



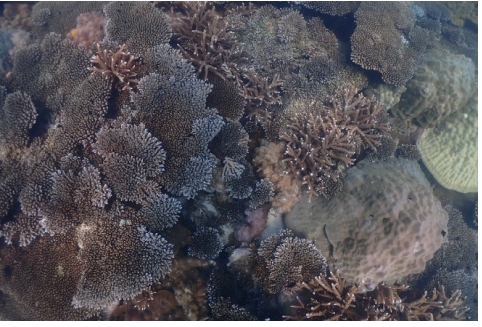
BUU
BURAPHA UNIVERSITY
WISDOM OF THE EAST CHANTHABURI CAMPUS

MT
คณะเทคโนโลยีทางทะเล
Marine Technology
BURAPHA UNIVERSITY CHANTHABURI CAMPUS

Coral Reef Benthic Identification

Choochai Ruangjaroon

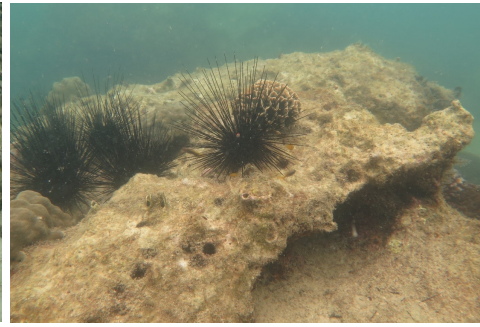
Faculty of Marine Technology, Burapha University,
Chanthaburi Campus, Chanthaburi, Thailand



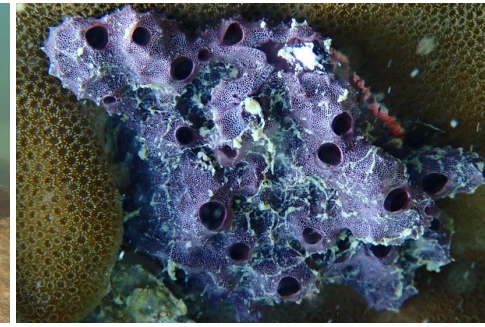
Hard coral



Rubble



Bare / Metrix

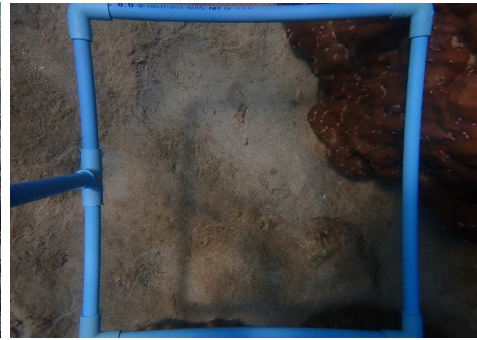


Others

- Sponge
- Ascidian
- Zoanthid
- Corallimorph
- Anemone



Soft coral



Sand



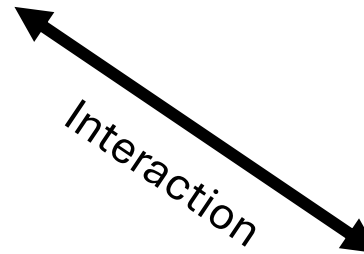
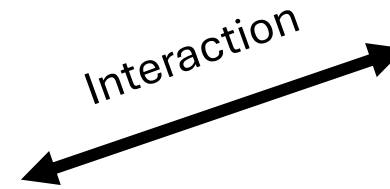
Rock



Reef Benthic Community

- Benthic algae
- Macroalgae
 - Turf algae
 - CCA
 - Cyanobacteria

Resilience / Phase shift



Scrapers, Excavators,
Grazers, Browsers



Herbivorous Fishes



Coral Recruitment

Benthic Community Identification

Live coral (Genus)

Dead coral

Algae

Sand

Rock

Others

- Recently dead coral
- Dead coral with algae
- Dead coral with sediment
- Coral rock / Old dead coral / Bare / Matrix
- Rubble

- Turf algae
- Macroalgae
- CCA

- Sponge
- Anemone
- Gorgonian
- Soft coral
- Zoanthid
- Corallimorph
- Giant clam
- Bivalve

Identification Benthic Community

Live coral (Genus)

