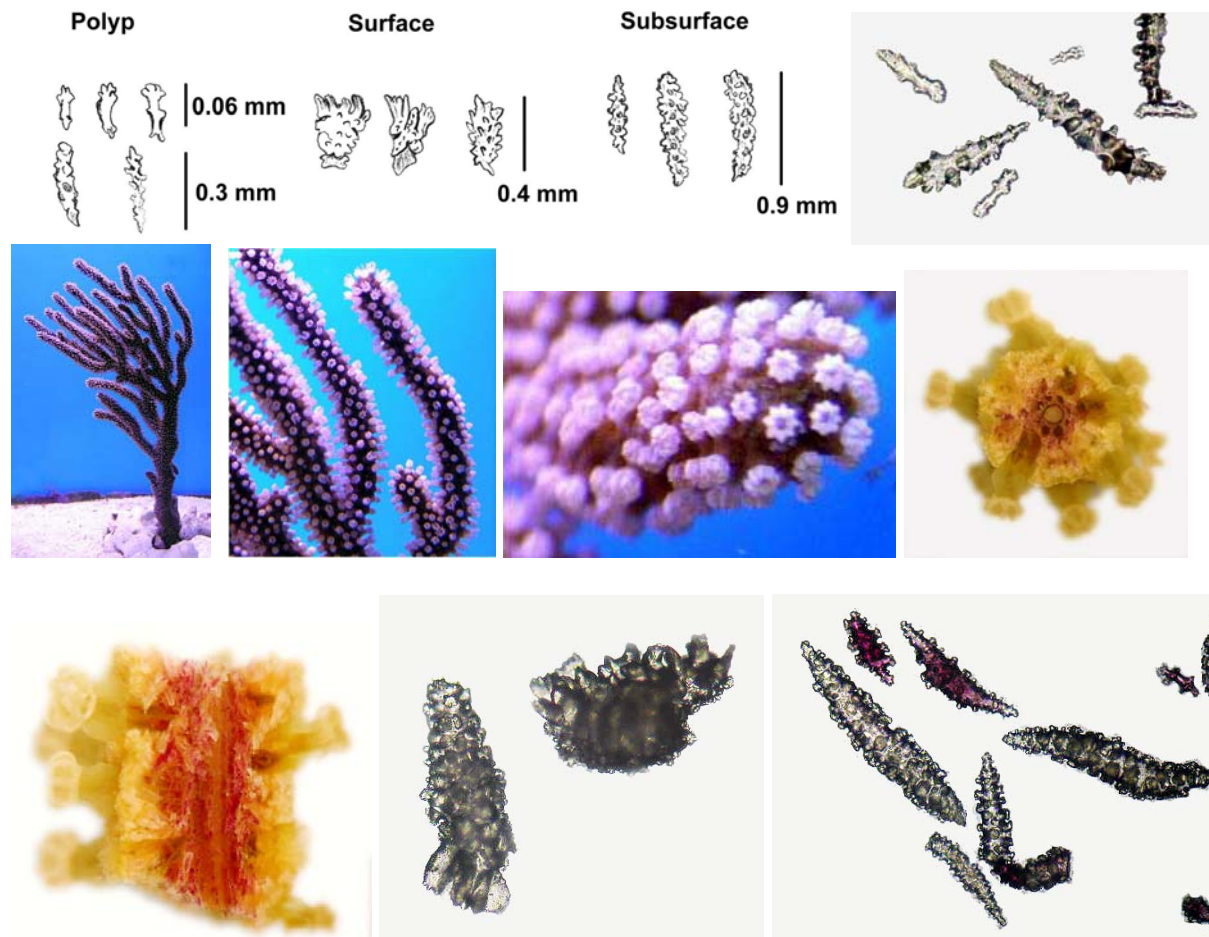
Group: Holaxonia  
Family: Plexauridae  
Genus:

## Plexaura

Sampling: Polyp, Surface and Subsurface.

Sclerites: Flattened rods in the polyp form a crown. Foliate, warty, and thorny clubs dominate the surface layer. Subsurface sclerites are warty spindles and also sometimes short capstans or spheroids. Sclerites close to the axis can be colored.

