

# A field guide to the mesophotic corals of Lord Howe Island Marine Park

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The following are preliminary identification of corals from images captured using remotely operated vehicles as part of a Geoscience Australia survey of the benthic habitats surrounding Balls Pyramid (Linklater et al. 2016). The research revealed occasionally abundant and surprisingly diverse coral assemblages at depths of between 40-80 m at 30°S, including the first records for some taxa, such as *Cycloseris*, south of the Great Barrier Reef.

The identifications are necessarily provisional. The image quality is often poor and no specimens were collected. Furthermore, many of the coral species in the Lord Howe Island Marine Park are new to science. The identifications are, however, supported by a large collection of corals from the Lord Howe Island Marine Park, including specimens from some of the mesophotic sites visited by Geoscience Australia, currently in either the private collection of Andrew Baird at James Cook University or the Museum of Tropical Queensland.

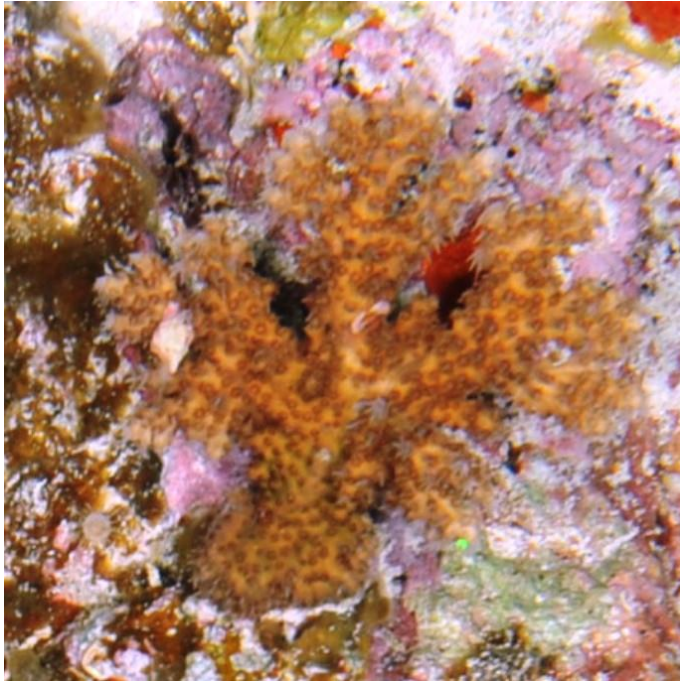
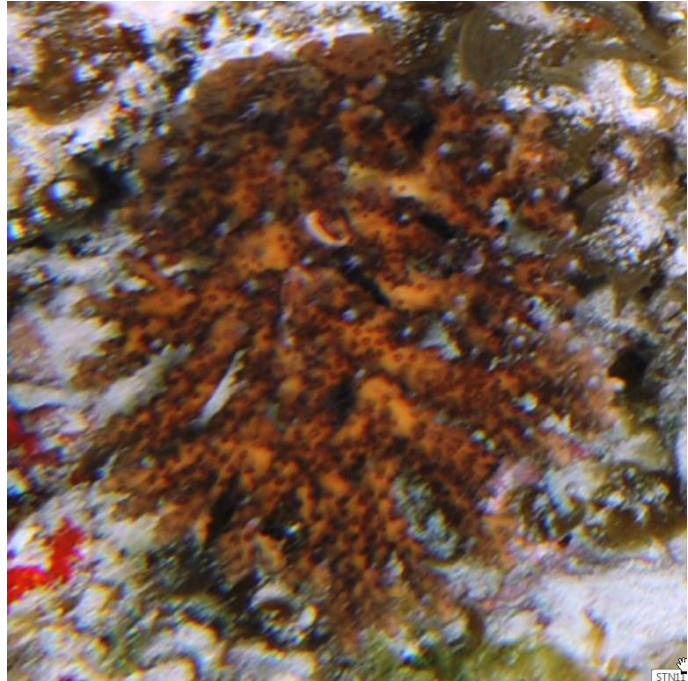
Acknowledgements. This research was funded by ARC Centre of Excellence for Coral Reef Studies and supported by Geoscience Australia. This research was conducted in the Lord Howe Island Marine Park under Permits LHIMP/R/2011/001, LHIMP/R/2013/001, LHIMP/R/18006/01032018. We thank Brian Busteed of Howea Dive, Aaron Ralph of Pro Dive Lord Howe Island, Ian Ker and Sallyann Gudge from the NSW Department of Primary Industries and Hanaka Mera for the design and formatting of the document and images.

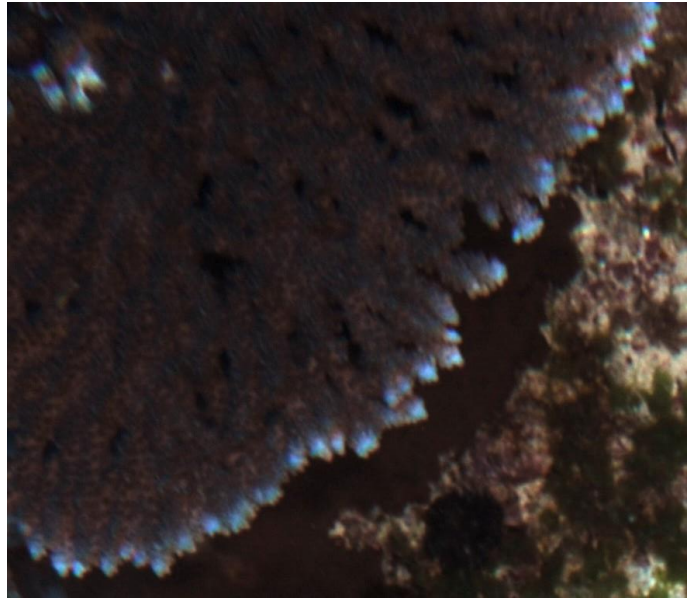
Linklater M, Carroll AG, Hamylton SM, Jordan AR, Brooke BP, Nichol SL, Woodroffe CD (2016) High coral cover on a mesophotic, subtropical island platform at the limits of coral reef growth. *Cont Shelf Res* 130:34-46