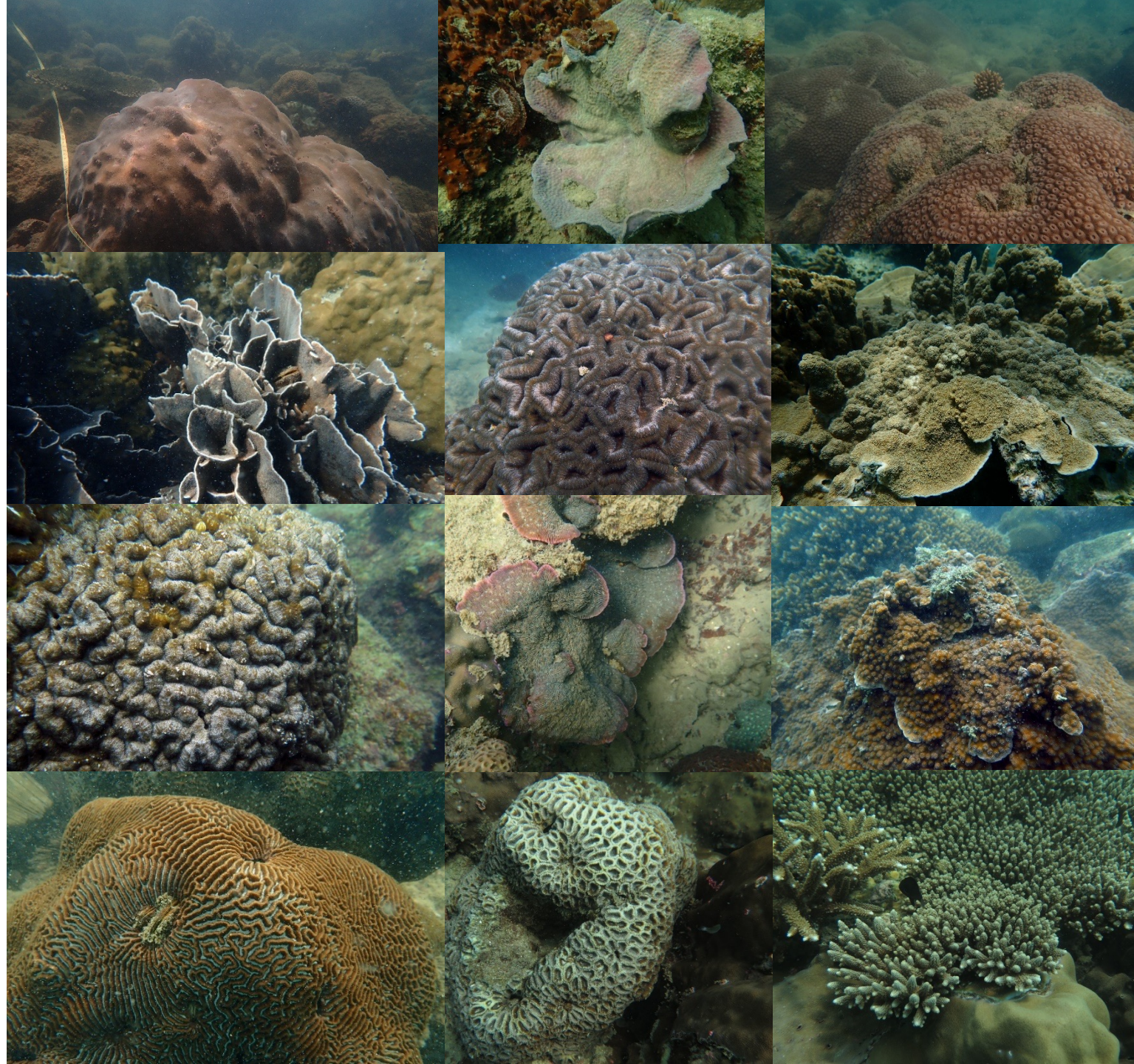
Dead coral

Algae

Sand

Rock

Others



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

Sand

Rock

Others

RDC / DCA / DCS

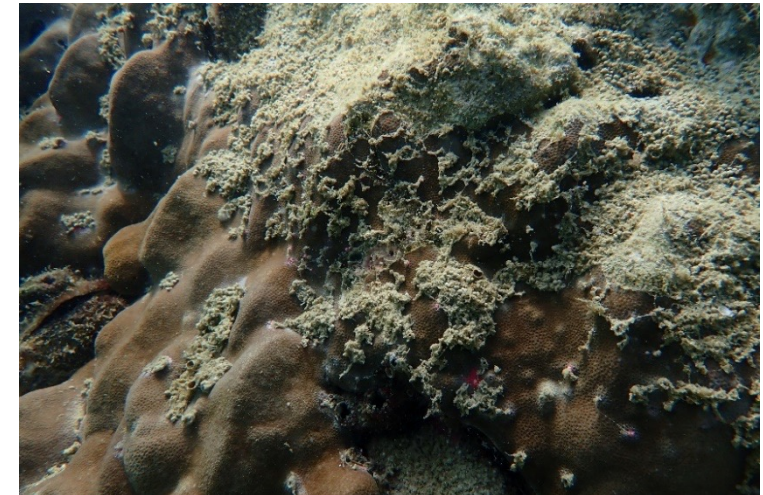
Coral rock

Rubble

Recently dead coral



Dead coral with algae



Dead coral with sediment

Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

Sand

Rock

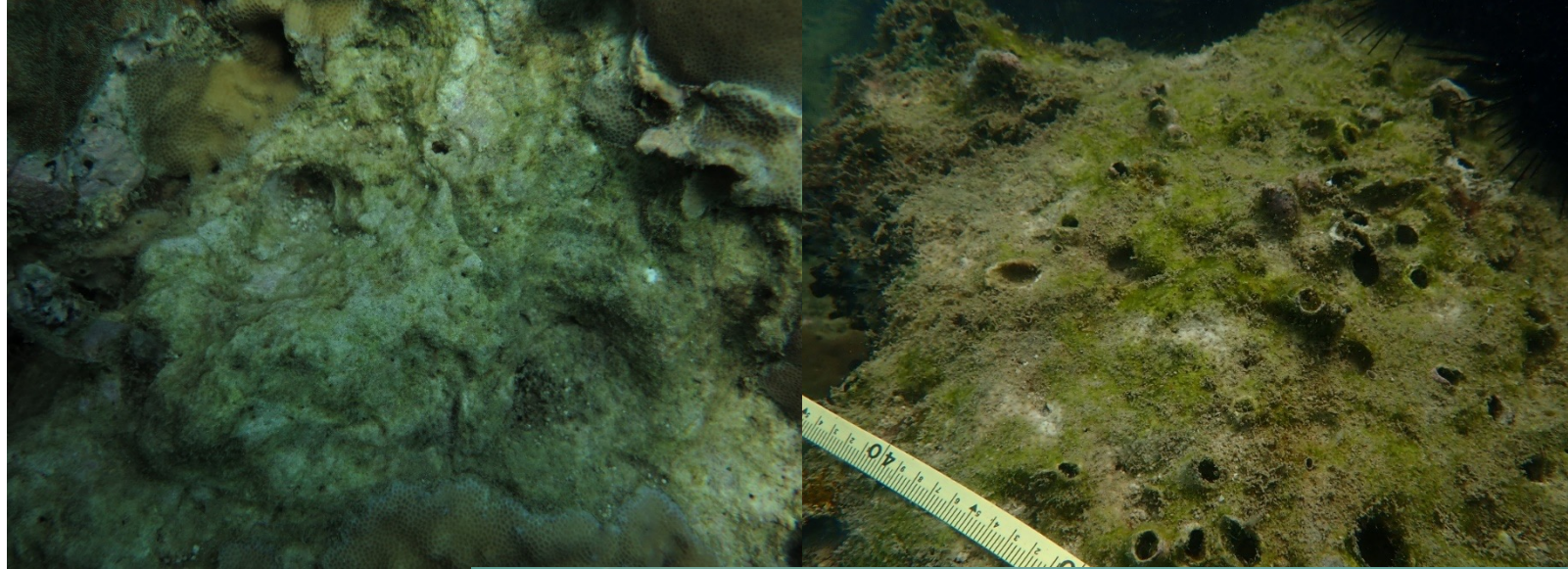
Others

Coral rock/ Old dead coral
/ Bare / Matrix