Notes: Branch pores are very short, forming a tiny lip around the retracted polyps. Colonies grow in a planar form with dichotomous branches. Polyps can be lighter in color than the coenenchyme coating the branches. Zooxanthellate. *Plexaura homomalla* has been examined for its potential biomedical benefits.



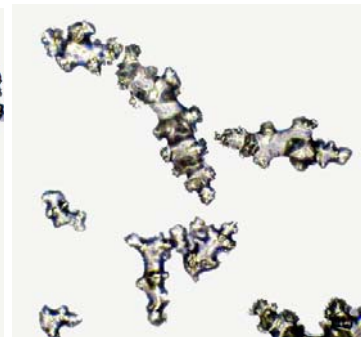
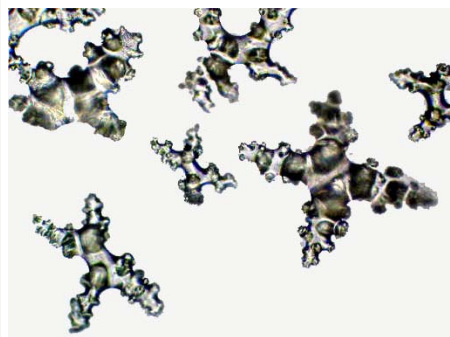
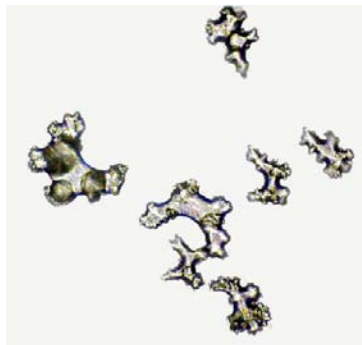
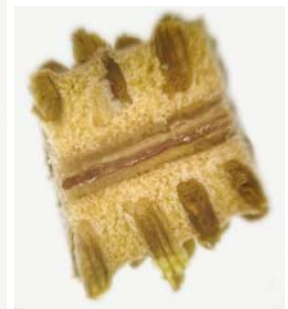
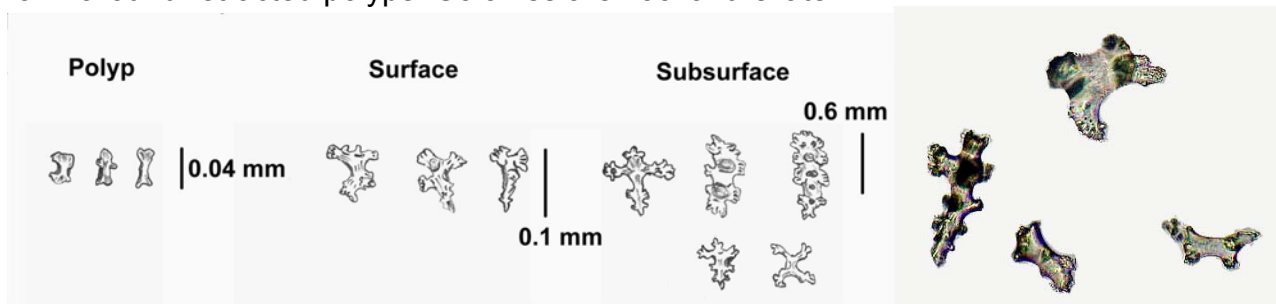
Group: Holaxonia  
Family: Plexauridae  
Genus:

## Plexaurella

**Sampling:** Polyp, Surface and Subsurface. Sclerites are often highly dense and may need additional dilution with de-ionized water on the slide to separate them.

**Sclerites:** Sclerites colorless. Polyps have very few sclerites that are flattened rods with knobby ends. Thorny, cross-like or butterfly shaped sclerites in the surface. Subsurface contains a mix of spindles, irregular spindles, and or crosses.

**Notes:** Bushy colonies with dichotomous branches. Oval, slit-like pores of coenenchyme form around retracted polyps. Colonies are zooxanthellate.