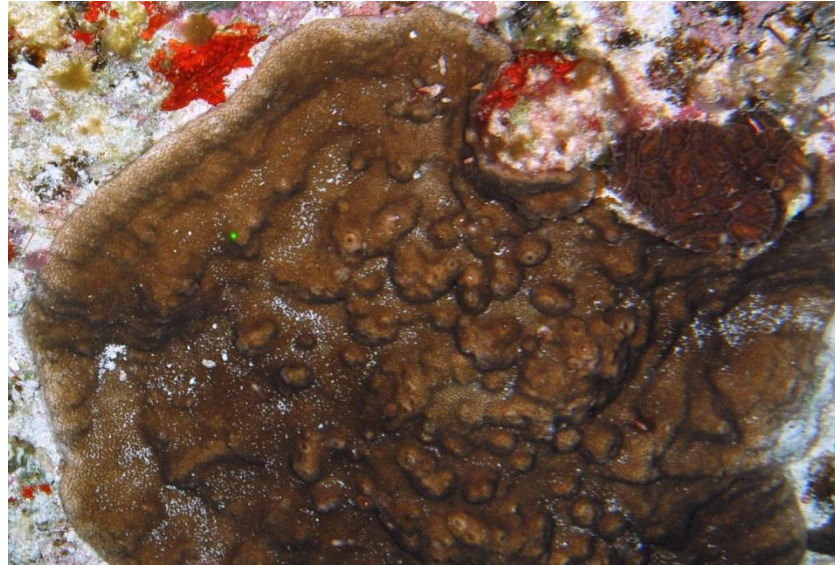
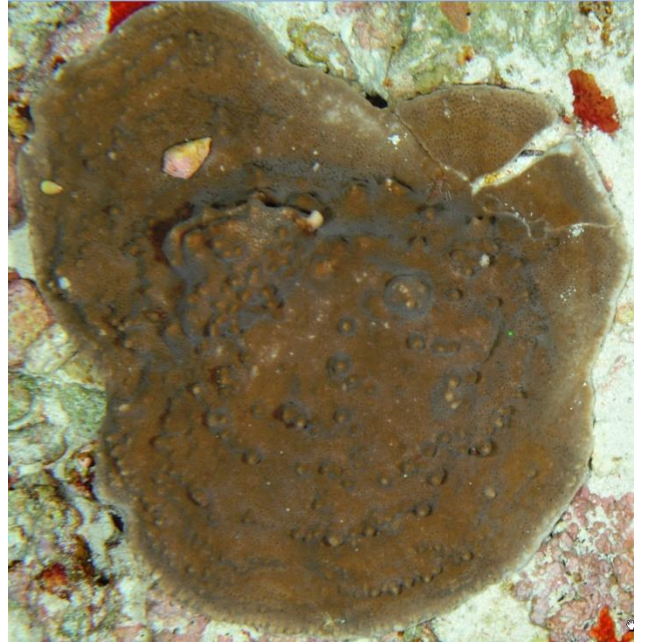
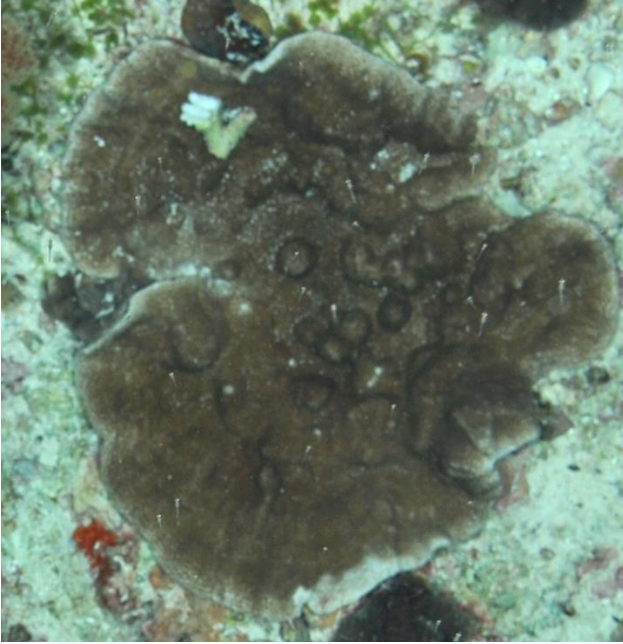
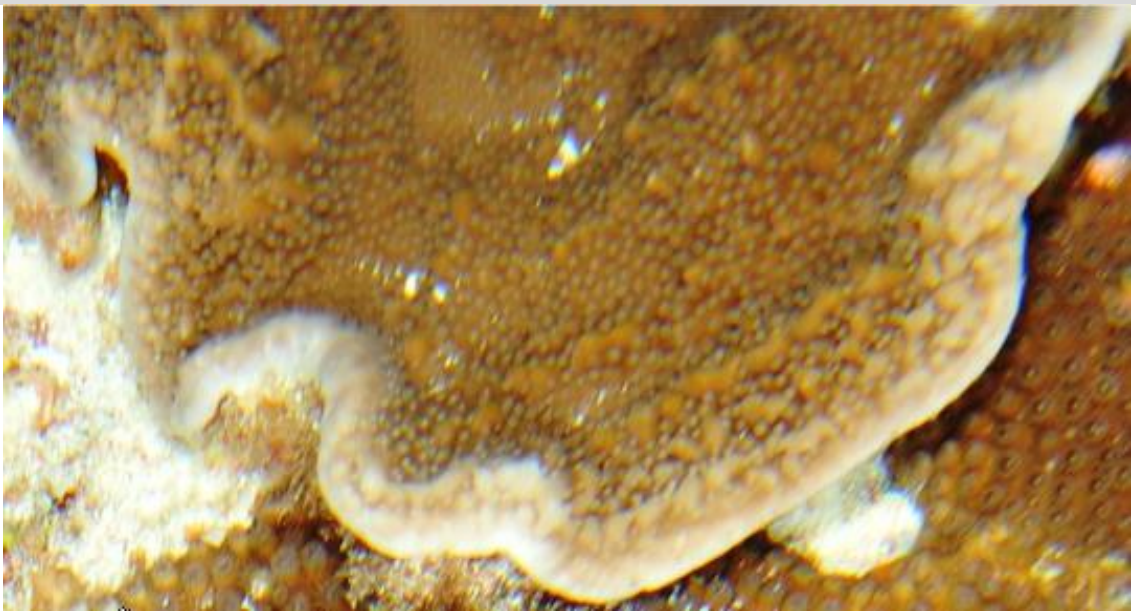
This is an initiative of Project Phoenix

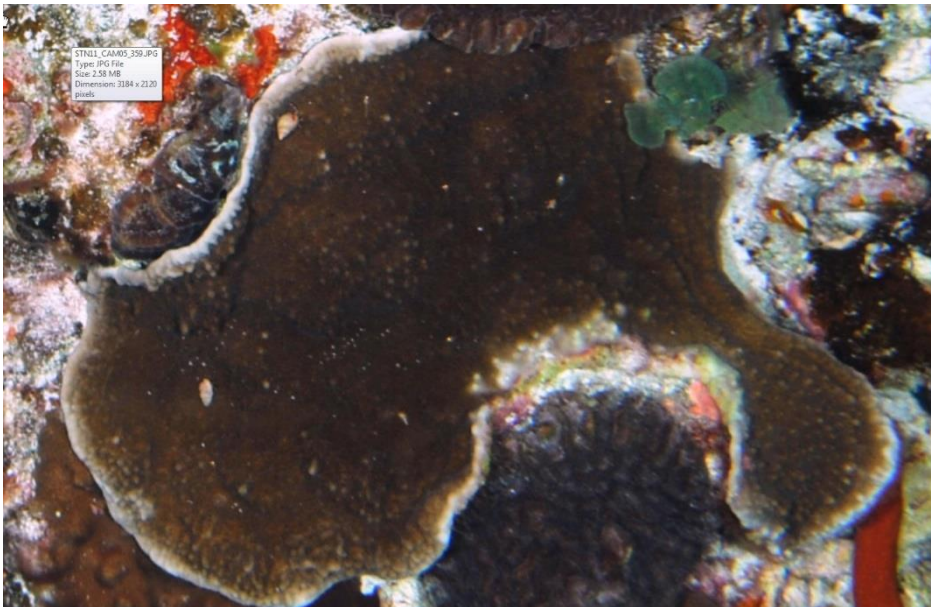
Visit: [coralprojectphoenix.org](http://coralprojectphoenix.org)



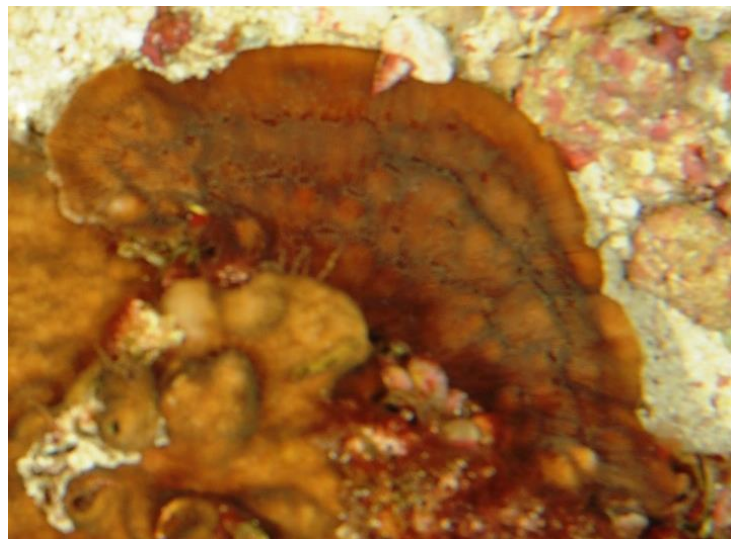
*Acropora arborescent* sp\_1*Acropora arborescent* sp\_2*Acropora solitaryensis*

*Acropora tabular* sp\_1

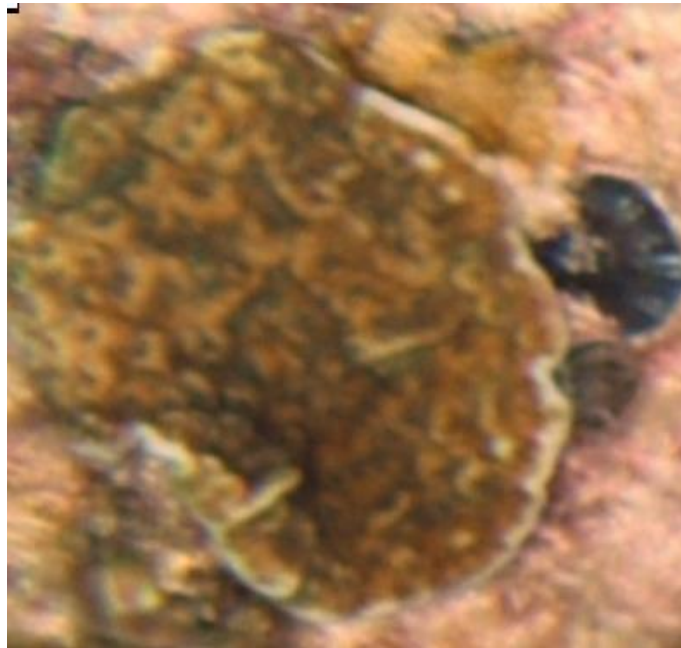
***Montipora cf capricornis******Montipora encrusting sp\_1***