Recently dead coral

Coral rock / OBM

Rubble



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

Sand

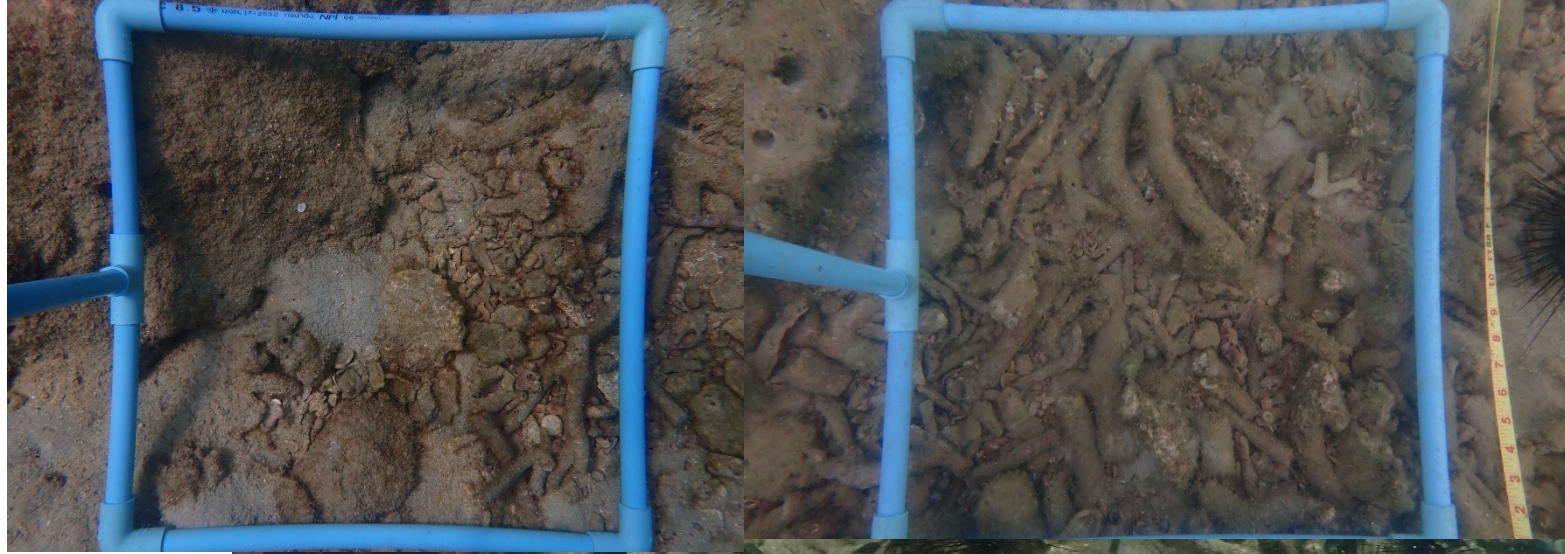
Rock

Others

Recently dead coral

Coral rock

Rubble



Rubble



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

Turf algae
Macroalgae

Sand

< 2 cm high

Rock

Others



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

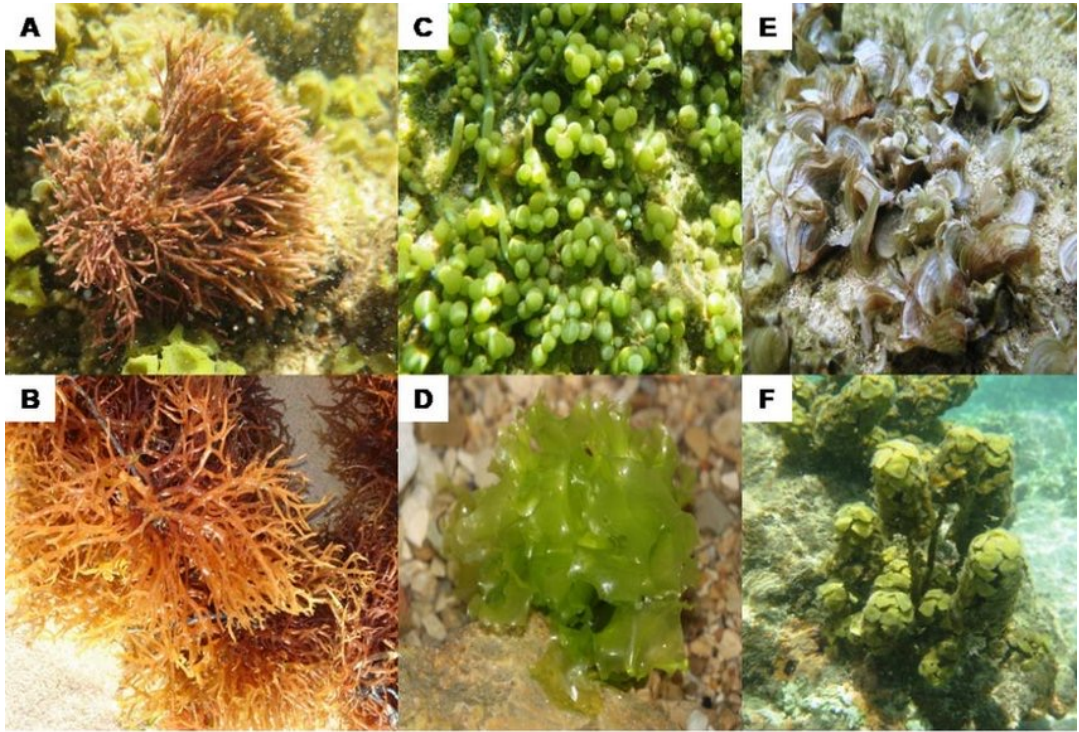
Turf algae
Macroalgae

> 2 cm high

Sand

Rock