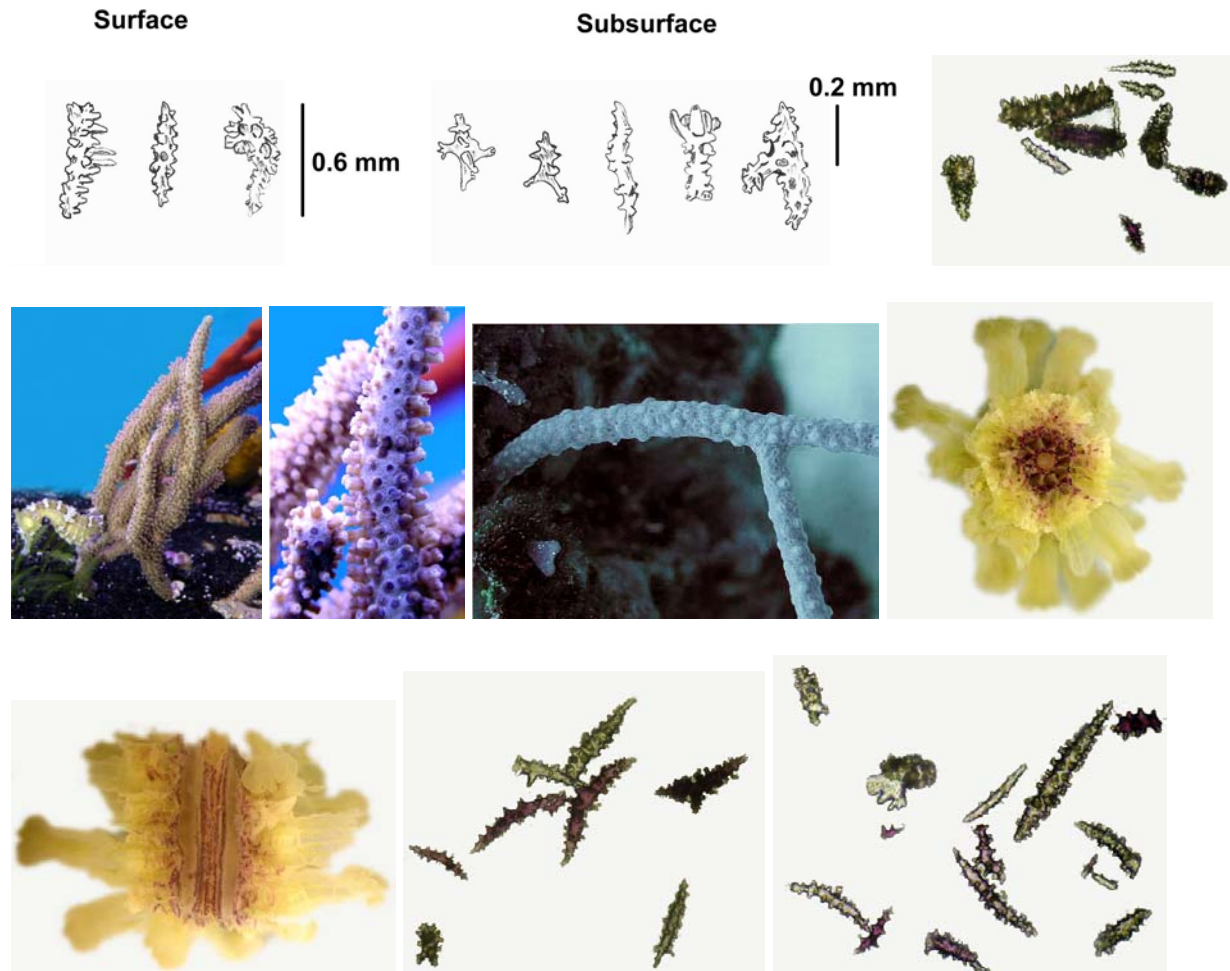
Group: Holaxonia  
Family: Plexauridae  
Genus:

## Pseudoplexaura

Sampling: Surface and Subsurface.

Sclerites: Some sclerites are colored. Most species lack polyp sclerites. Surface has wart clubs and or leafy clubs with a mix of spindles. A range of multi-radiated capstans, sharp pointed spindles, and branch spindles are found in the subsurface.