*Montipora* encrusting sp\_2*Montipora* encrusting sp\_3

*Leptoseris aff hawaiiensis*



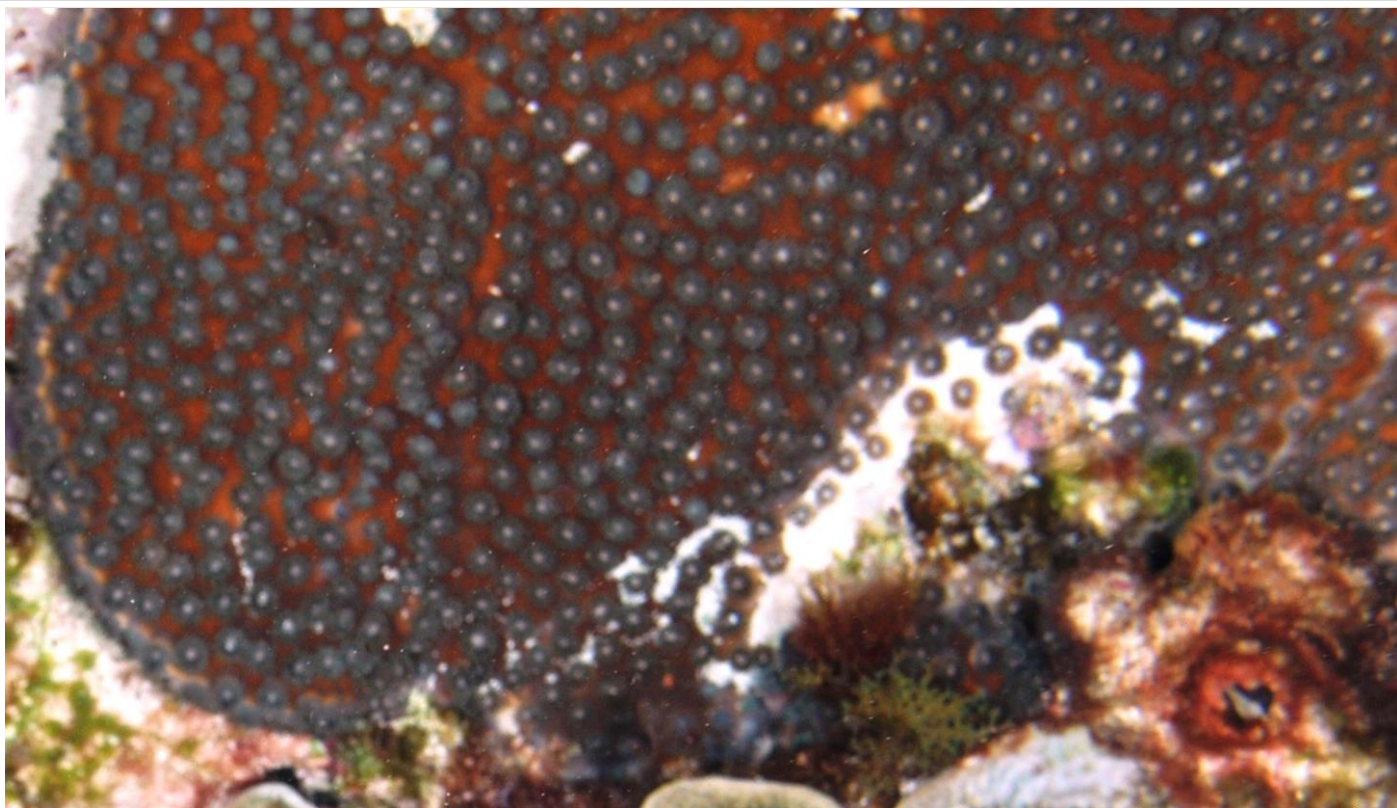
*Leptoseris aff mycetoseroides*



*Pavona cf explanulata*



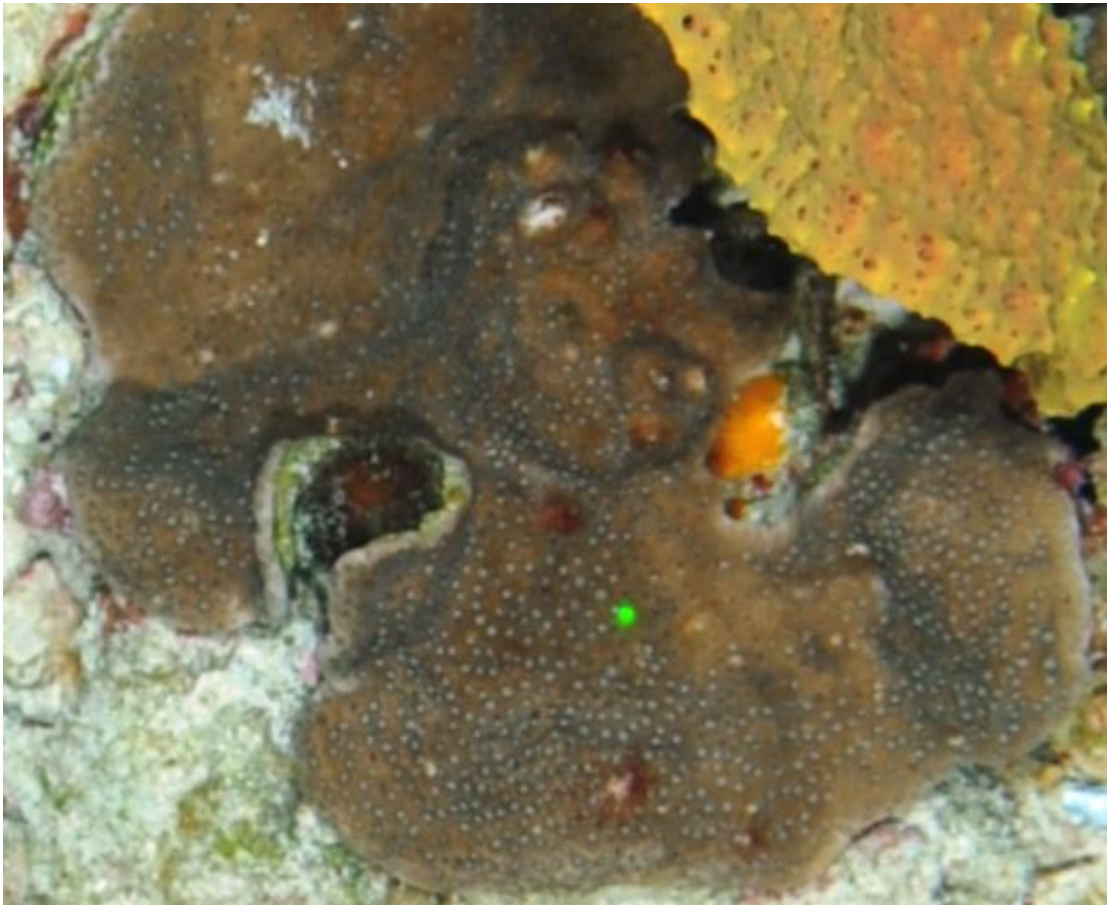
*Coscinaraea cf columna*

*Duncanopsammia cf peltata**Turbinaria cf frondens**Turbinaria cf mesenterina*

