



PISCO
Uniform Point Contact
Algae
2016



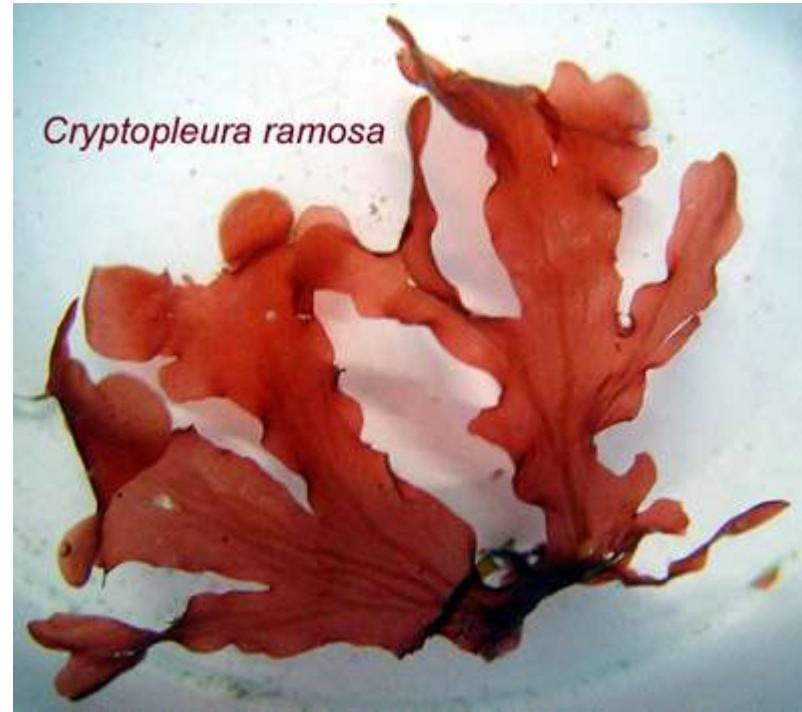
Lonhart/SIMoN
MBNMS NOAA

Dead kelp holdfast (any species)



Lonhart/SIMoN
MBNMS NOAA

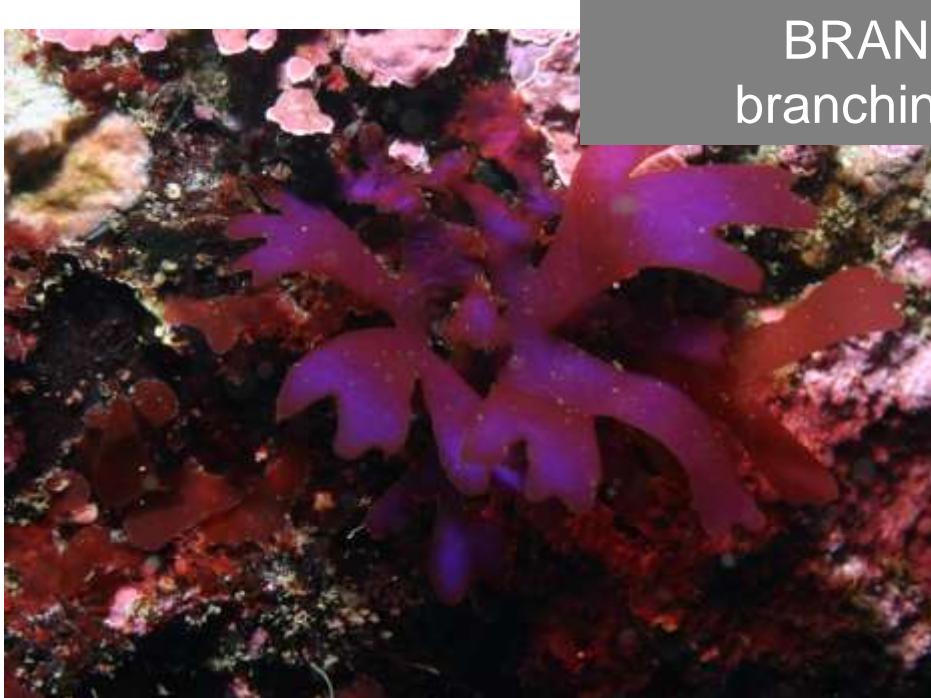
Dead kelp holdfast (any species)



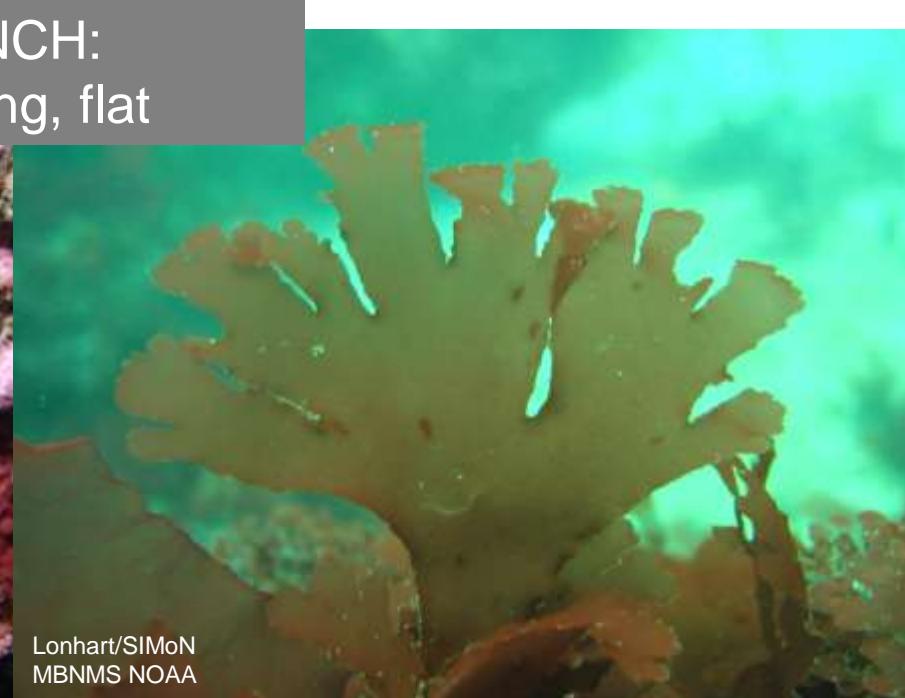
BRANCH:
**Red algae with branches
& flat profile**

e.g., *Callophyllis*, *Cryptopleura*,
Hymenena, *Fryeella*,
Opuntiella californica, *Pikea*,
and *Rhodymenia*