Others

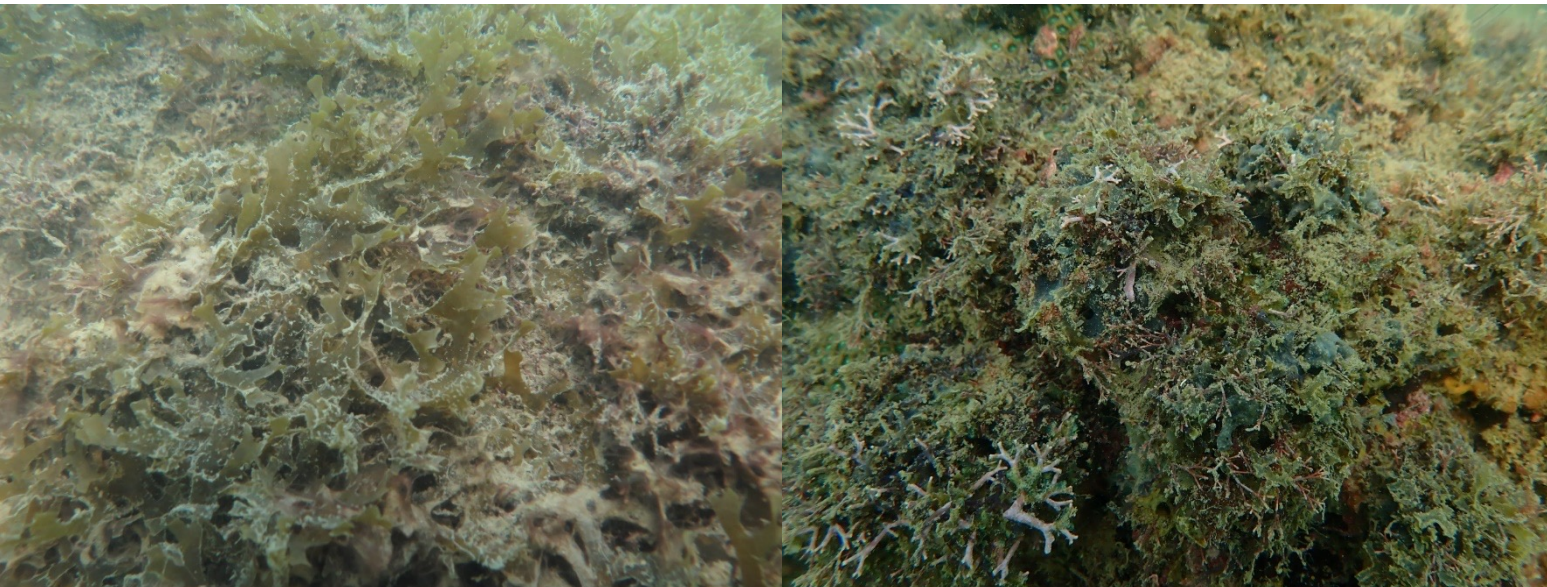


red macroalgae

green macroalgae

brown macroalgae

Bayu and Handayani, 2018



Identification Benthic Community

Live coral

Dead coral

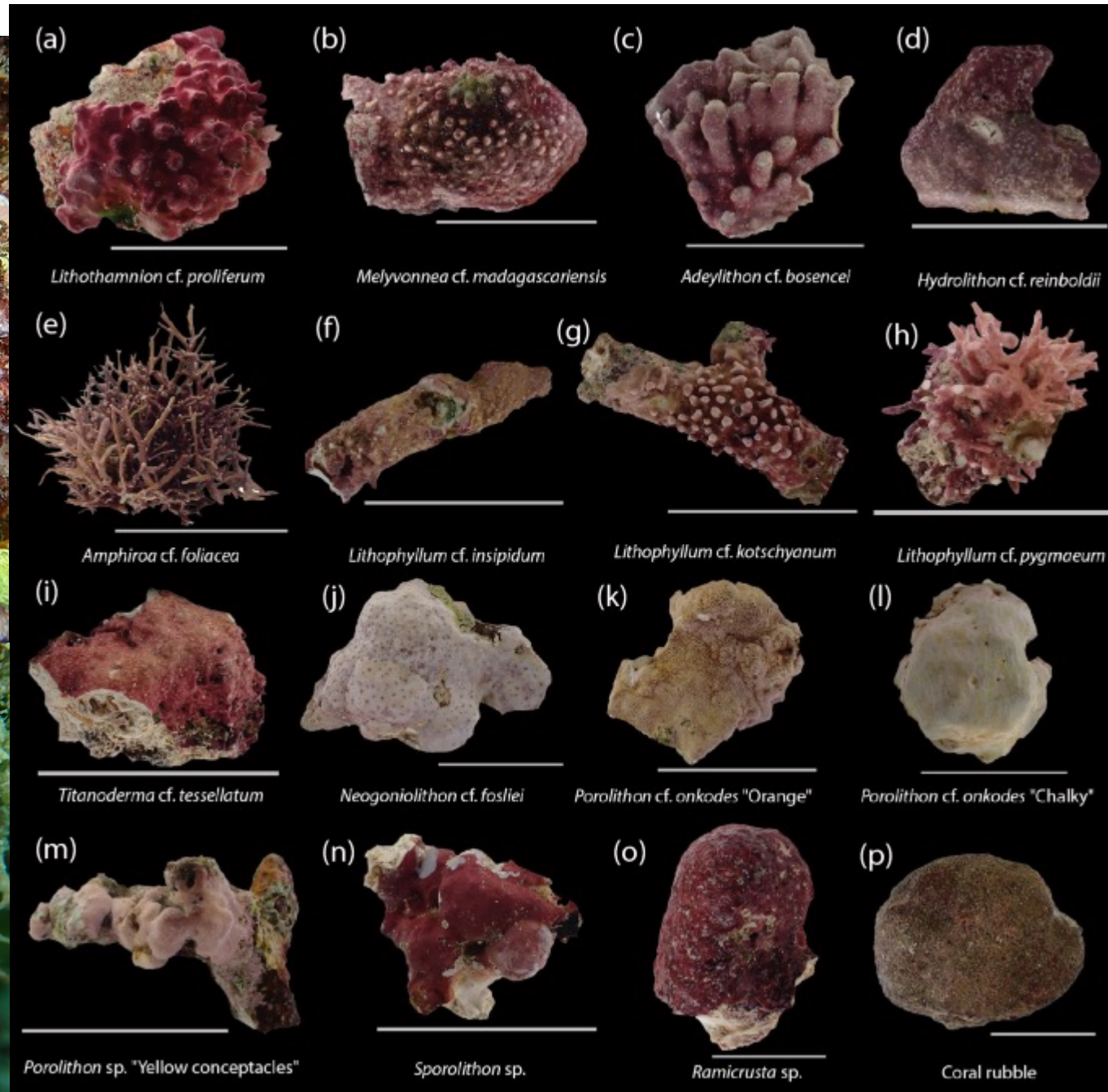
Algae

CCA

Sand

Rock

Others



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

Sand

Rock

Others



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

Sand

Rock

Others



Identification Benthic Community

Live coral (Genus)

