CORAL DISEASE IN THE NEW CALEDONIA LAGOON

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Institut de recherche pour le développement

CRISP

CORAL DISEASE IN THE NEW CALEDONIA LAGOON

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.

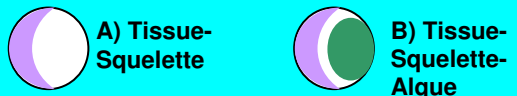
Thierry M. Work, Greta S. Aeby, Aline Tribollet (2010)

Method to describe lesions in corals

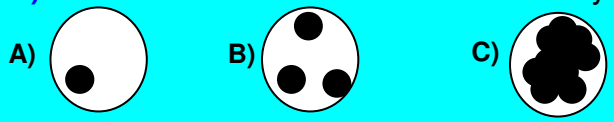
Determine coral host affected and see if the lesion can be explained (e.g. presence of a predator in the surroundings). If not, describe the lesion as follows:

1) **T**issue loss; **D**iscoloration; **G**rowth anomaly.

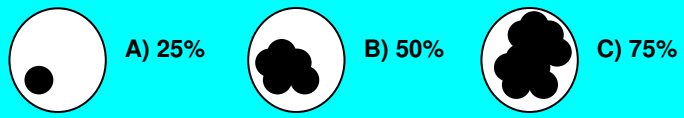
2) If tissue loss, determine pattern



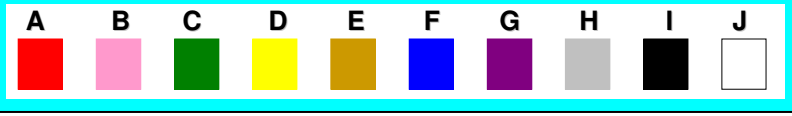
3) Distribution of lesion on affected colony.



4) Estimate of area affected.

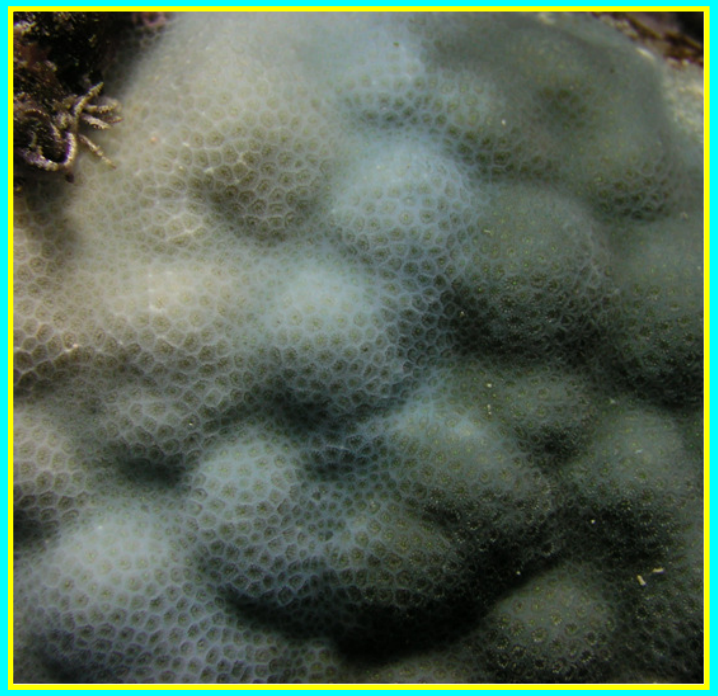


5) Color of the lesion and its border (see color key below:



EXAMPLE

DISCOLORATION IN *PORITES*



1	2	3	4	5
D		C	C	J

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.