BRANCH:
branching, flat



Lonhart/SIMoN
MBNMS NOAA



BRANCH:
branching, flat

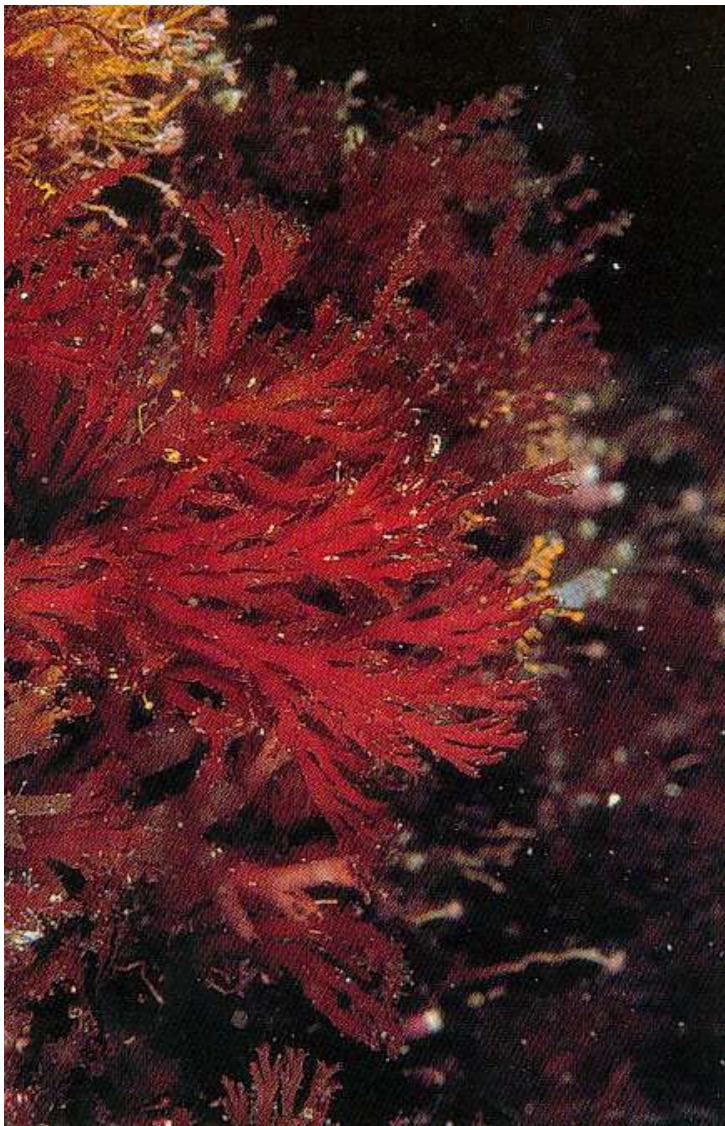


Rhodymenia californica



BRANCH:
branching, flat



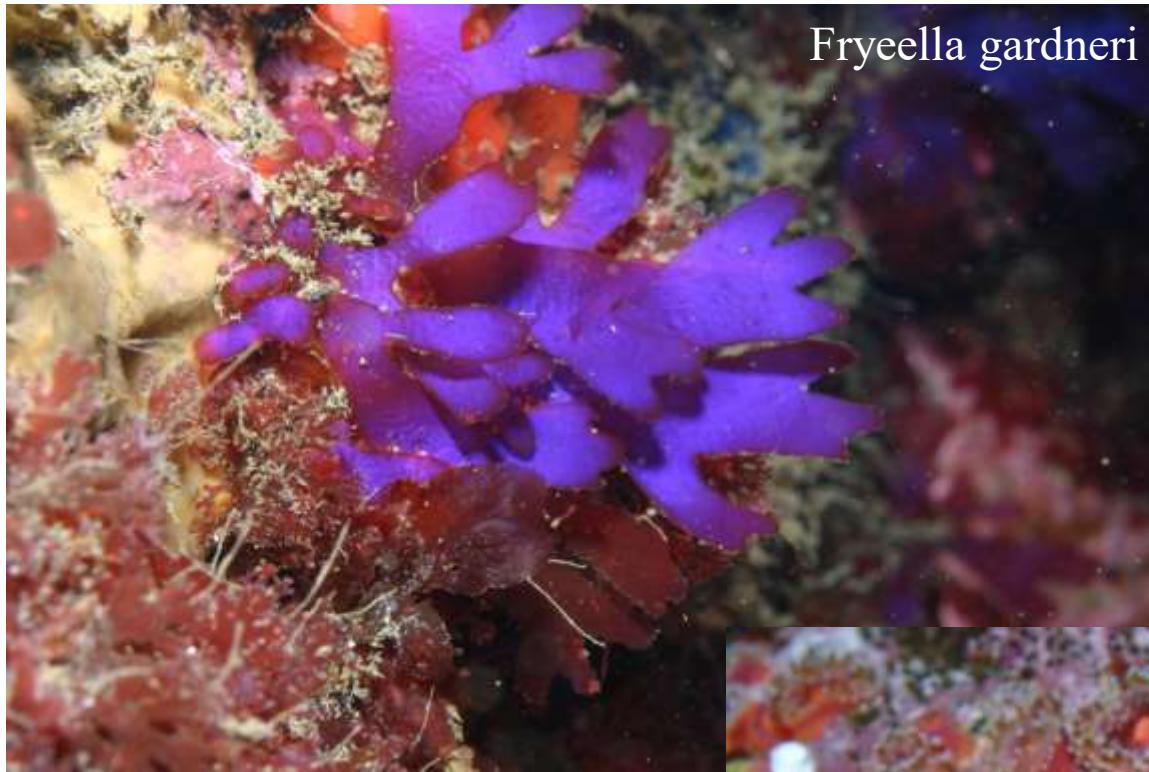


BRANCH:
branching, flat



BRANCH:
branching, flat

Fryeella gardneri



BRANCH:
branching, flat

Rhodymenia pacifica





LEAF

Wide sheet, no branches (but can be torn)