Dead coral

Algae

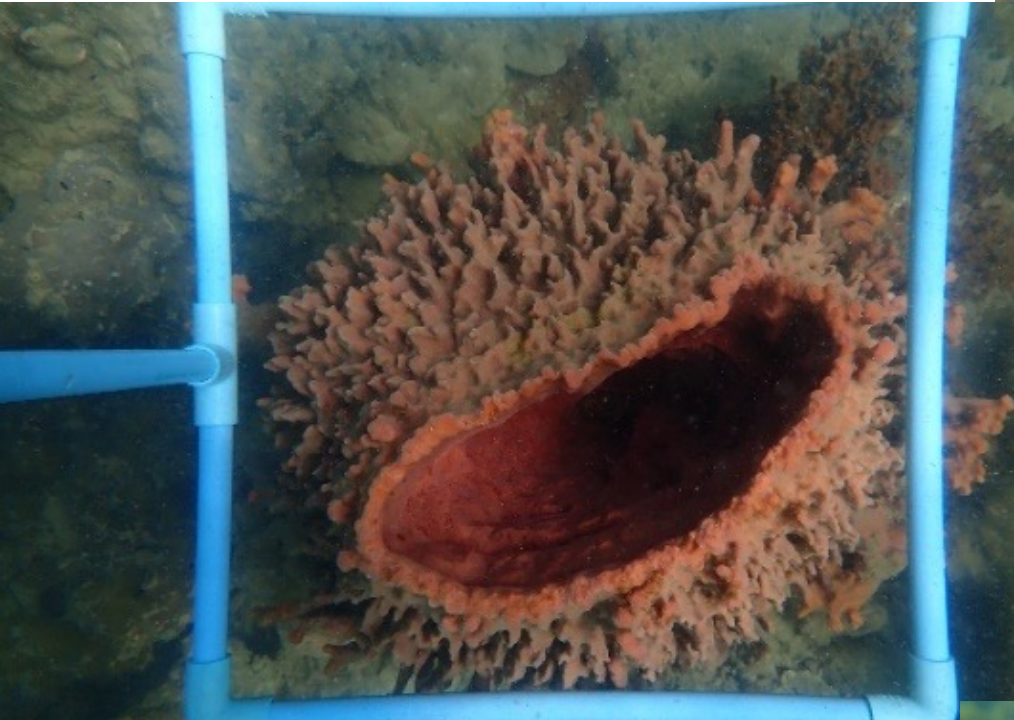
Sand

Rock

Others

Sponge
Anemone
Gorgonian
Soft coral
Zoanthid
Corallimorph
Giant clam
Bivalve

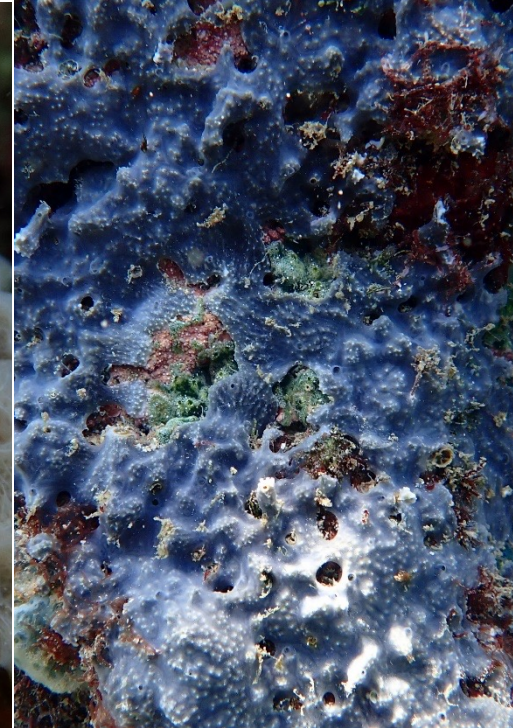




Others