*Turbinaria cf patula*



*Turbinaria cf radicalis*



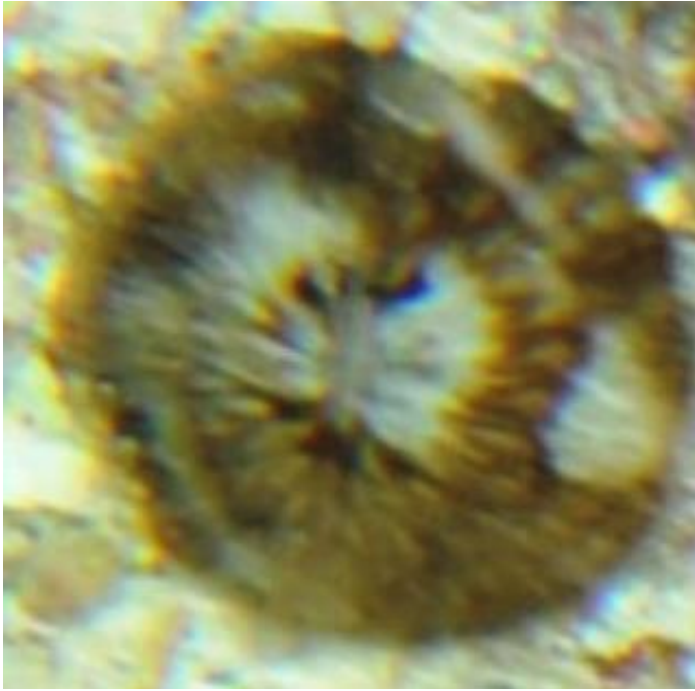
*Cycloseris aff costulata*



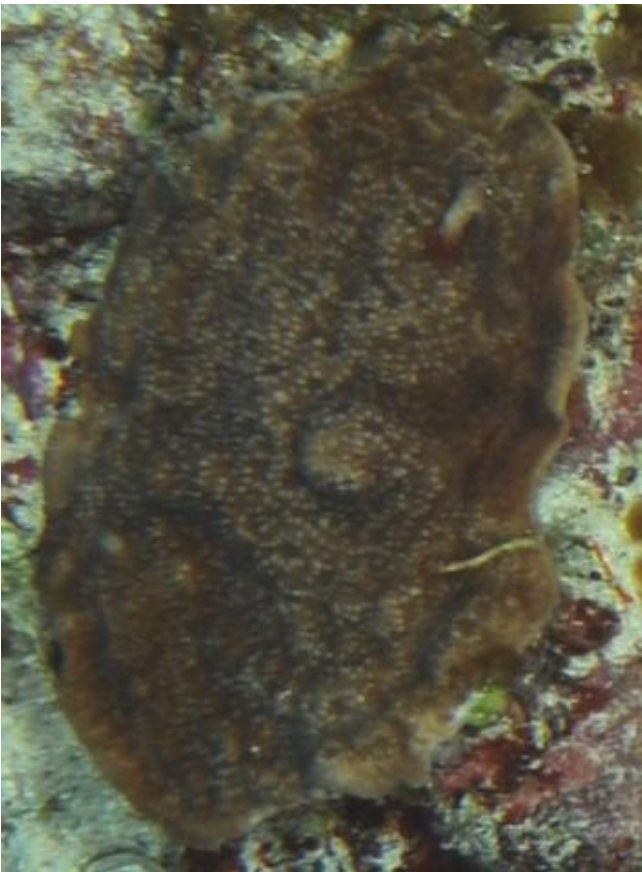
*Cycloseris aff distorta*



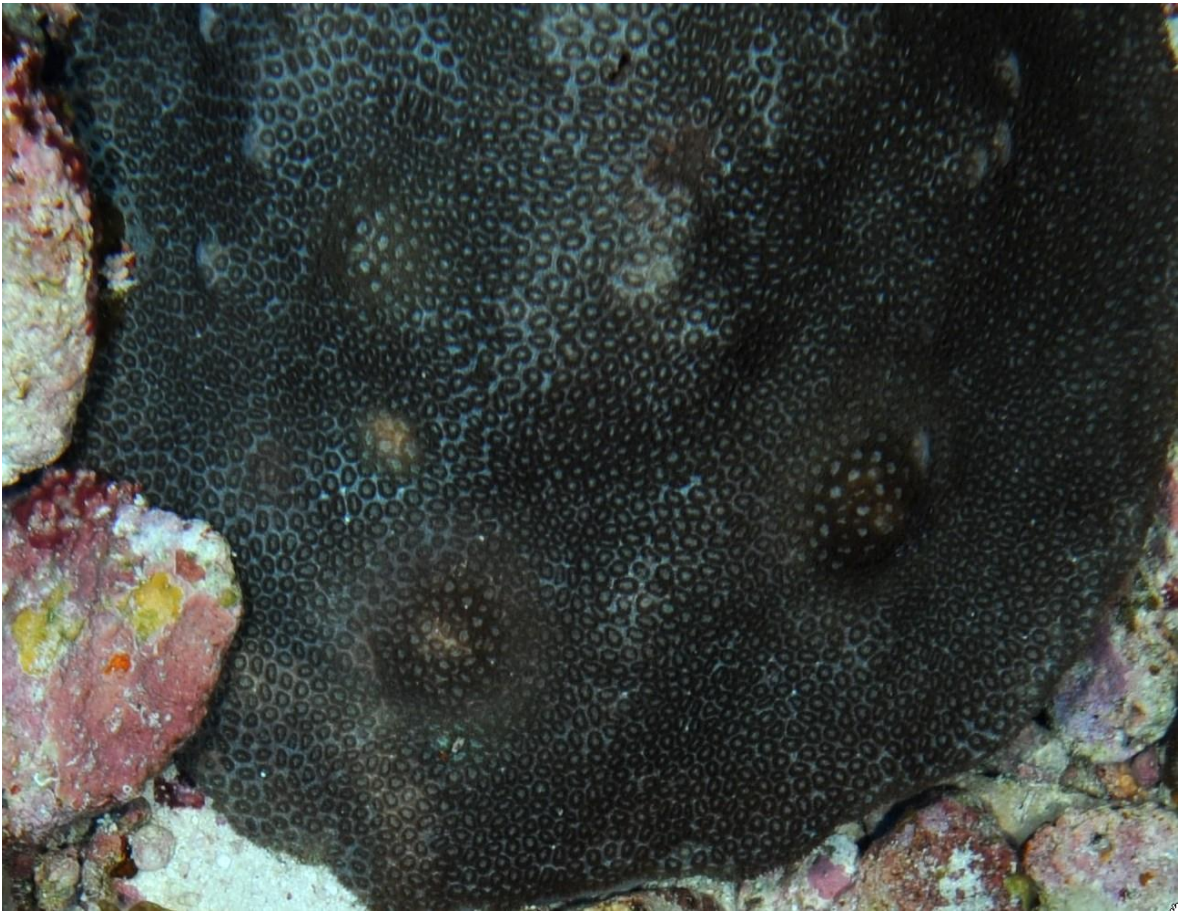
*Cycloseris aff tenuis*



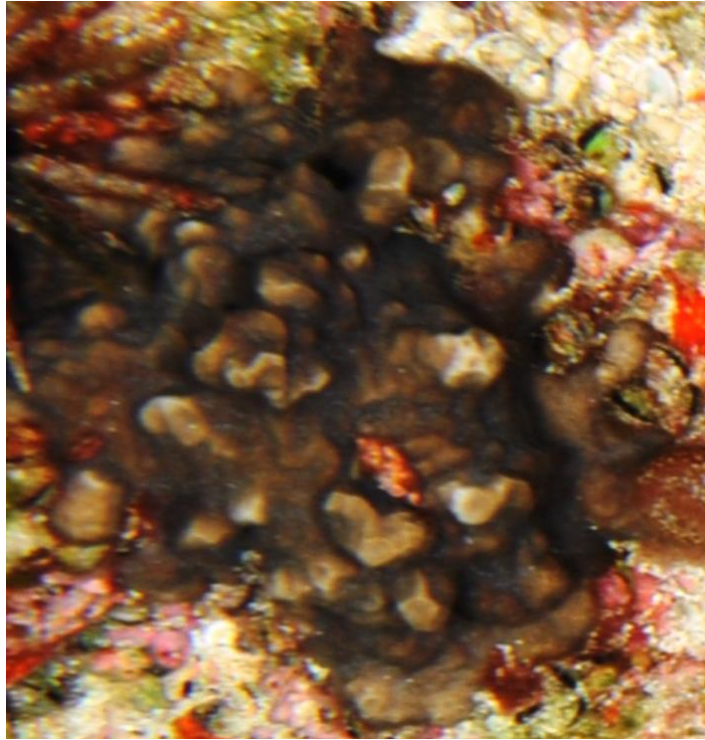
*Cycloseris cf wellsi*