e.g., *Chondracanthus (Gigartina)*, *Halymenia*, *Mazzaella*, *Weeksia*



LEAF
Wide sheet, no branches



LEAF
Wide sheet, no branches



LEAF
Wide sheet, no branches



LEAF
Wide sheet, no branches



LEAF
Wide sheet, no branches

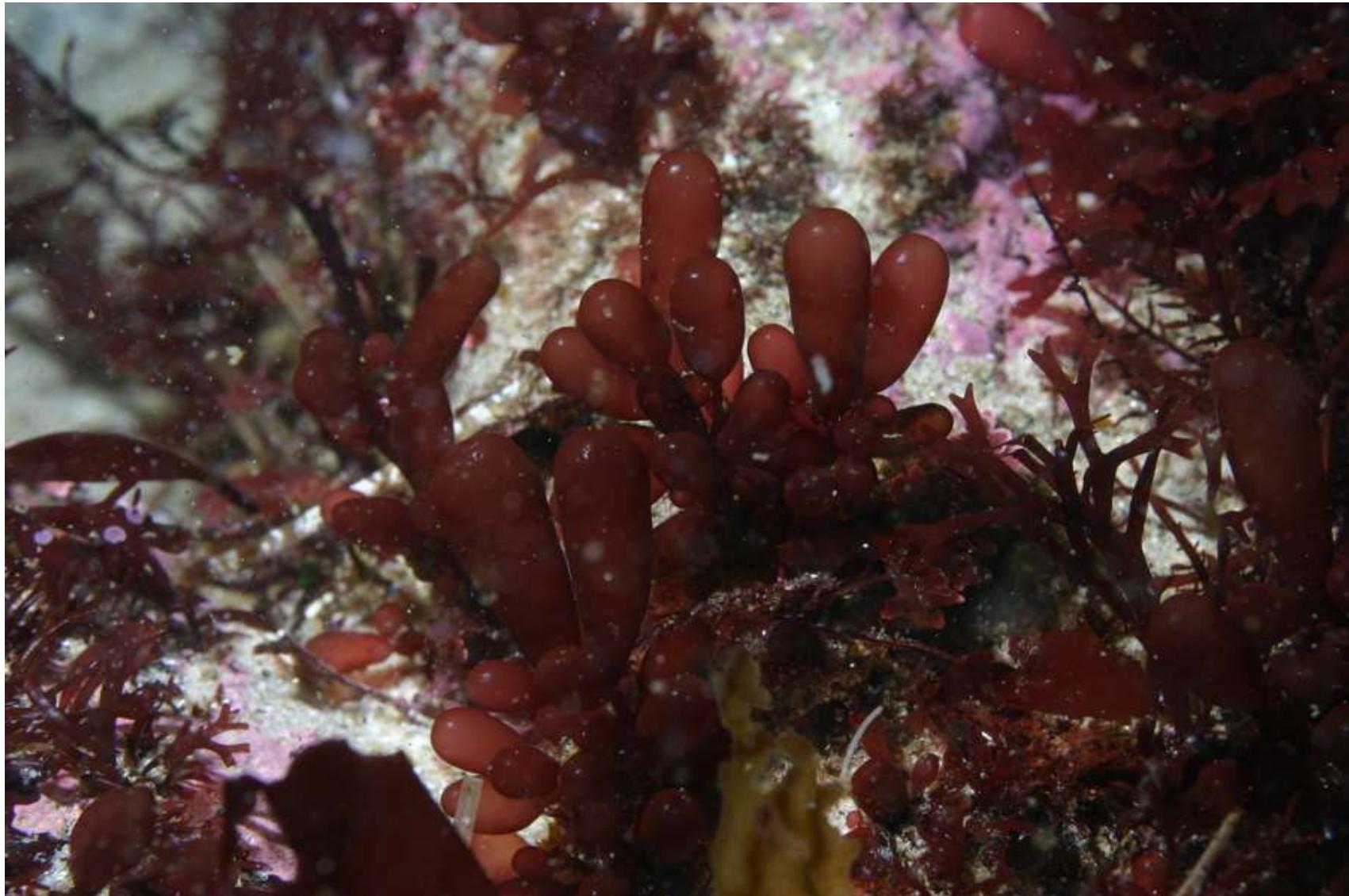


King/ SIMoN
MBNMS NOAA



BUSHY
Cylindrical branches

e.g., *Botryocladia*, *Gastroclonium*, *Gelidium*, *Gracilaria*, most *Prionitis*