Sponge







Others



Anemone
Gorgonian
Soft coral

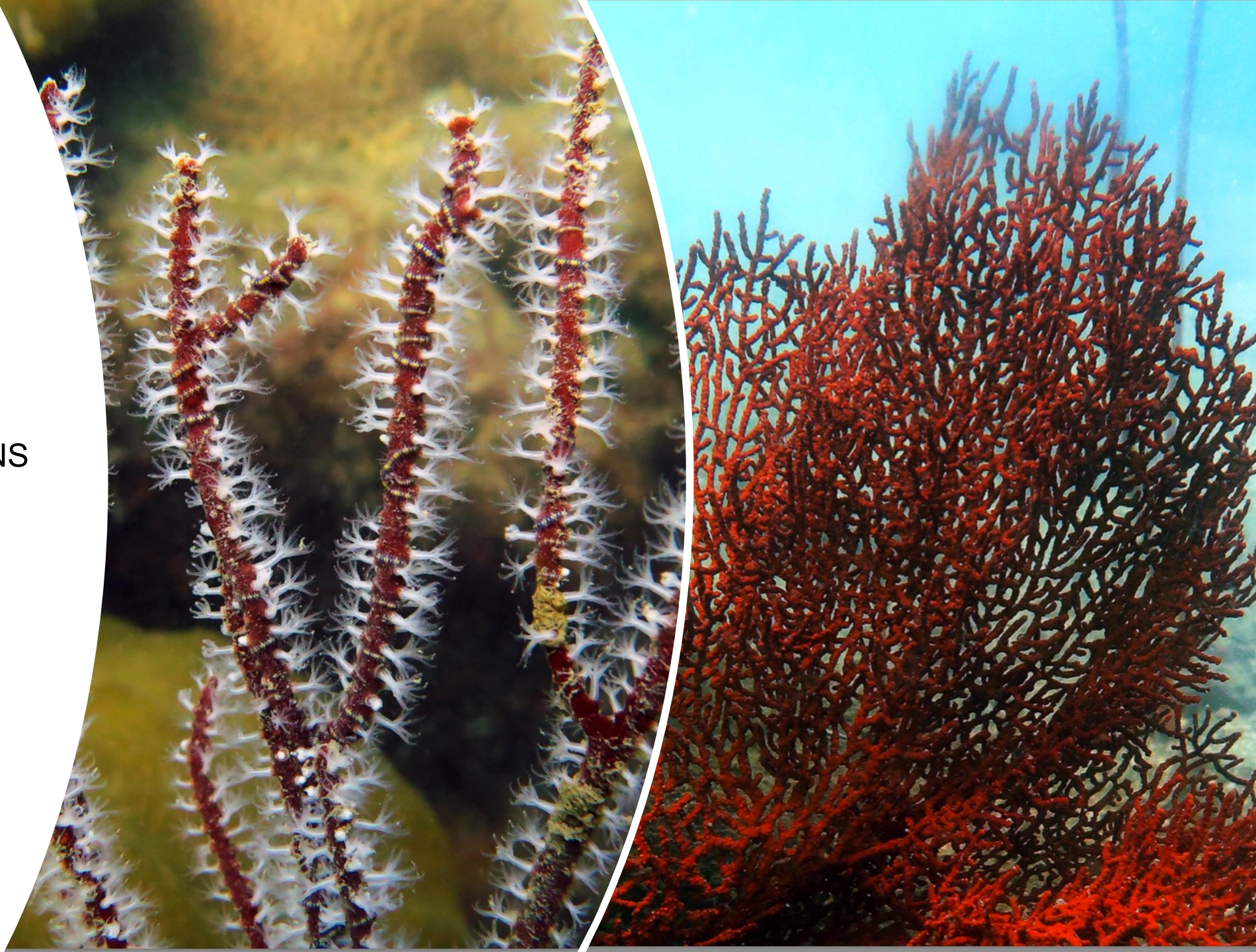
Others

SEA ANEMONES



Others

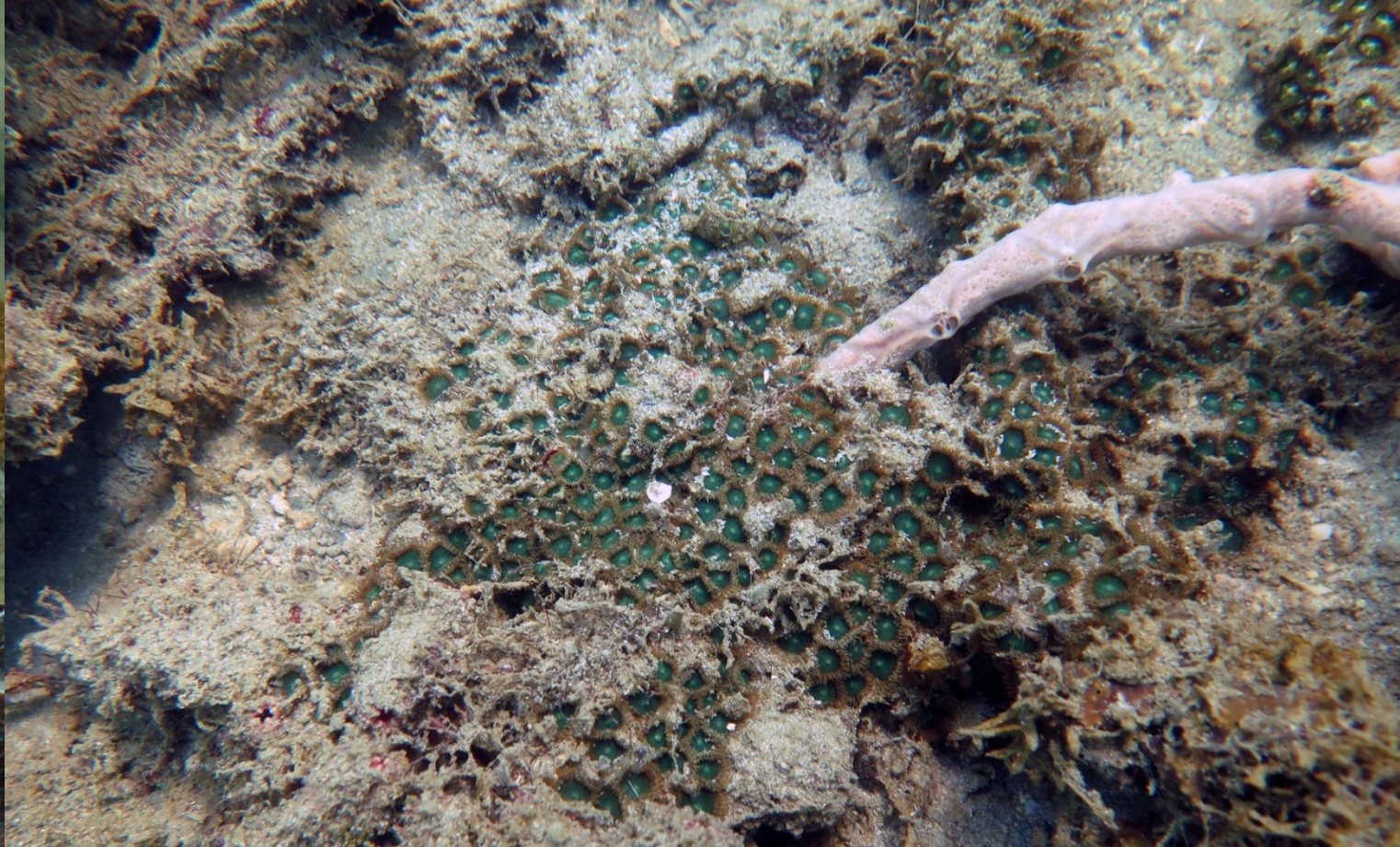
SEA FANS / GORGONIANS



Others

SOFT CORALS