Notes: Polyps retractile. Colonies form large, rod-shaped upright branches and can be dichotomous. Branches are smooth with no calyces and soft to the touch. Sometimes small polyp ridges are present from partially retracted polyps. Zooxanthellate.



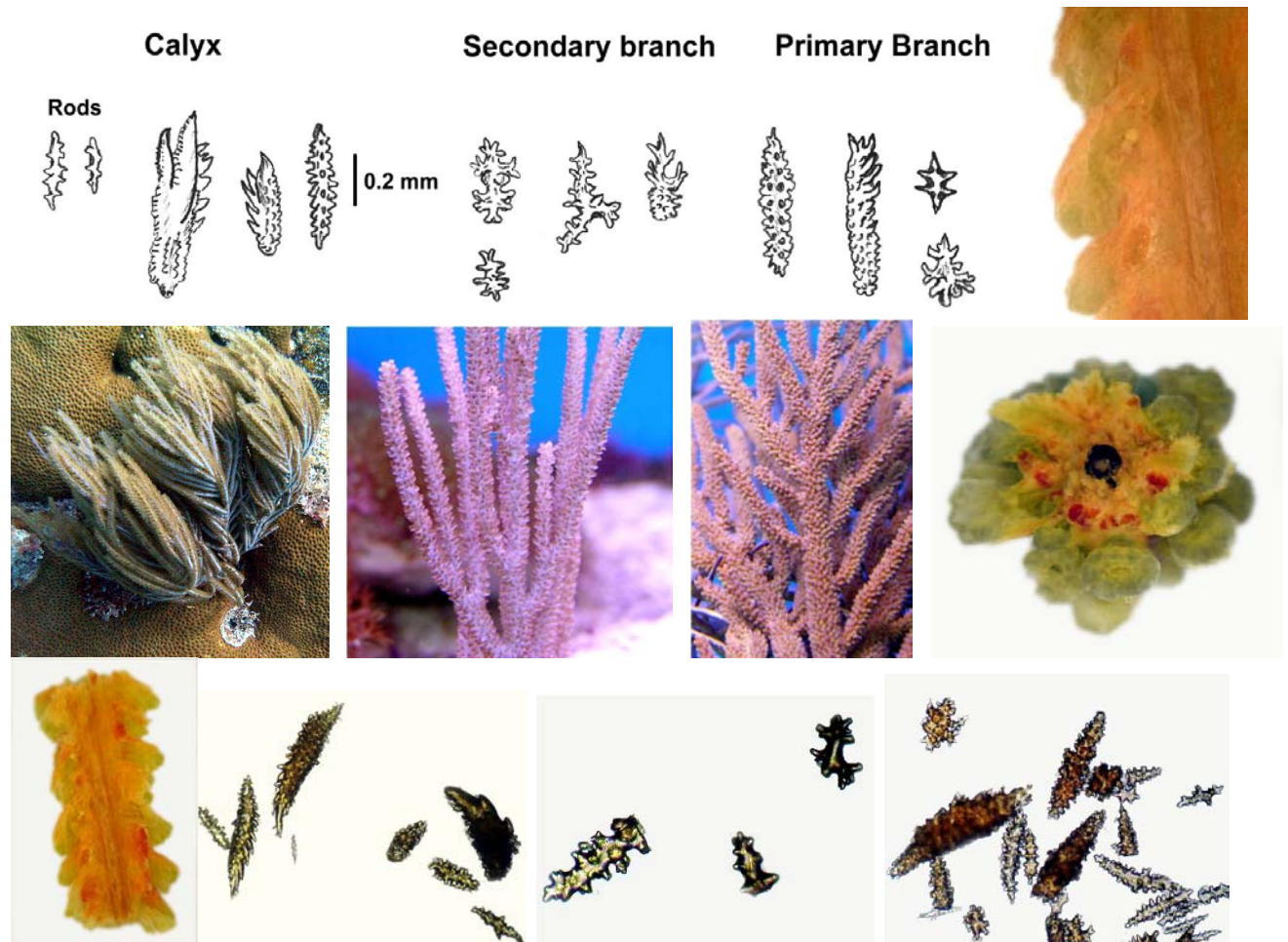
Group: Holaxonia  
Family: Plexauridae  
Genus:

## Muricea

Sampling: Calyx, Secondary Branch and Primary Branch.