BUSHY
Cylindrical branches



BUSHY
Cylindrical branches



BUSHY
Cylindrical branches



BUSHY
Cylindrical branches



BUSHY
Cylindrical branches



BUSHY
Cylindrical branches



BUSHY
Cylindrical branches



LACY

Filamentous and dense, highly branched
e.g., *Ceramium*, *Microcladia*, *Neoptilota*, *Platythamnion*, *Plocamium*, *Polysiphonia*



LACY

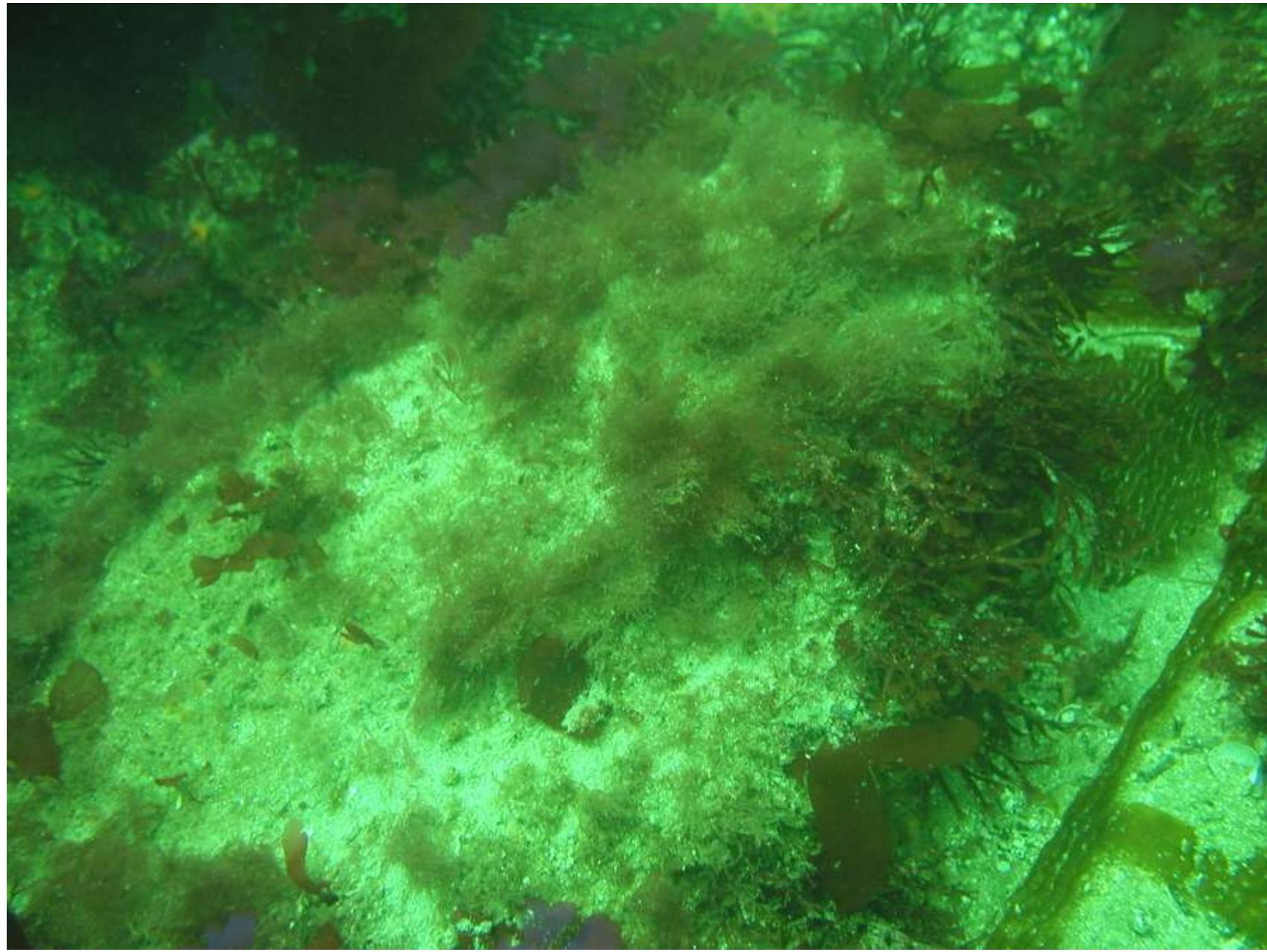
Very fine branchlets off of secondary branch
Neoptilota densa