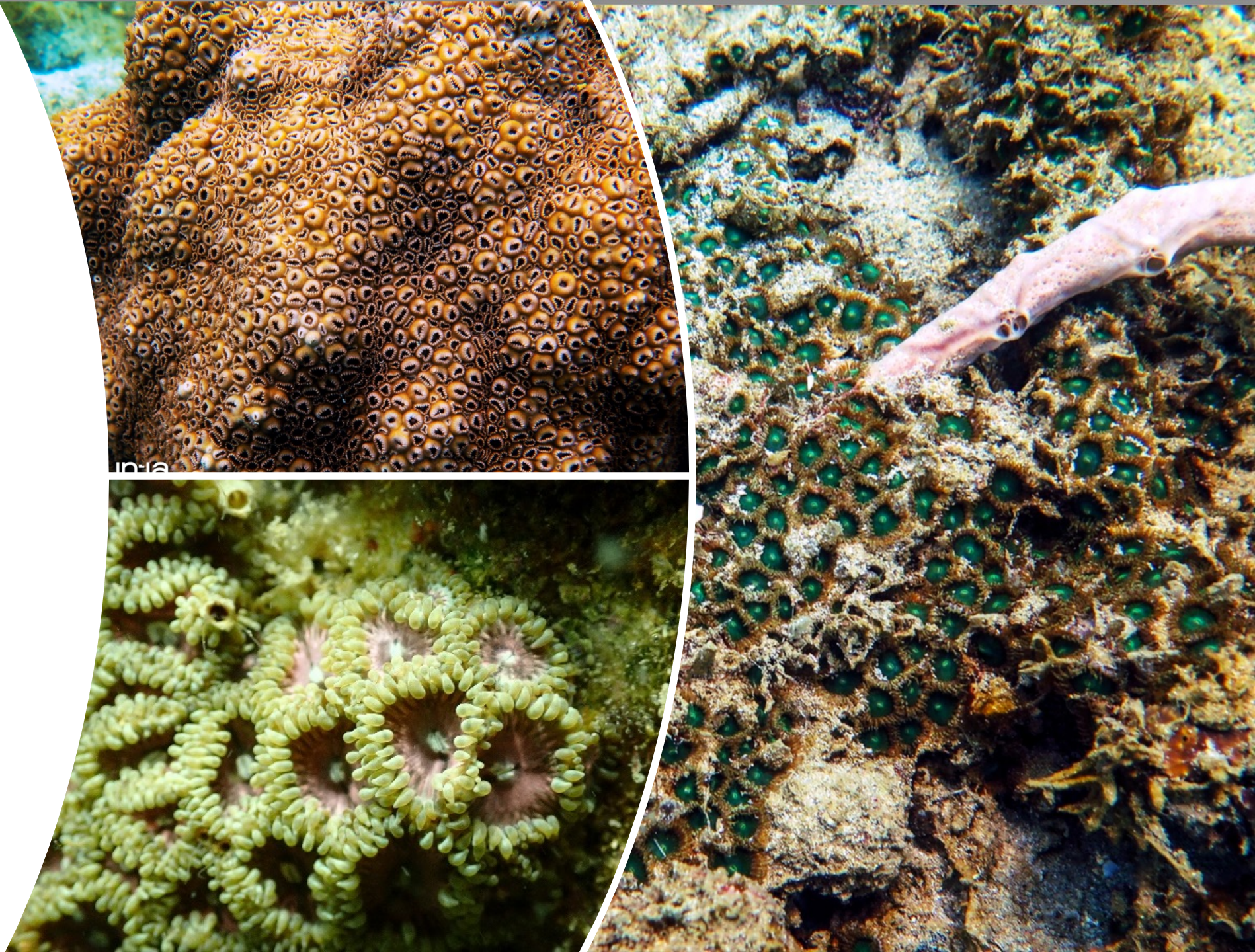


Others

Zoanthid
Corallimorph

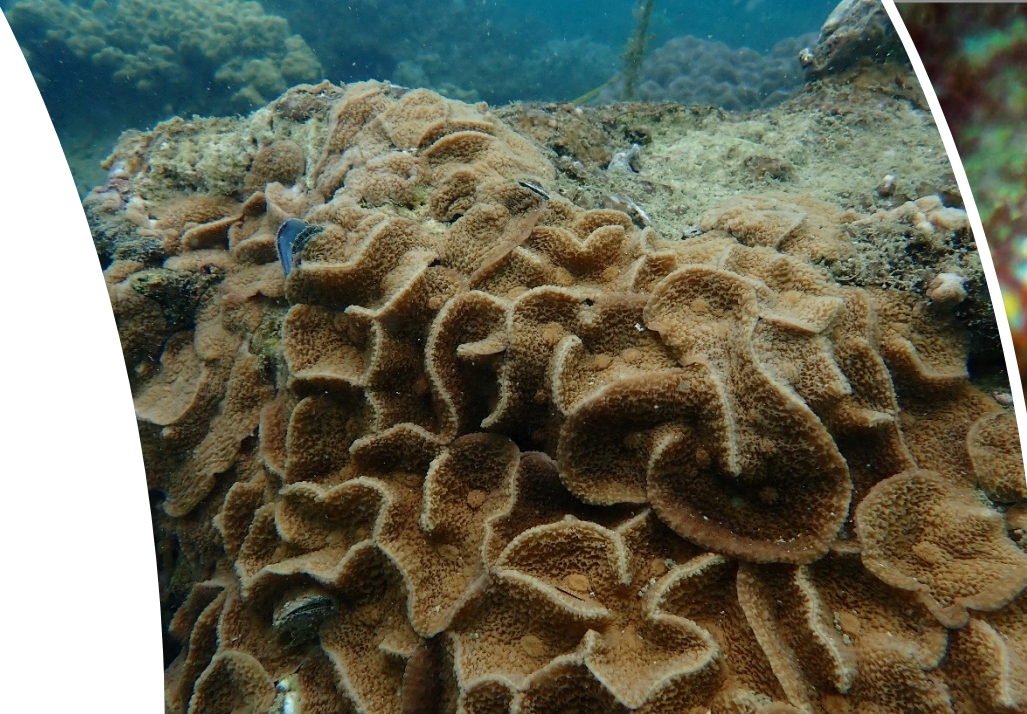
Others

ZOANTHIDS

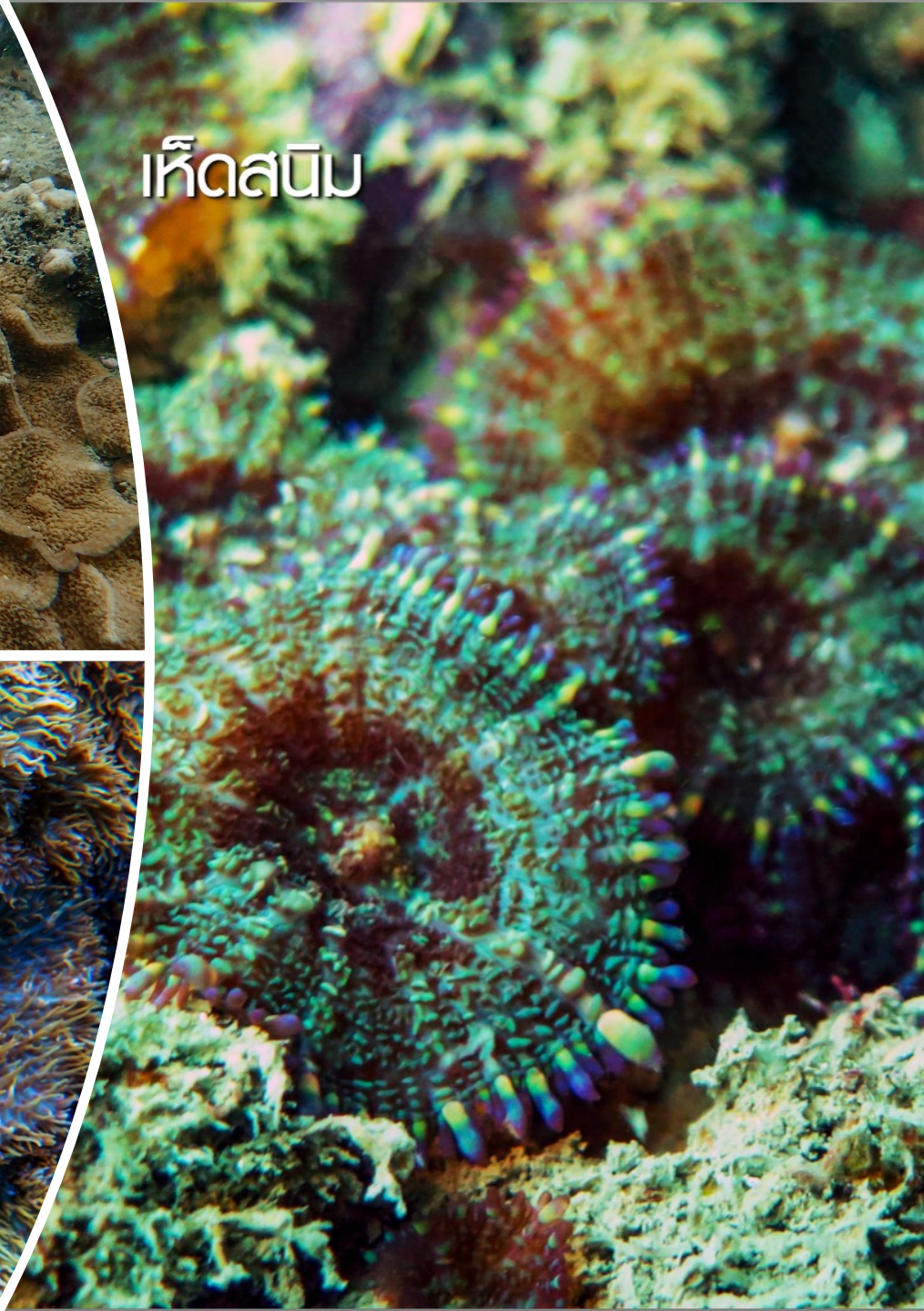
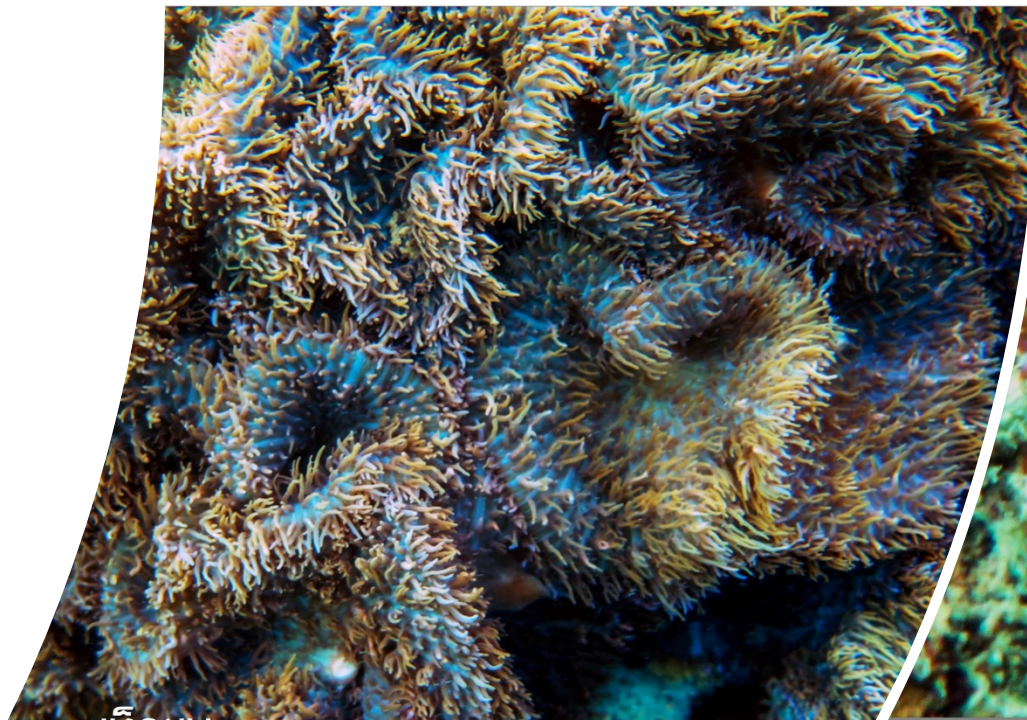