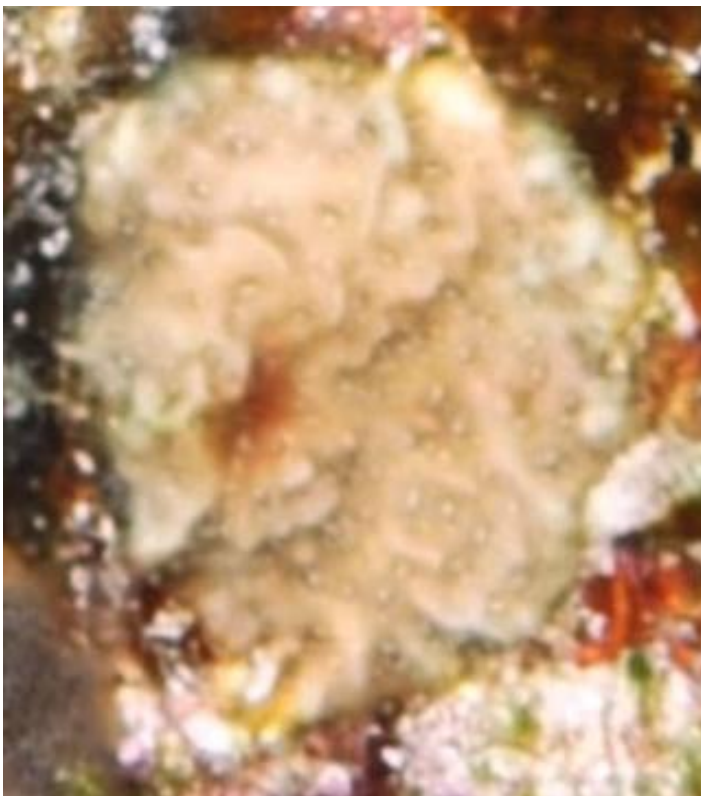
*Lobactis aff scutaria*

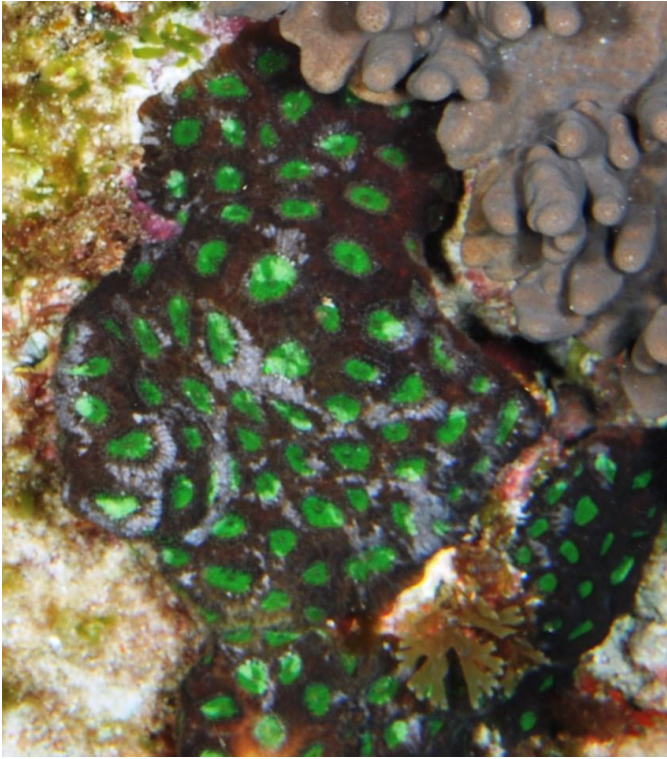
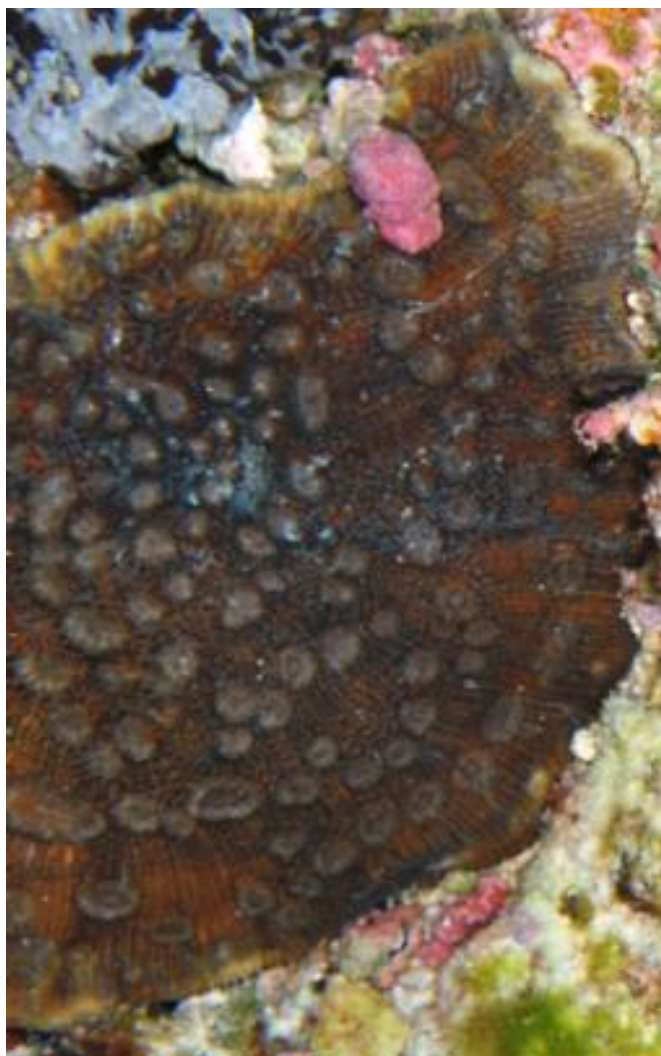
*Plesiastrea peroni*

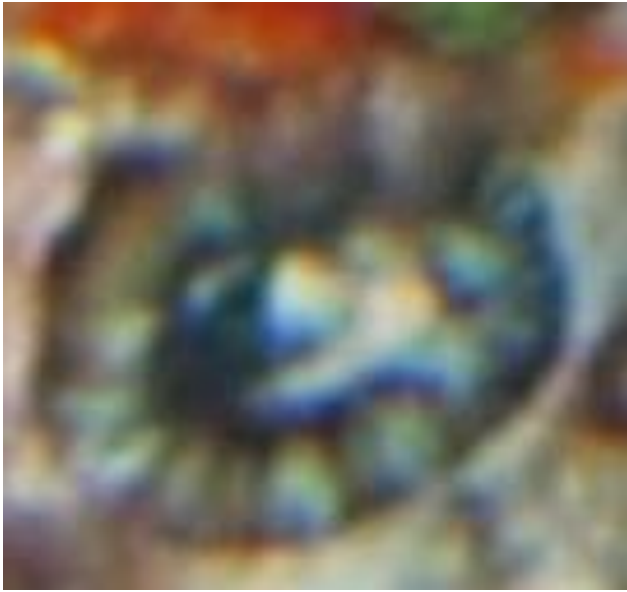
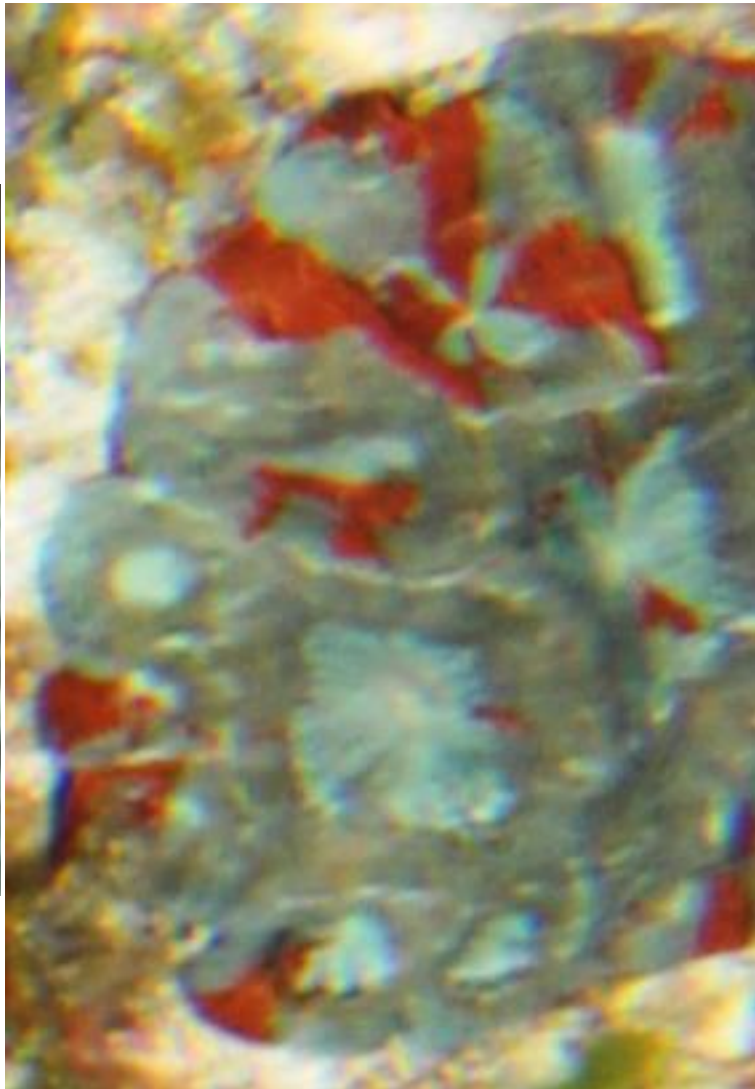
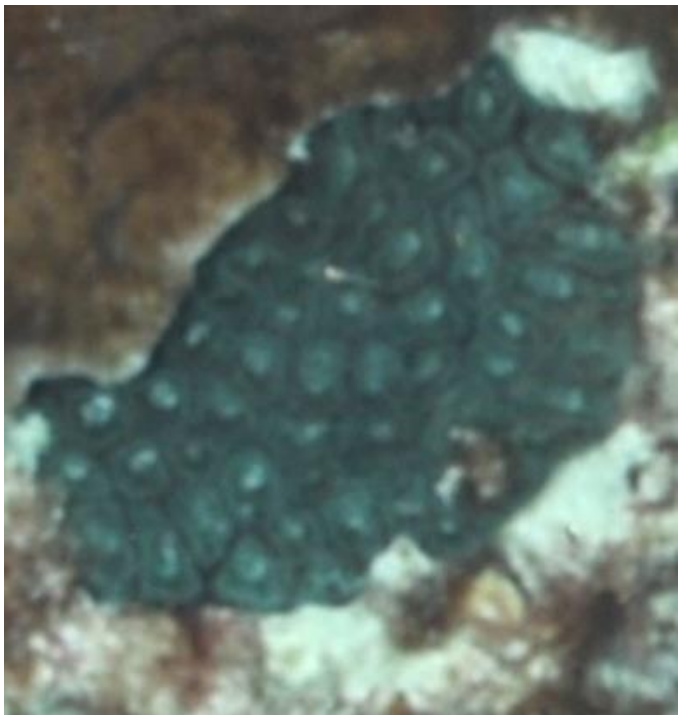
*Psammocora cf contigua*