LACY
Filamentous/dense



LACY
Filamentous/dense clump



LACY
Filamentous/dense clump



Turf
Not in a clump



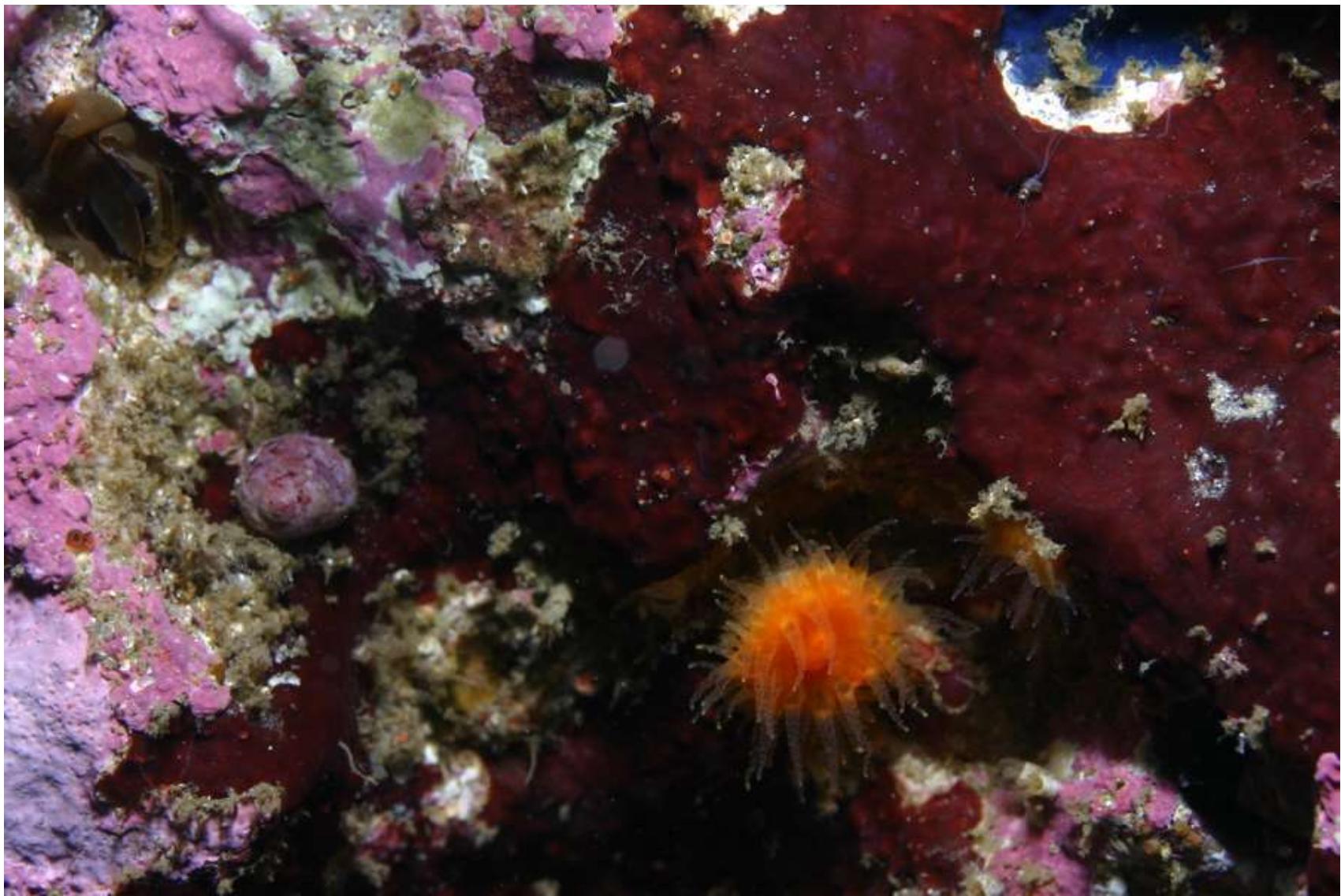
LACY
Filamentous/dense



LACY
Filamentous/dense



Encrusting Red
Not a coralline, usually very smooth, often deep red



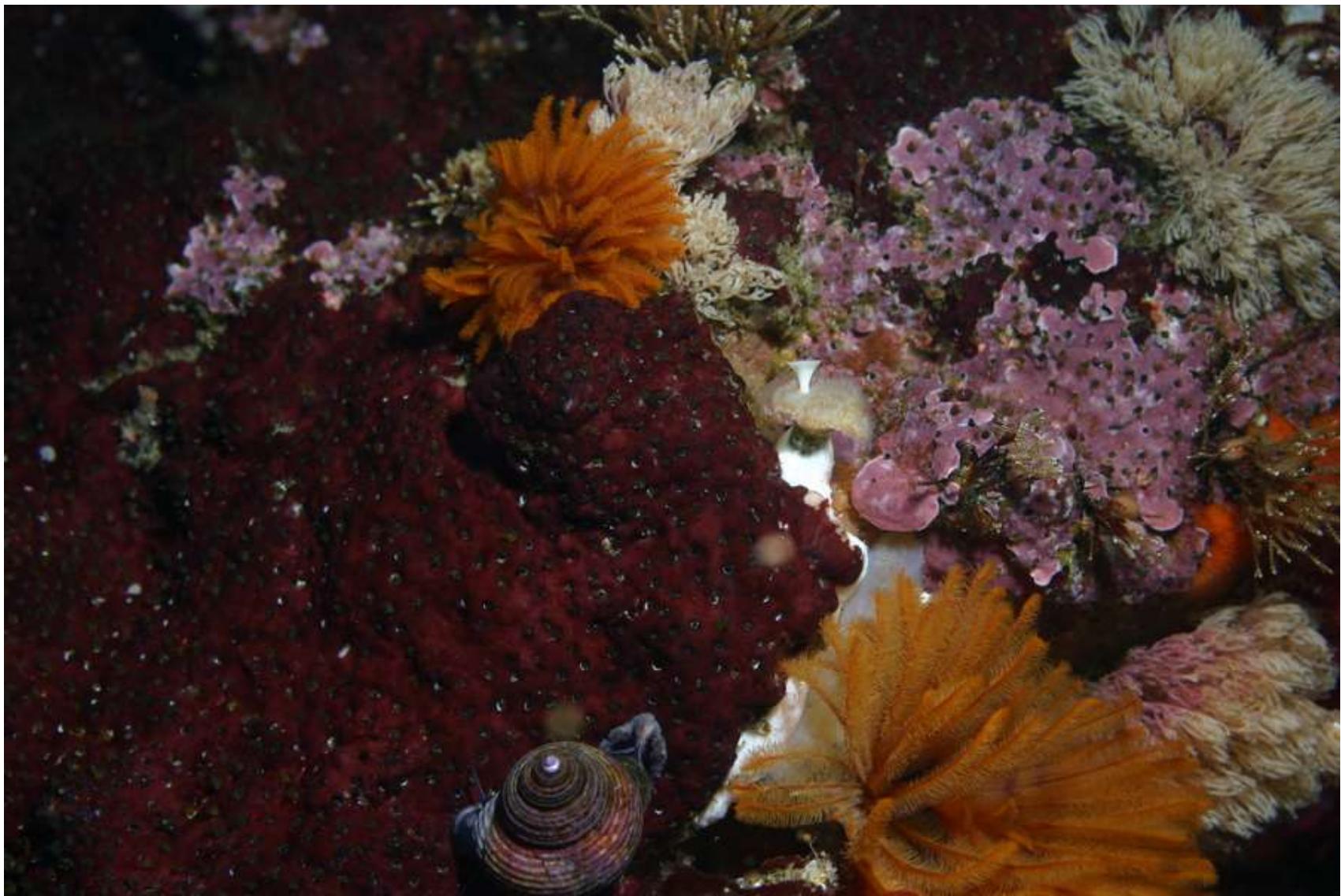
Encrusting Red
Not a coralline, usually very smooth, often deep red