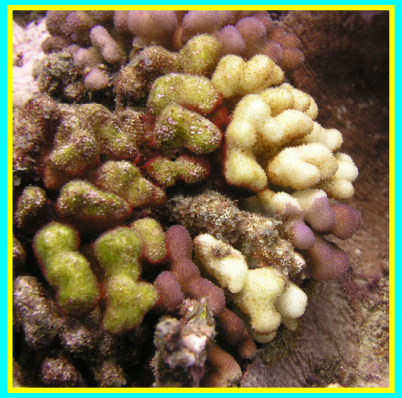
Branching *Acropora* WS
Diffuse acute tissue loss

Table *Acropora* WS
Diffuse subacute tissue loss

***Pavona* WS**
Diffuse acute tissue loss

***Coscinarea* WS**
Diffuse subacute tissue loss

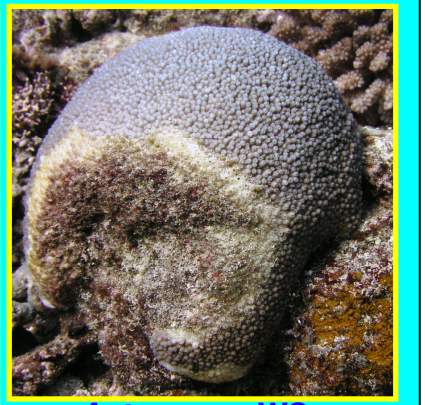
WHITE SYNDROME (WS)



***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

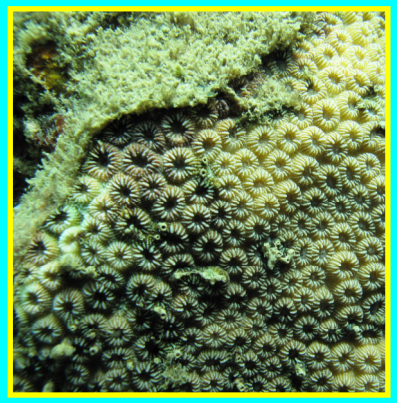
Favia
Diffuse bleaching with broad dark border

Porites
Multifocal bleaching

DARK SPOTS DISEASE (Endolithic hypermycosis) AND PINK SPOT

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

***Leptoria* DSD**
Localized dark discoloration



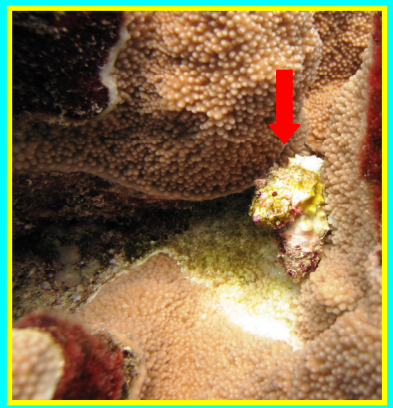
***Favia* DSD**
Diffuse dark discoloration

Porites Pink Spot
Multifocal pink discoloration

PREDATION/PARASITES

Porites
Mollusc predation
(*corallophylia*)

Porites
Fish predation



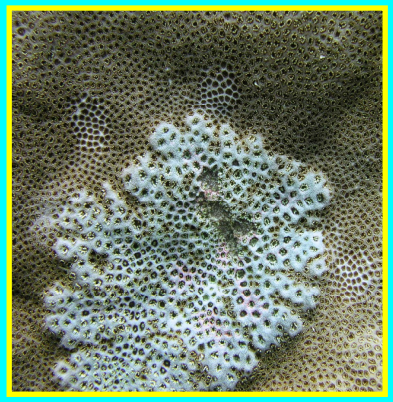
Montipora
Mollusc predation (*Drupella*)

Pocillopora
Crab parasitism

GROWTH ANOMALY (GA)

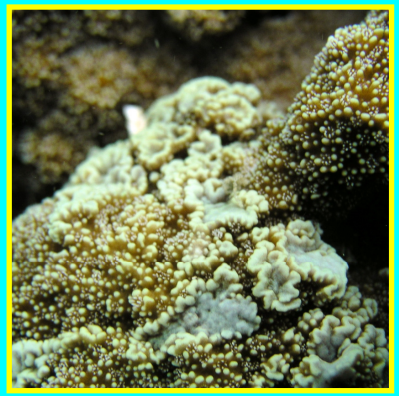
Skeletal growths overlaid by normally colored to pale tissue with enlarged calices or reduced to absent polyp formation.

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