Sclerites: Sclerites can be a mix of clear and colored. Calyx sclerites are predominately spindles. Some have many strong slanting spines. Others have a terminal flattened point that may or may not be branched and up to 0.8 mm long. Secondary branches contain narrow spiny spindles and branched spindles up to 0.4 mm long. Primary branch sclerites are larger warty spindles some with slanting spines. There are also smaller stellate capstans in primary branches.

Notes: Very prominent, shelf-like calyces giving this genus a rough outer feel when handled. Primary and secondary branches often growing planar with stout branches. Zooxanthellate.



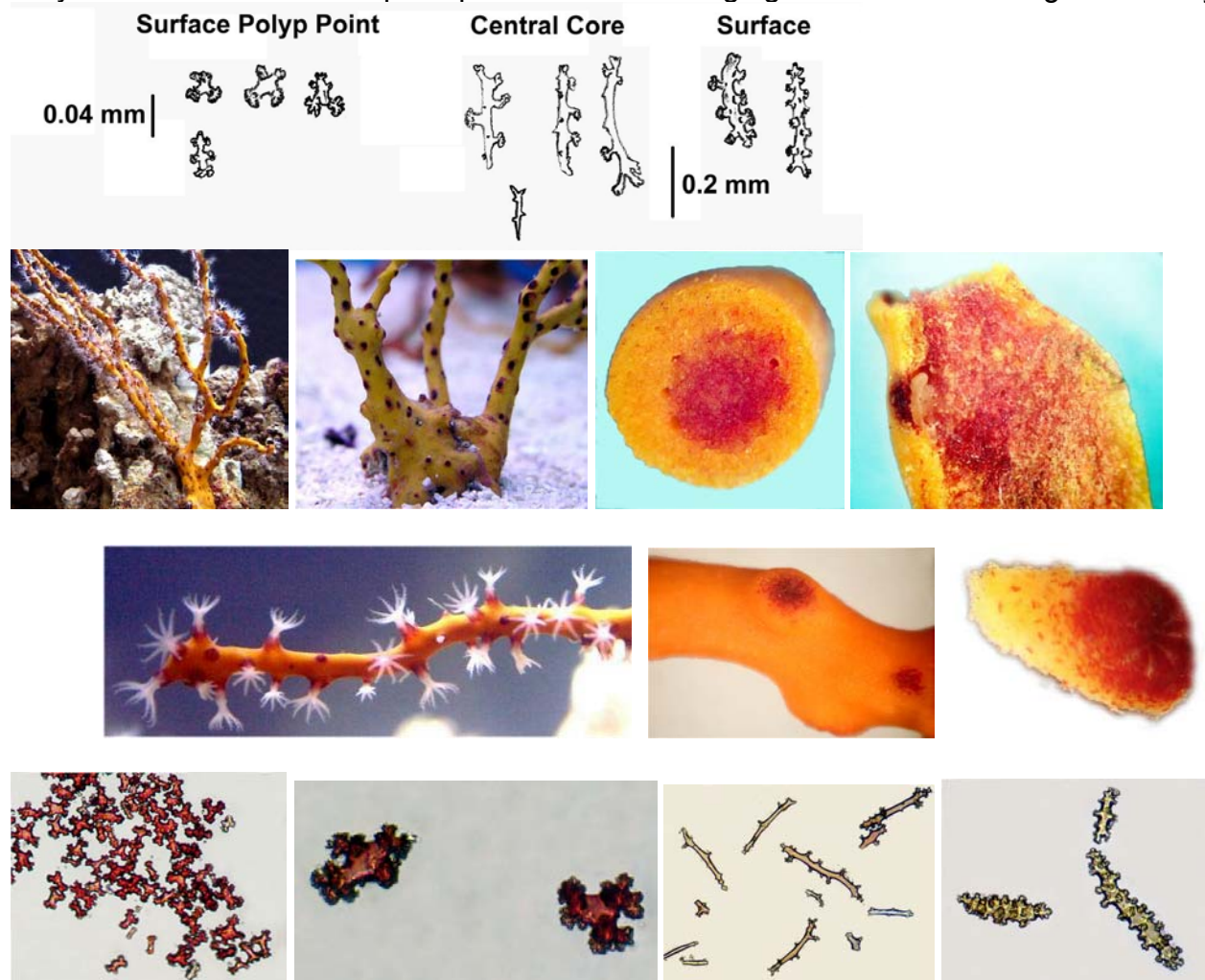
Group: Scleraxonia  
Family: Anthothelidae  
Genus:

## Diodogorgia

Sampling: Surface Polyp Pont, Central Core, and Surface.

Sclerites: Areas of polyp retraction in the surface tissue are coated with radiate sclerites. These often have four to six points. Surface sclerites are rods or spindles with widely spaced tubercles. Branched rods with tubercles are found in the central core.

Notes: Azooxanthellate with white polyps. There is one species, *D. nodulifera* with two color morphs. Colonies are either orange to yellow with red calyces or red with red calyces. Calyces are low with a bump shape and smooth merging into the surrounding coenenchyme.



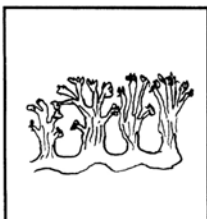
## Appendix A

Record keeping is an important part of the taxonomic process. The following is an example of a generic recording form used during the examination of a soft coral specimen. The blank version of this form may be photocopied to use as needed. Alternatively it can be used as a template, modified to fit the needs of your specific institution.

### OCTOCORAL EXAMINATION REPORT

DATE: Aug. 14, 2006	CATALOG: RMNH	SPECIMEN NUMBER: Sta. 609:B
FAMILY: Xeniidae	GENUS:	SPECIES:
COLLECTOR:	DATE COLLECTED: 12-11-1992	NUMBER OF SAMPLES: 1 pc.

Colony shape: Base with stalks, Branched Polyps on multiple levels, No Capitulum	Colony Size: 4.5 cm long x 2 cm high Preserved.
Polyp detail: Polyps fused at Base! Basic Stalks!	Monomorphic <input checked="" type="checkbox"/> Dimorphic <input type="checkbox"/>
Color: Preserved: Creamish brown to light tan	Location of origin: Mahé, Seychelles



Sclerite Notes: All sclerites dense in tissue, mostly biscuit shaped. Many with slight irregularities, i.e. bends, lumps, fusing, etc... Surface features common Anthelia appearance. Sclerites 0.03 mm Long x 0.007 wide, maximum.

Sclerite Sampling: (1-Tentacle/Pinnule 2-Antho. 3-Stalk 4-Base )

① 128.7µm 	② 200x 33µm = 7.5µm 	③ 	④ 	Pinnule Counts 2 Rows  Aboral = 8-10P ORAL = 10P
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Additional Notes: Anthoecidia - 6-8 mm Long x 1.0 mm wide (max)  
Tentacles - 4.5 mm Long x 0.2 mm wide  
Pinnules - up to 0.3 mm Long x 0.15 mm Wide

\* Anthoecidia fused at base to form stalks. Stalks have vertical lines outlining polyps. Very grooved stalks.  
Space between Pinnules with blunt, round ends

Samples on hand:	Slide mounts:
Photographs: Yes	Material on loan: 1 pc.

# OCTOCORAL EXAMINATION REPORT

DATE:	CATALOG:	SPECIMEN NUMBER:
FAMILY:	GENUS:	SPECIES:
COLLECTOR:	DATE COLLECTED:	NUMBER OF SAMPLES:

Colony shape:	Colony Size:
Polyp detail:	Monomorphic <input type="checkbox"/> Dimorphic <input type="checkbox"/>
Color:	Location of origin:



Sclerite Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Sclerite Sampling: ( \_\_\_\_\_ )



Additional Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Samples on hand:	Slide mounts:
Photographs:	Material on loan:

## References and Suggested Reading

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