Encrusting Red
Not a coralline, usually very smooth, often deep red



Encrusting Red
Not a coralline, usually very smooth, often deep red



Encrusting Red
Not a coralline, usually very smooth, often deep red



Crustose Coralline Algae
usually pink



Crustose Coralline Algae
usually pink



Crustose Coralline Algae
usually pink



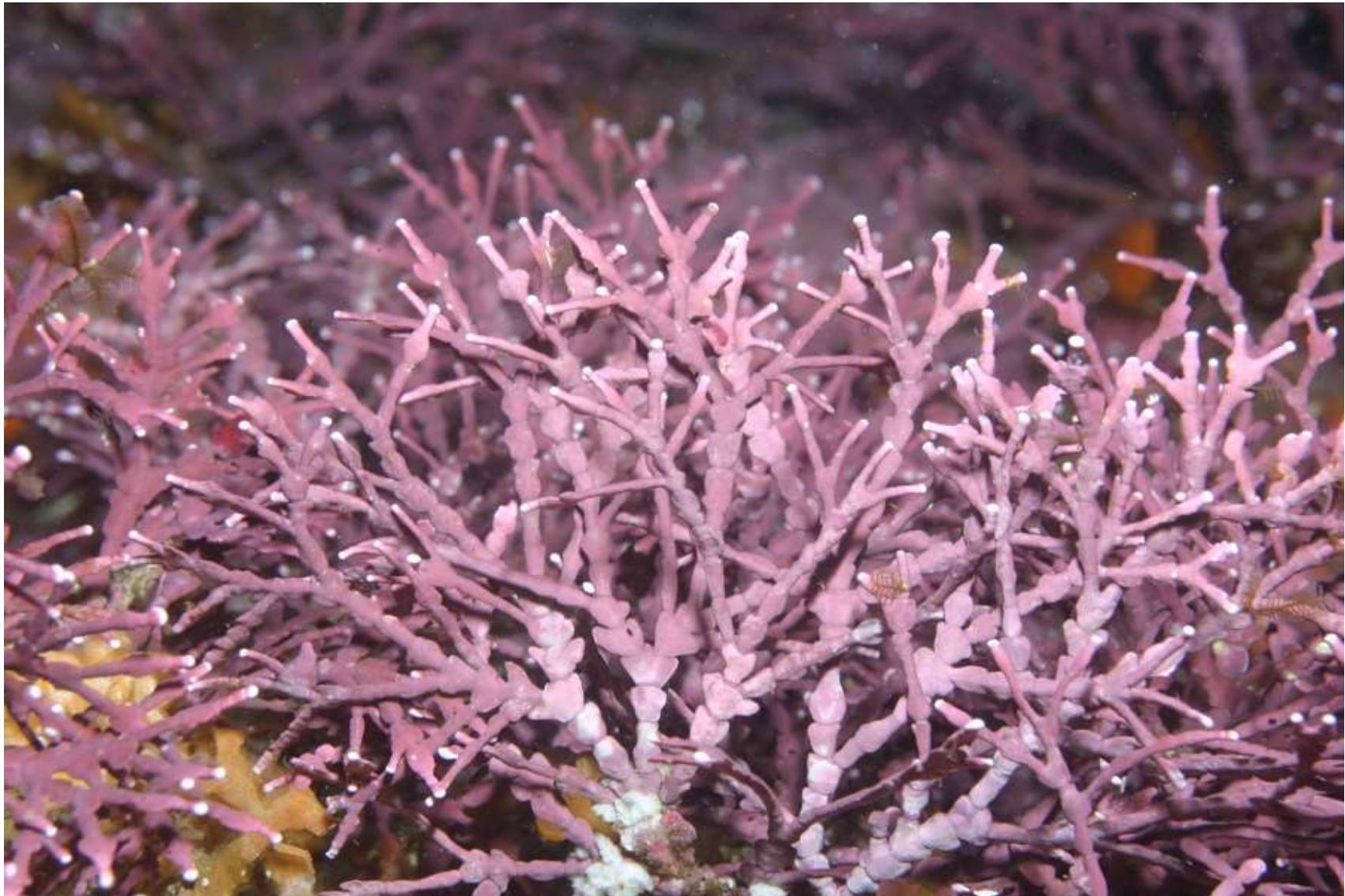
Crustose Coralline Algae
usually pink



Articulated Coralline Algae
erect and branching
e.g., *Bossiella*, *Calliarthron*, *Corallina*



Articulated Coralline Algae
erect and branching



Articulated Coralline Algae
erect and branching



Efird

Cystoseira osmundacea

Large, low lying, brown-green, robust, blades are like oak leaves, long chains of pneumatocysts when reproductive