Others

CORALLIMORPHS



เห็ดสนิม

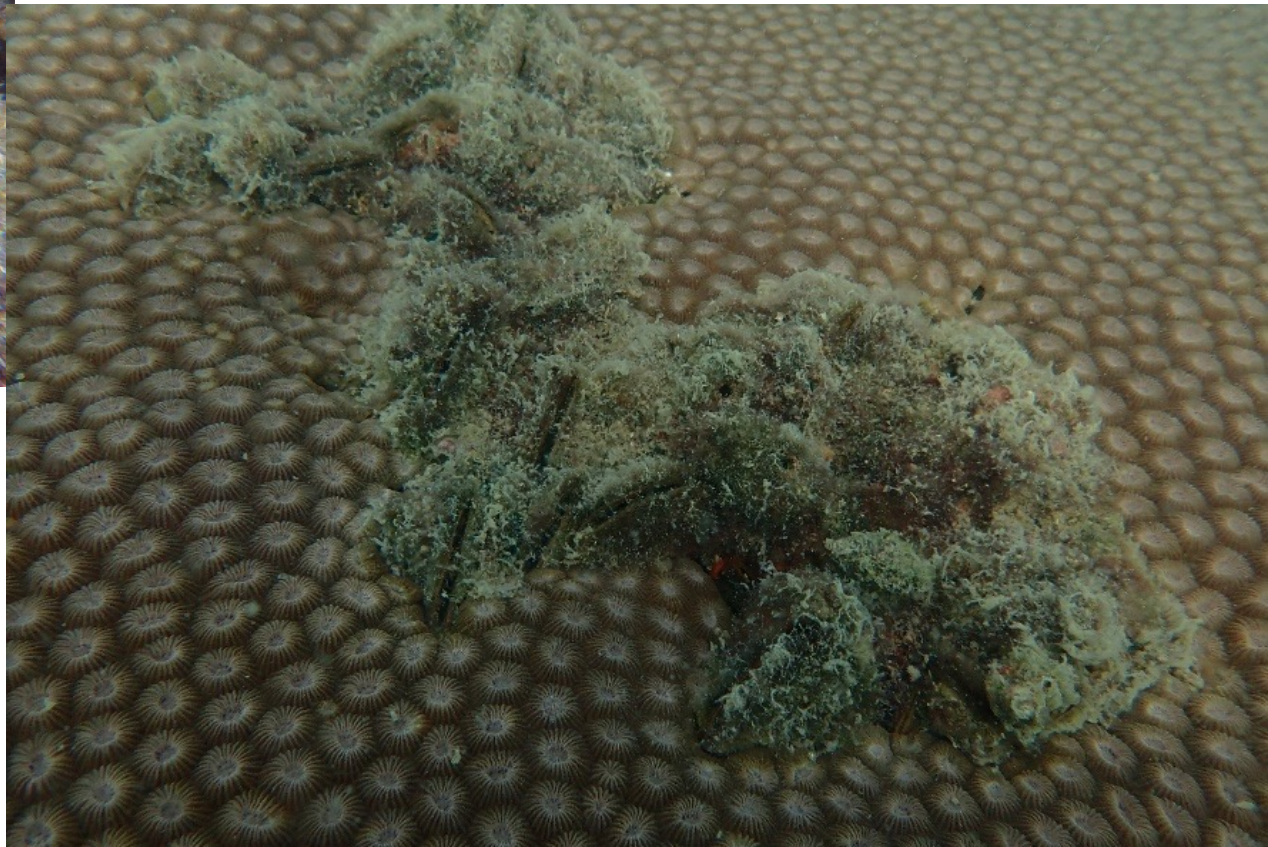




Giant clam

Others

Bivalve



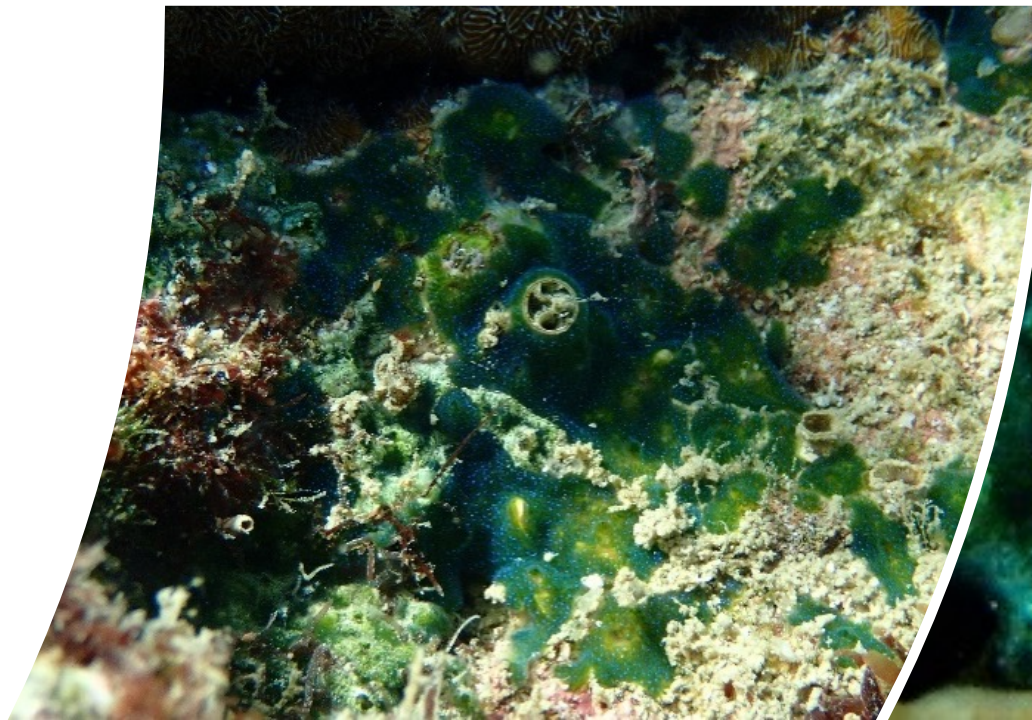
Others

WORMS



Others

ASCIDIANS



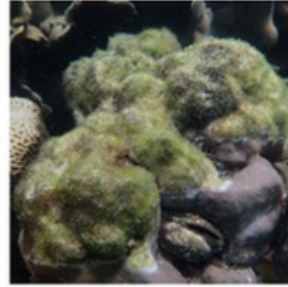
BENTHIC COMMUNITY



LIVE CORAL



RECENTLY DEAD
CORAL



TURF ALGAE (< 2 cm high)



MACROALGAE



CORAL ROCK



RUBBLE



SAND



ROCK

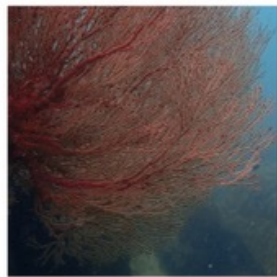
OTHERS



SPONGE



ANEMONE



GORGONIAN



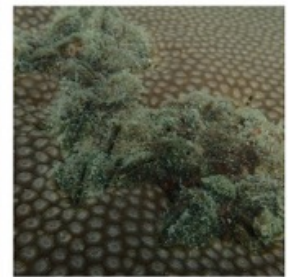
SOFT CORAL



ZOANTHID



CORALLIMORPH



BIVALVE

CORAL HEALTH

					
Healthy				WHITE SYNDROME	YELLOW SYNDROME
					
PIGMENTATION RESPONSE	GROWTH ANOMALIES	NON FOCAL BLEACHING	SEDIMENT DAMAGE	COMPETITION	BLEACHING
  HUMAN IMPACTS		Healthy: _____ % Note: _____			
		Diseases: _____ % Note: _____			
		Compromised health: _____ % Note: _____			
		Bleaching: _____ % Note: _____			
		Human impacts: _____ % Note: _____			



RAPID ASSESSMENT SHEET



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WISDOM OF THE EAST CHANTHABURI CAMPUS

MT
มรณานันท์เทคโนโลยี
Marine Technology

Observer Name: _____ Phone: _____ Email: _____

Organisation: _____ Site name: _____ Lat: _____ Long: _____

Water temp: _____ °C Date: _____

Visibility (circle one)

Reef zone (circle one)

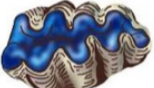
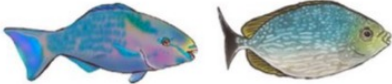
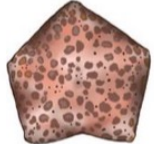
Survey depth: _____ m Time: _____

<5m 10m >10m

FLAT EDGE SLOPE

NOTES: _____

15 cm

Indicator species	Count/Total	Indicator species	Count/Total
 Giant clam (all species)		 Parrotfish/ Rabbitfish/ Surgeonfish	
 Snail (<i>Drupella</i> spp.)		 Snapper (all species > 20 cm)	
 Cushion star		 Grouper (all species > 20 cm)	
 Sea cucumber (all species)		 Wrasse (all species)	
 Black sea urchin		 Butterfly fish (all species)	
 Crown-of-thorns starfish		 Ray (all species)	
 Nudibranch (all species)		 Shark (all species)	
 Octopus/ Cuttlefish/ Squid		 Sea turtle (all species)	

Indicator species

- Fishing pressures/ Aquarium trade
- Grazing herbivores
- Population outbrakes
- Good reef health/ Biodiversity
- Reef cleaner (detritus/algae)
- Top-down control

คณะเทคโนโลยีทางทะเล มหาวิทยาลัยบูรพา วิทยาเขตจันทบุรี

ภายใต้ โครงการวิจัยเรื่อง "การพัฒนาหลักสูตรบูรณาการเพื่อพัฒนาศักยภาพการเรียนรู้ด้านเศรษฐกิจ สังคม มรดกทางวัฒนธรรม และภูมิปัญญา สู่การพัฒนาทรัพยากรมนุษย์อย่างยั่งยืน (สนองพระราชดำริโครงการอนุรักษ์พันธุกรรมพืชอันเนื่องมาจากพระราชดำริสมเด็จพระปรมินทรมหาภูมิพลอดุลยเดช บรมนาถบพิตร)"

- Coral Point Count with Excel extensions (CPCe) คือ โปรแกรมสำหรับการวิเคราะห์สัดส่วนเปอร์เซ็นต์การปกคลุมพื้นที่ของปะการังมีชีวิต ปะการังตาย ทราช หิน สาหร่าย และสิ่งมีชีวิตอื่นๆ บนพื้นทะเล โดยใช้ภาพถ่ายที่ได้จากการเก็บข้อมูลในภาคสนาม