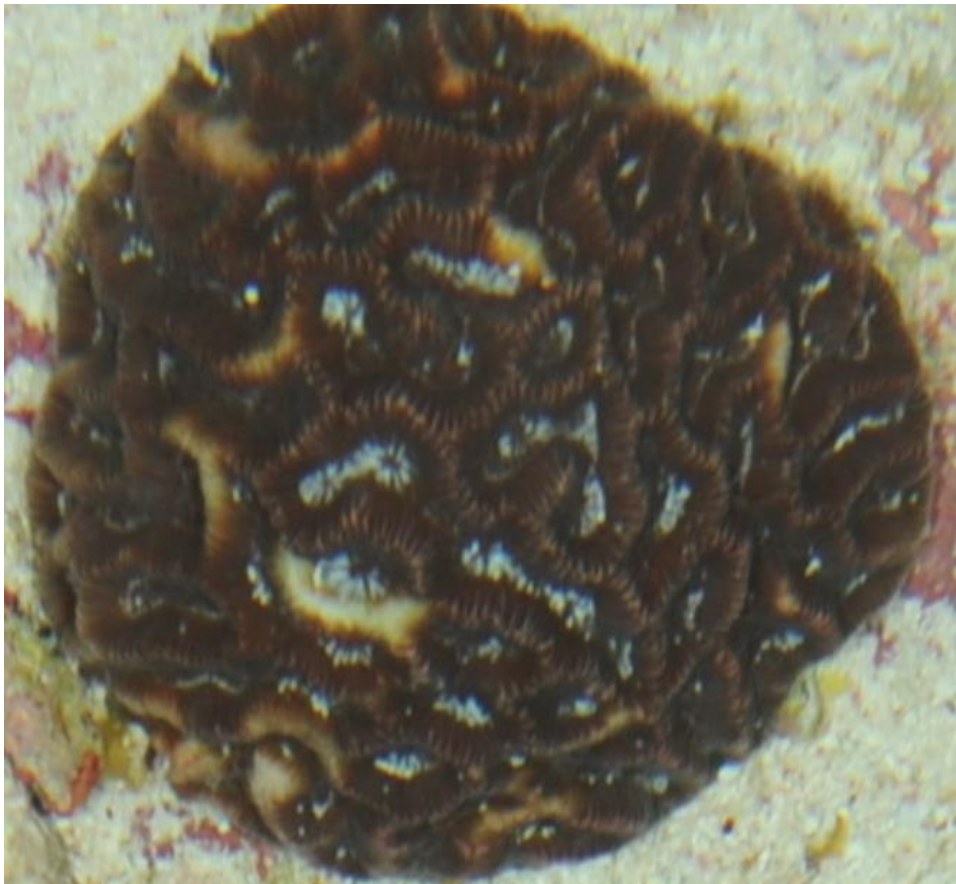


*Psammocora cf profundacella*

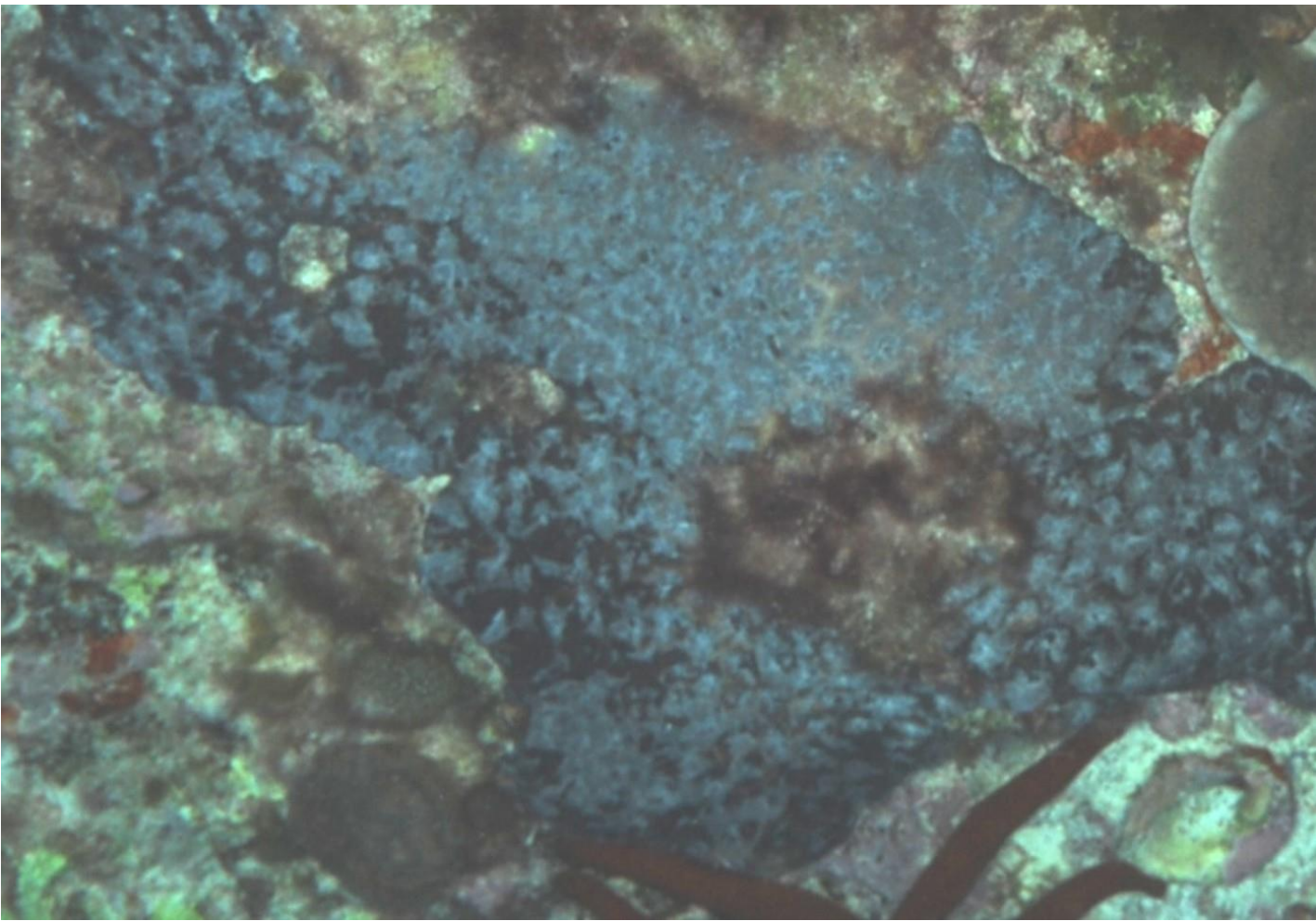


*Acanthastrea cf echinata**Echinophyllia cf aspera**Echinophyllia cf aspera*

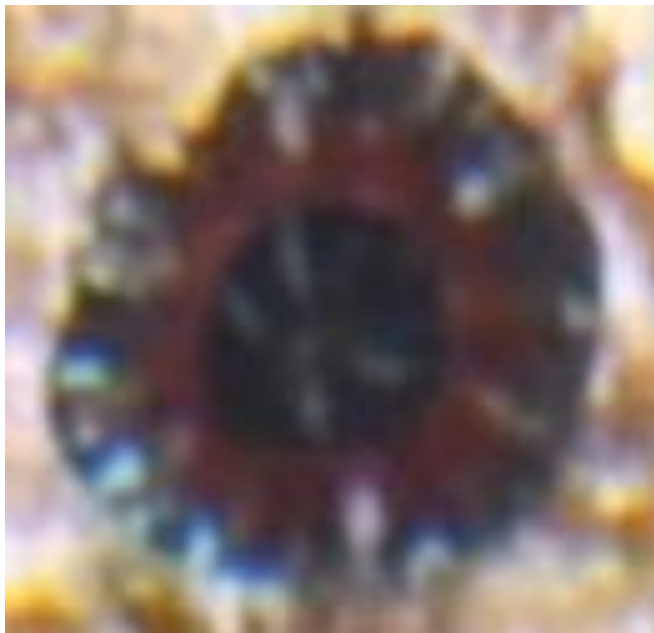
*Homophyllia cf australis**Homophyllia bowerbanki**Homophyllia bowerbanki*