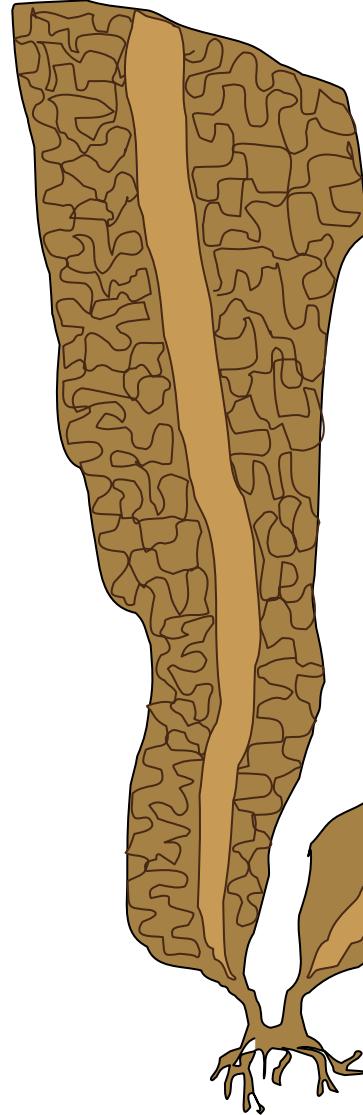
Cystoseira osmundacea



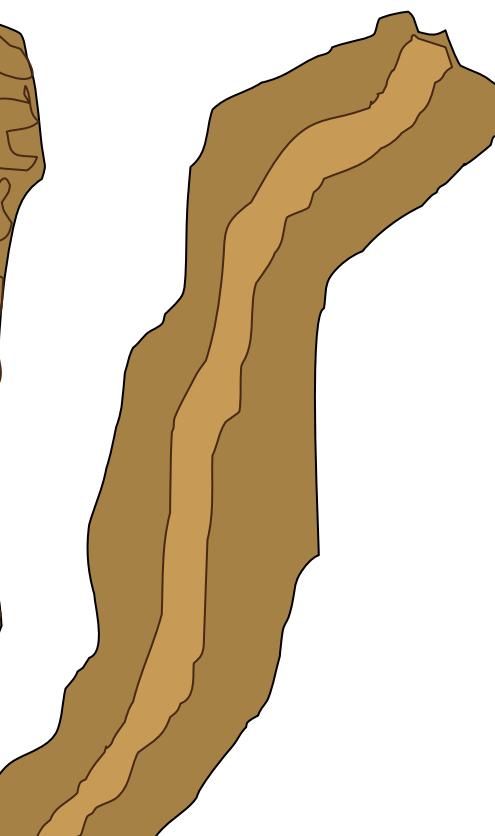
Cystoseira osmundacea



Cystoseira osmundacea
covered by a tunicate (epibiont)

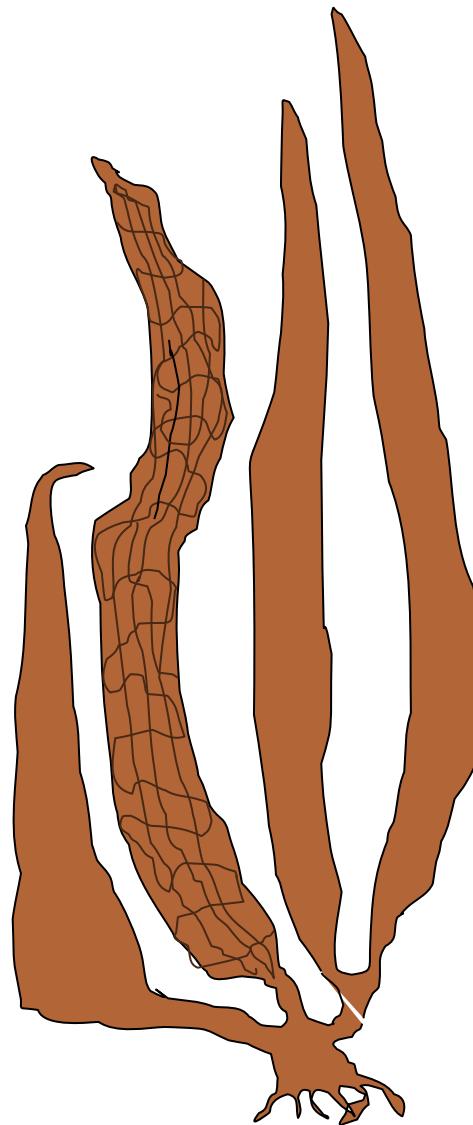


Dictyoneuropsis reticulata versus With midrib



vs.

