

## CORAL DISEASE IN THE NEW CALEDONIA LAGOON



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Corals, like all animals, are susceptible to disease. Diseases manifest by presence of characteristic lesions. These lesions can be caused by infectious (virus, parasite, bacteria) or non infectious (temperature-induced bleaching, predation) agents. Coral diseases are important to coral reef health because elevated levels of diseases can cause significant loss of corals. The first step to determine causes of coral diseases is to systematically describe lesions. The objective of these cards is to help you recognize and describe lesions in corals commonly encountered in the New Caledonia lagoon.

Thierry M. Work, Greta S. Aeby, Aline Tribollet (2010)

## Method to describe lesions in corals

Determine coral host affected and see if the lesion can be explained (e.g. presence of a predator in the surroundings). If not, describe the lesion as follows:

1) Tissue loss; **D**iscoloration; **G**rowth anomaly.

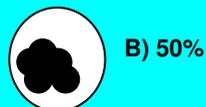
2) If tissue loss, determine pattern



3) Distribution of lesion on affected colony.



4) Estimate of area affected.

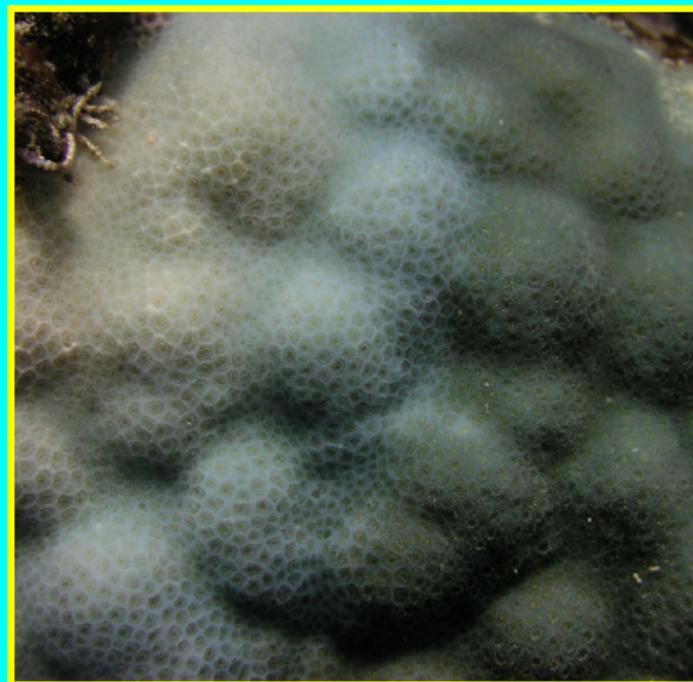


5) Color of the lesion and its border (see color key below):



## EXAMPLE

### DISCOLORATION IN *PORITES*



1



2



3



4



5



### WHITE SYNDROME (Tissue loss or WS)

Localized or diffuse tissue loss revealing intact skeleton. Tissue loss can be acute (white color) or subacute (white progressing to green due to algal colonization of skeleton).



**Branching Acropora WS**  
Diffuse acute tissue loss



**Table Acropora WS**  
Diffuse subacute tissue loss



**Pavona WS**  
Diffuse acute tissue loss



**Coscinarea WS**  
Diffuse subacute tissue loss

### WHITE SYNDROME (WS)



**Stylophora WS**  
Diffuse acute tissue loss



**Montipora WS**  
Diffuse subacute tissue loss



**Pachyseris WS**  
Localized subacute tissue loss



**Astreopora WS**  
Diffuse subacute tissue loss

**NORMAL DISCOLORATION AND BLEACHED SPOTS**



***Favia***  
Normal color (mucus sheathing)



***Leptoria***  
Multifocal bleaching



***Favia***  
Diffuse bleaching with broad dark border



***Porites***  
Multifocal bleaching

**DARK SPOTS DISEASE (Endolithic hypermycosis) AND PINK SPOT**



***Pavona DSD***  
Focal to diffuse dark discoloration



***Leptoria DSD***  
Localized dark discoloration



***Favia DSD***  
Diffuse dark discoloration



***Porites Pink Spot***  
Multifocal pink discoloration

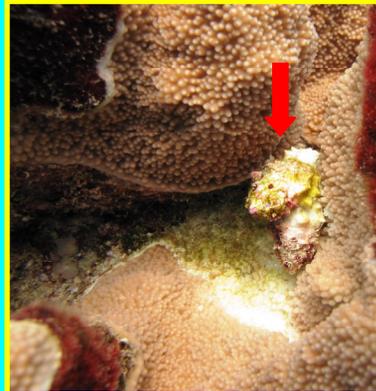
## PREDATION/PARASITES



**Porites**  
Mollusc predation  
(*corallophilia*)



**Porites**  
Fish predation



**Montipora**  
Mollusc predation (*Drupella*)



**Pocillopora**  
Crab parasitism

## GROWTH ANOMALY (GA)

Skeletal growths overlaid by normally colored to pale tissue with enlarged calices or reduced to absent polyp formation.



**Favia**  
Focal umbonate GA



**Porites**  
Focal nodular GA with  
scalloped edges



**Turbinaria**  
Multifocal nodular white GA  
with absence of polyps



**Montipora**  
Focal rugose GA with absence  
of polyps

## CRUSTOSE CORALLINE ALGAE (CCA)



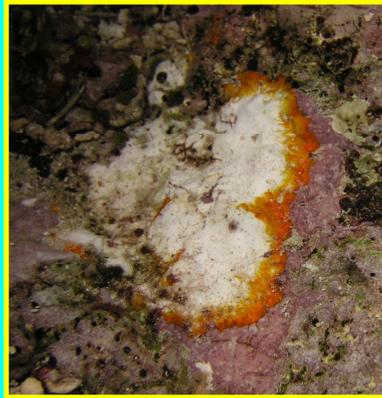
**CCA White syndrome**  
Focal distinct white discoloration



**CCA White Band**  
Focal annular white discoloration.



**CCA Annular Rings**  
Diffuse concentric annular white discoloration



**Coralline lethal orange disease (CLOD)**

## SOFT CORAL



***Sinularia***  
Multifocal nodular growth anomaly



***Sinularia***  
Fish predation