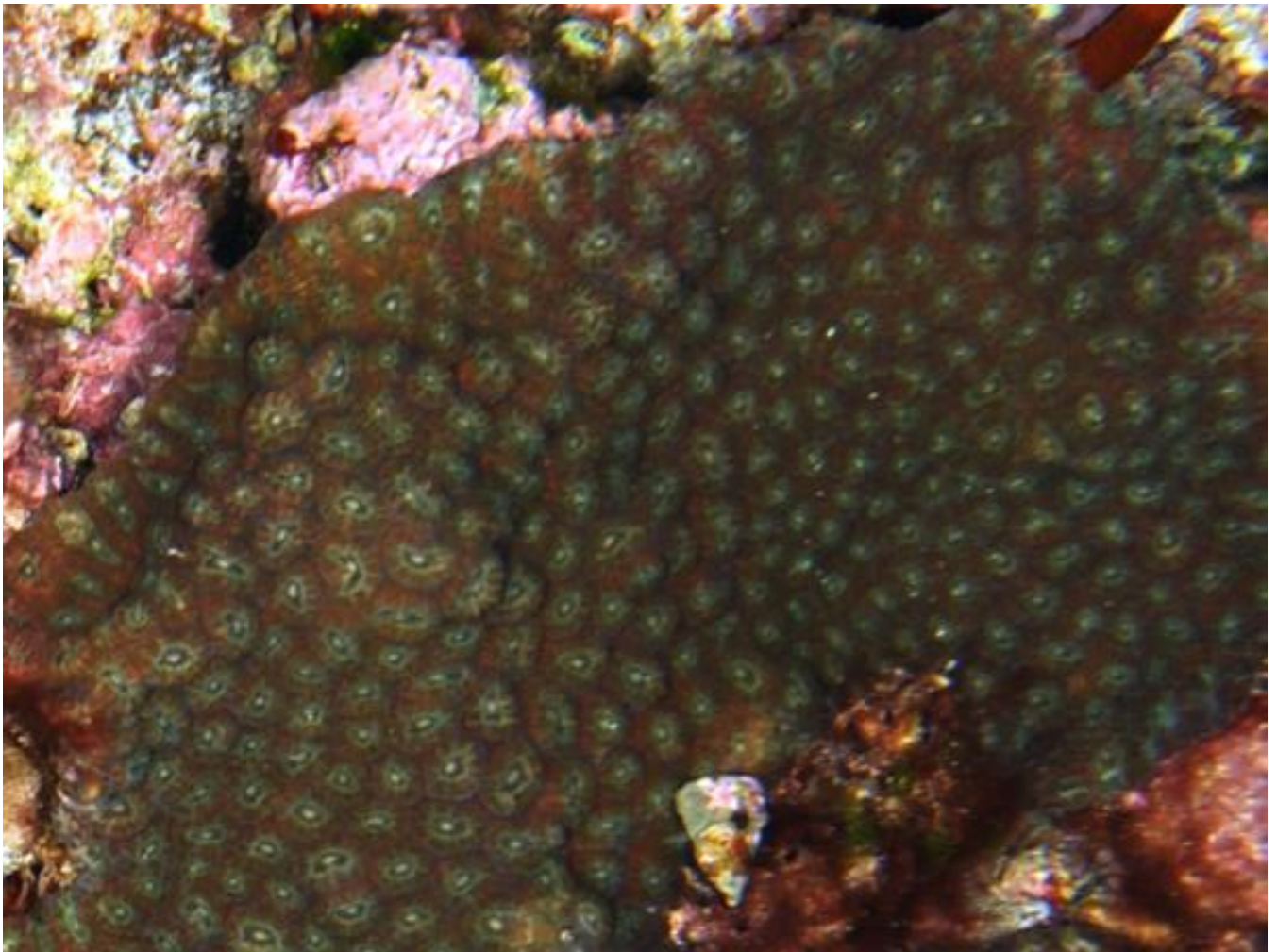
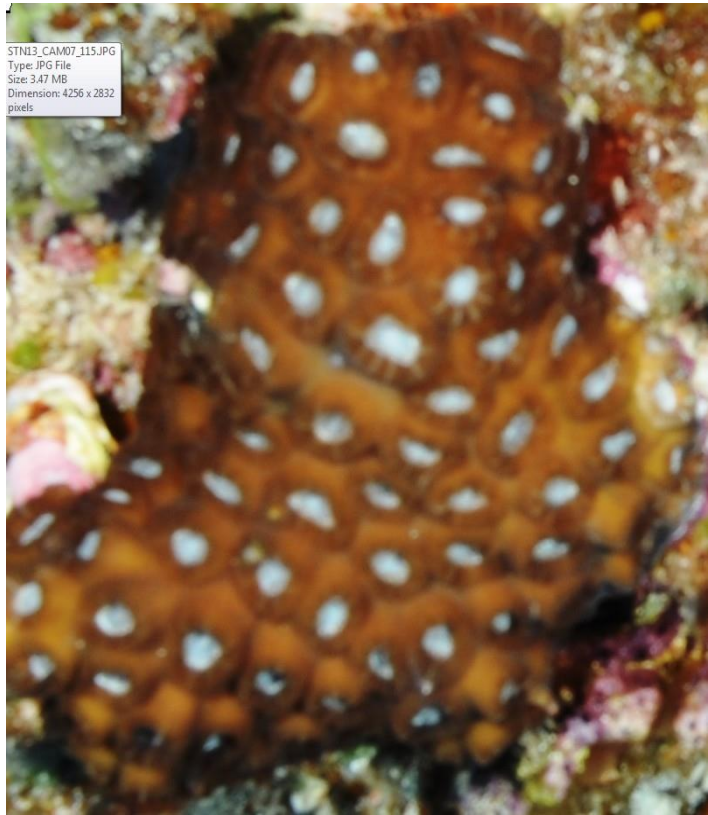
*Homophyllia* aff *bowerbanki*