Dictyoneurum californicum without midrib





Dictyoneuropsis reticulata
with tear along midrib



Dictyoneuropsis reticulata
midrib present



Dictyoneuropsis reticulata
midrib present

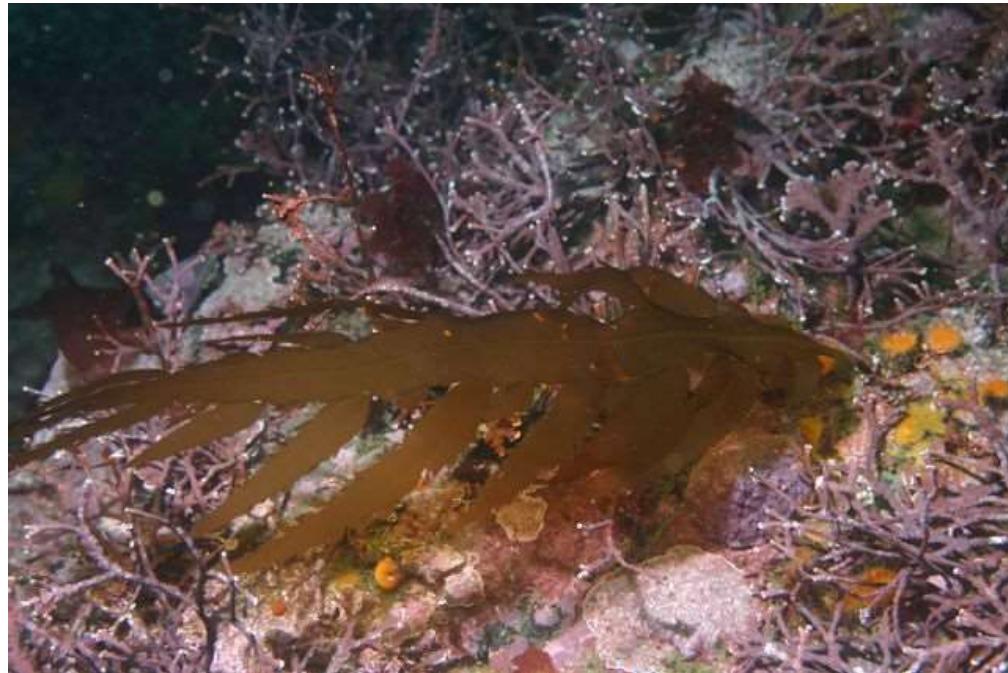


Egregia menziesii





Egregia menziesii



***Desmarestia* spp.**
Acid weed

www.algaebase.org





***Desmarestia* spp.
(var. *firma*)
Acid weed**

Desmarestia spp.
Acid weed





***Desmarestia* spp.**
Acid weed



King/SIMoN
MBNMS NOAA

***Desmarestia* spp.**
Acid weed



***Desmarestia* spp.**
Acid weed

Desmarestia spp.

Acid weed





<http://www.guianamarina.com>

***Macrocystis* holdfast (Live)**



***Macrocystis* holdfast (Live)**



Laminariales Holdfast (Live)

If you hit the holdfast of *any* stipitate kelp.



Laminariales Holdfast (Live)
High epibiont cover



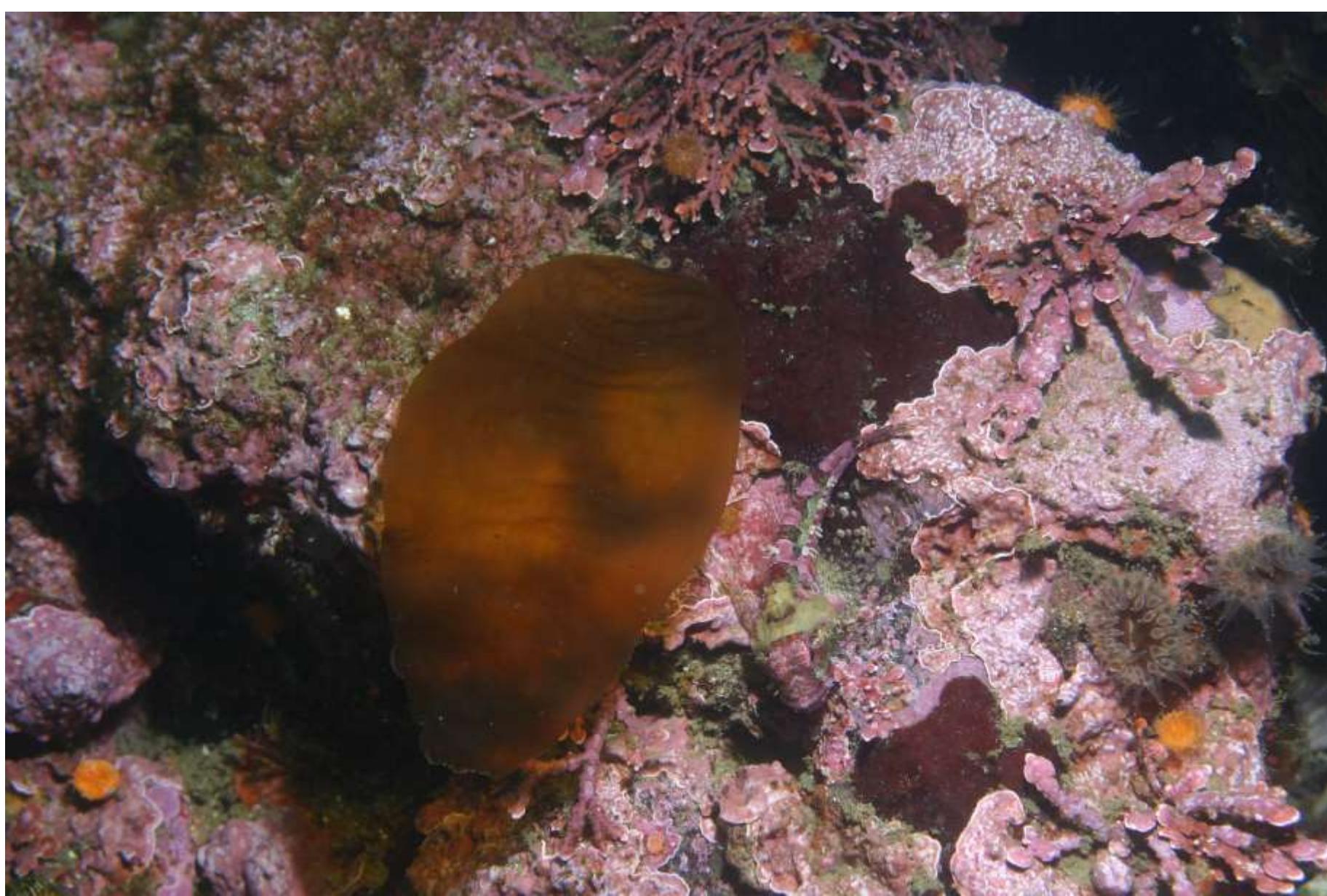
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MBNMS NOAA

Dictyotales

Brown, branching algae



Dictyotales
Brown, branching algae



Juvenile Laminariales – superlayer category