*Micromussa lordhowensis*

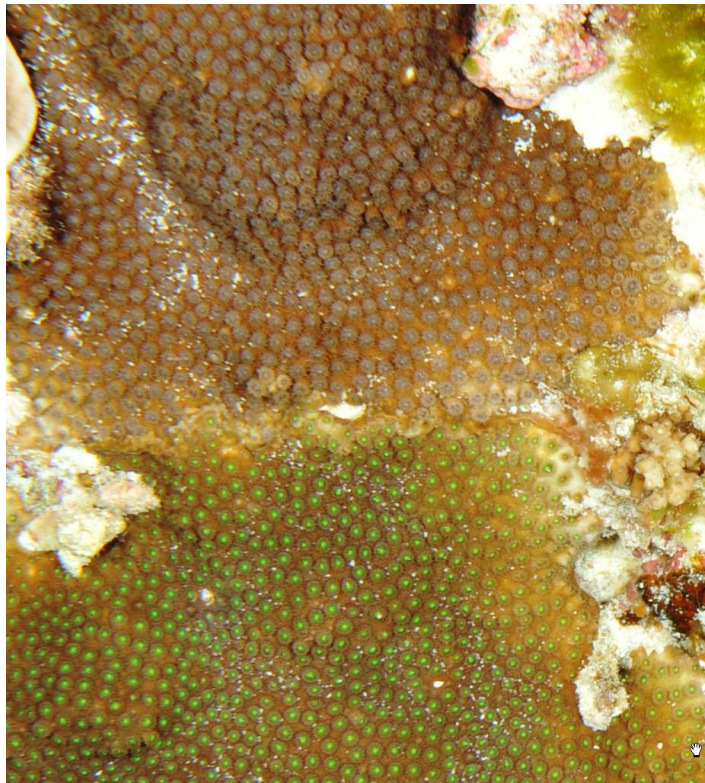


*Micromussa pacifica*

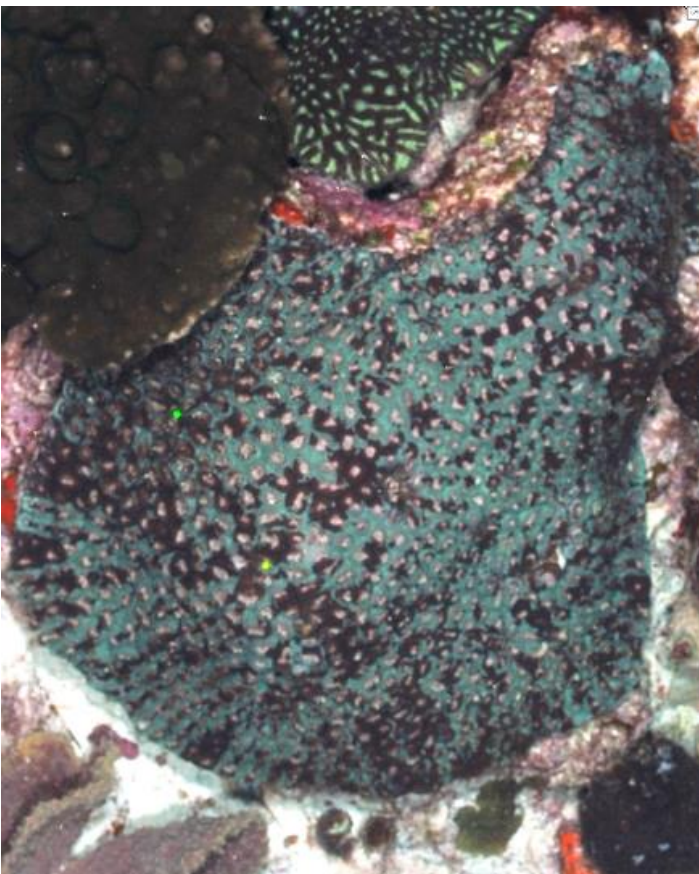


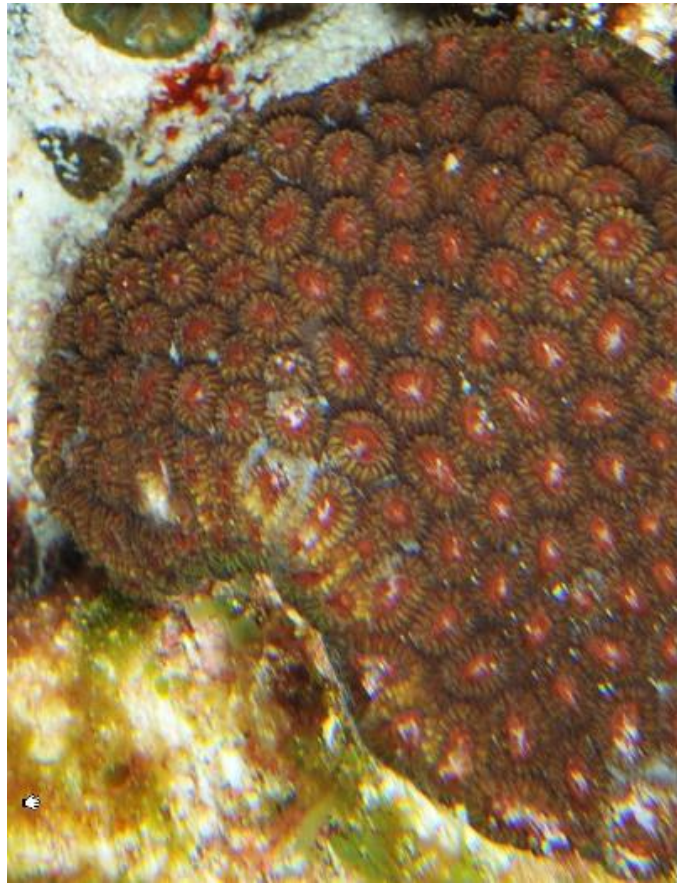
*Astrea cf curta*

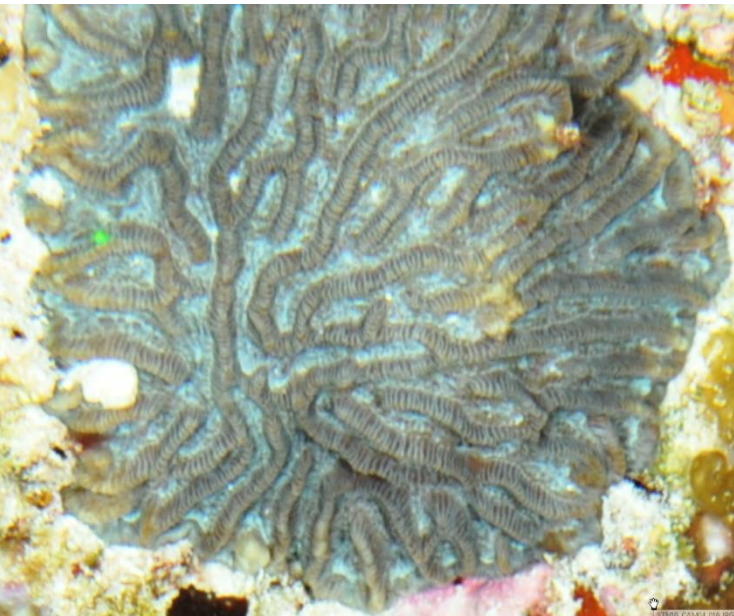
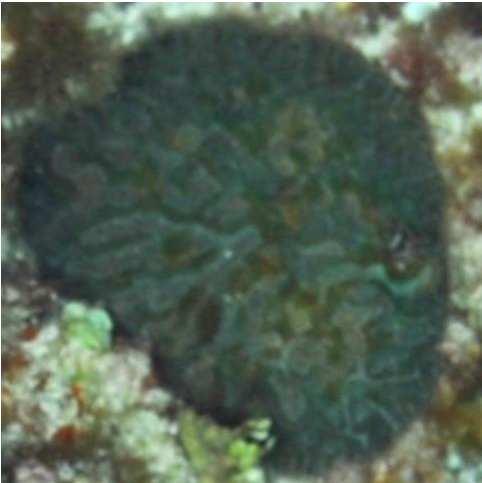
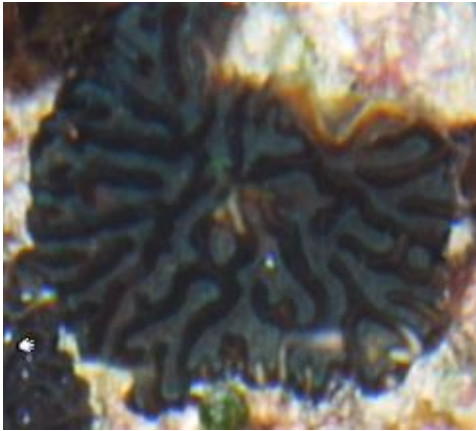
*Cyphastrea salae*



*Dipsastraea aff favus*



*Dipsastraea aff matthai**Dipsastrea cf pallida**Hydnophora cf exesa*

*Paragoniastrea cf benhami*

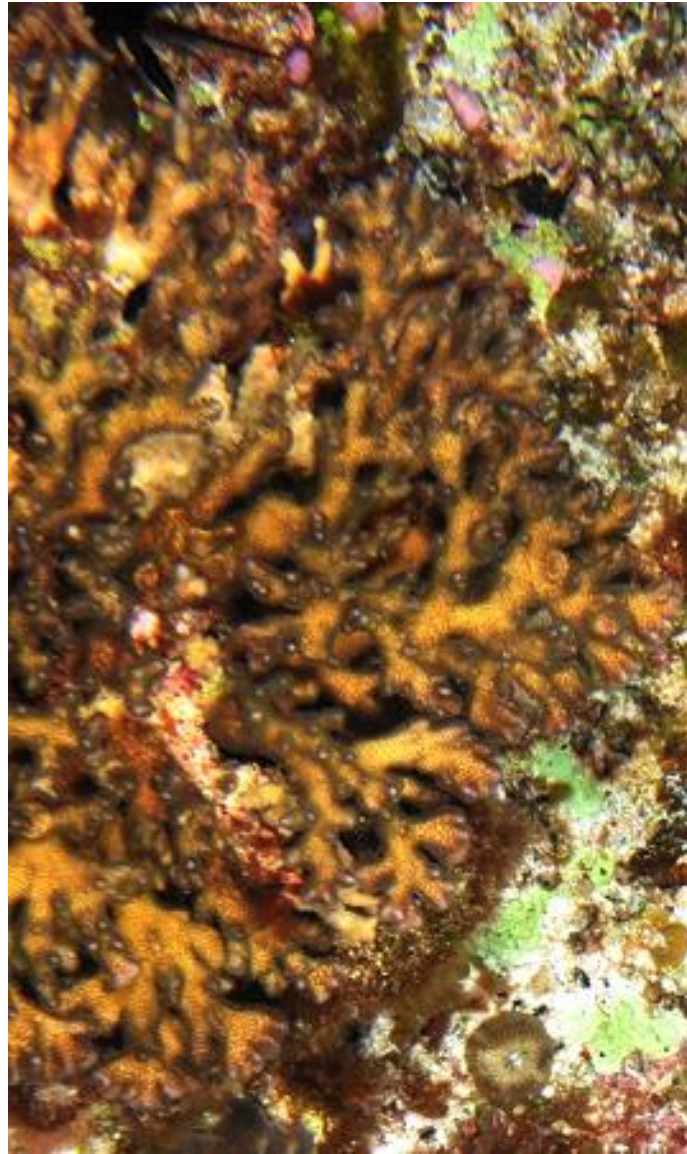
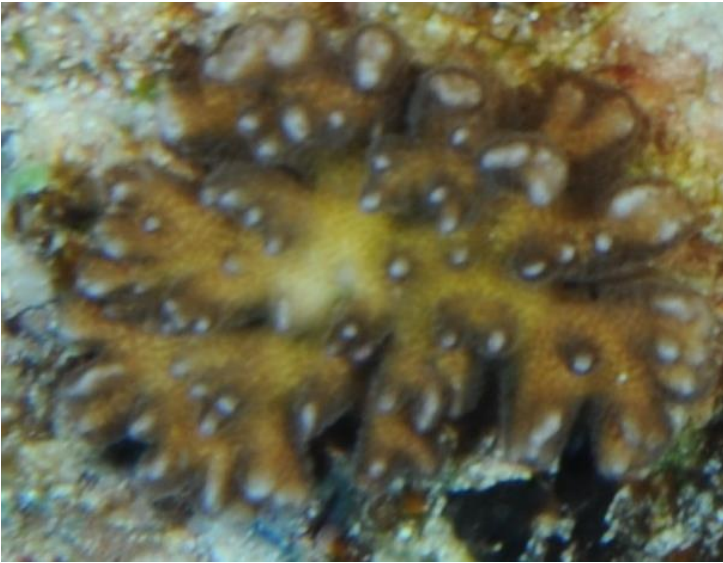
*Paragoniastrea cf russelli*



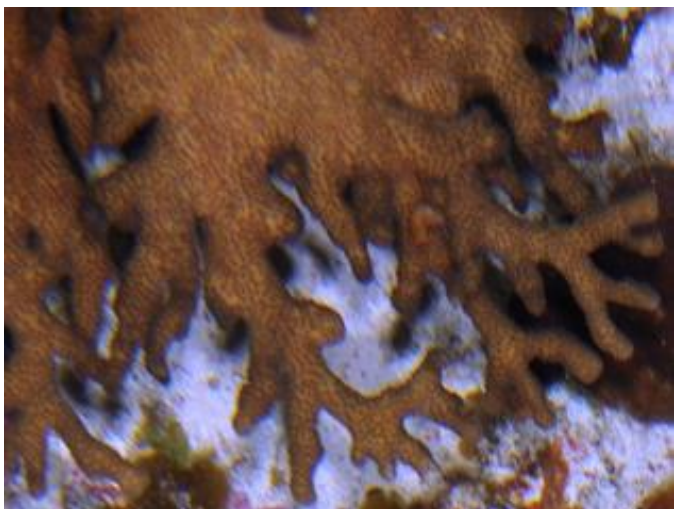
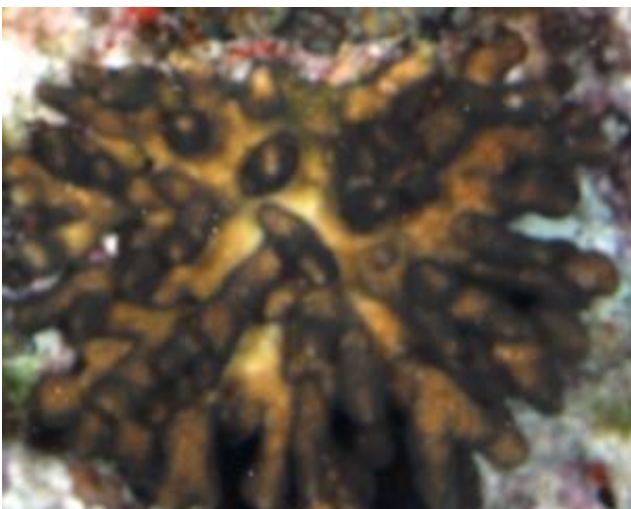
*Platygyra cf sinensis*



*Pocillopora cf damicornis*



*Stylophora aff pistillata*



*Goniopora* sp\_1



*Porites* encrusting



*Porites* massive

