

Reef Etiquette and Hawaiian Reef species ID



Today's experience

- Quick lecture on reef etiquette and common reef organisms
- Swim/snorkel test
- Test out your new reef organisms knowledge on a 'get to know the reef' guided snorkel

Reef Etiquette

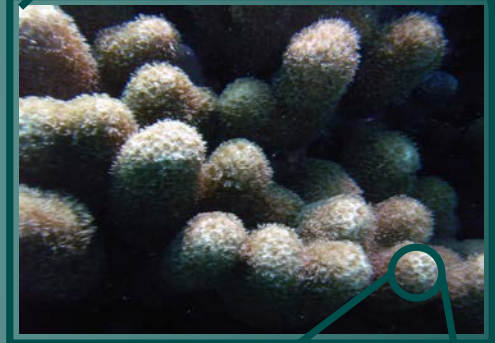
The reef is alive!



A closer look reveals separate colonies of coral on the reef



Each colony has many coral individuals, all of them identical clones within the colony



Each individual coral animal is called a polyp, the brown/green specs inside the polyp tissue are actually the symbiotic algae or zooxanthellae



This is a typical Hawaiian reef

Coral is an ANIMAL that has a plant (ALGAE) living inside it's cells, and together they form the calcium carbonate (MINERAL) reef structure that is the foundation of the coral reef ecosystem

Reef etiquette and water safety

- Please don't:
 - step, stand or kick the reef with your fins
 - Stir up sediment with your fins
 - Grab the reef or any living organism
 - Stick your hands into crevices
 - Chase after fish or turtles
 - Touch experiments on the reef
 - Stay with your buddy
 - Stay near the dive buoy

Common reef organisms

- Algae
- Sponges
- Corals
- Worms
- Sea cucumbers
- Sea urchins
- Crabs
- Snails

Algae

- Photosynthetic, but not true plants
- Mainly aquatic (marine and fresh), some terrestrial
- Three main phyla
 - Green (chlorophyta)
 - Red (Rhodophyta)
 - Brown (Phaeophyta)

Green algae: *Bryopsis pennata*

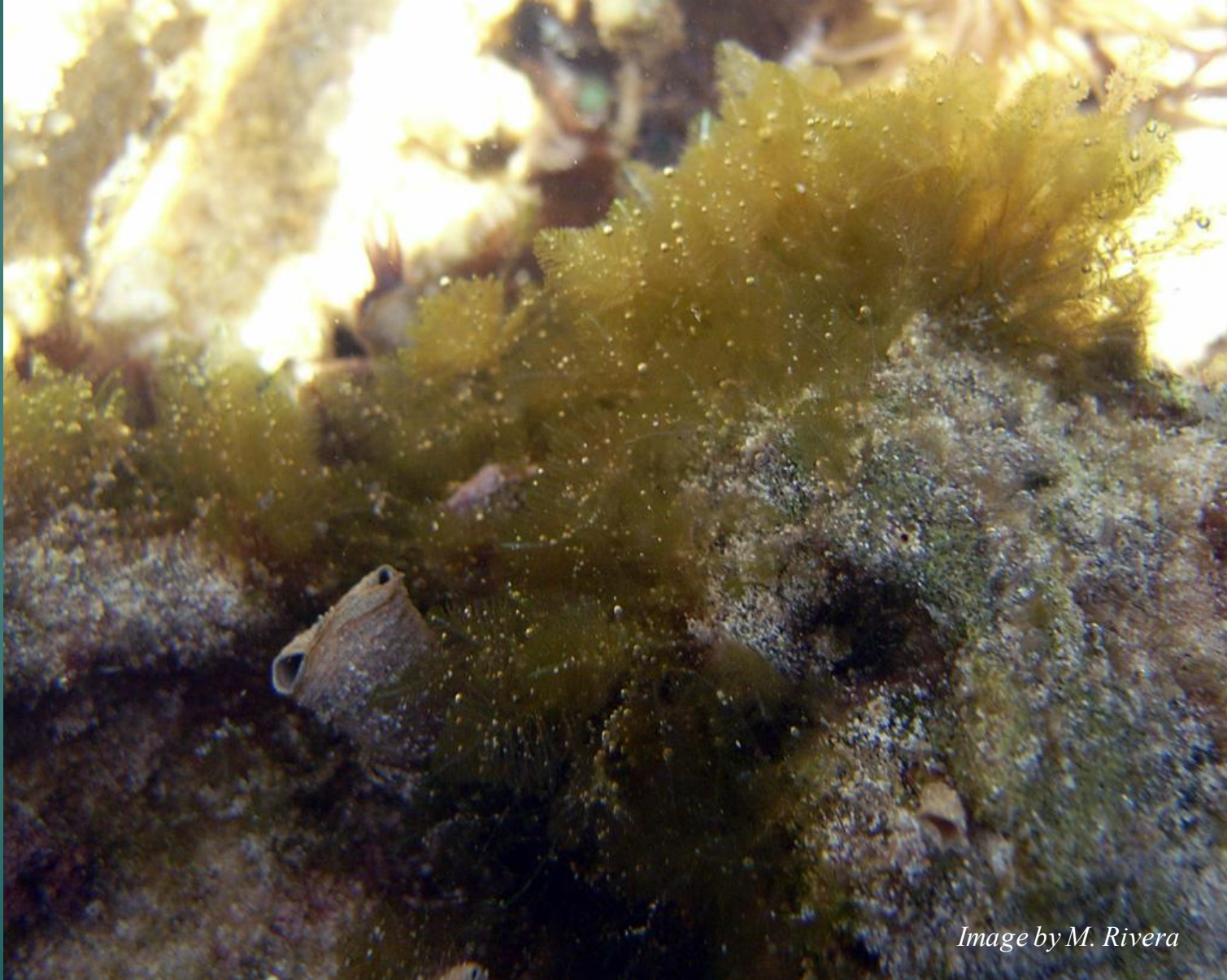


Image by M. Rivera

Green algae: *Derbesia fastigiata*

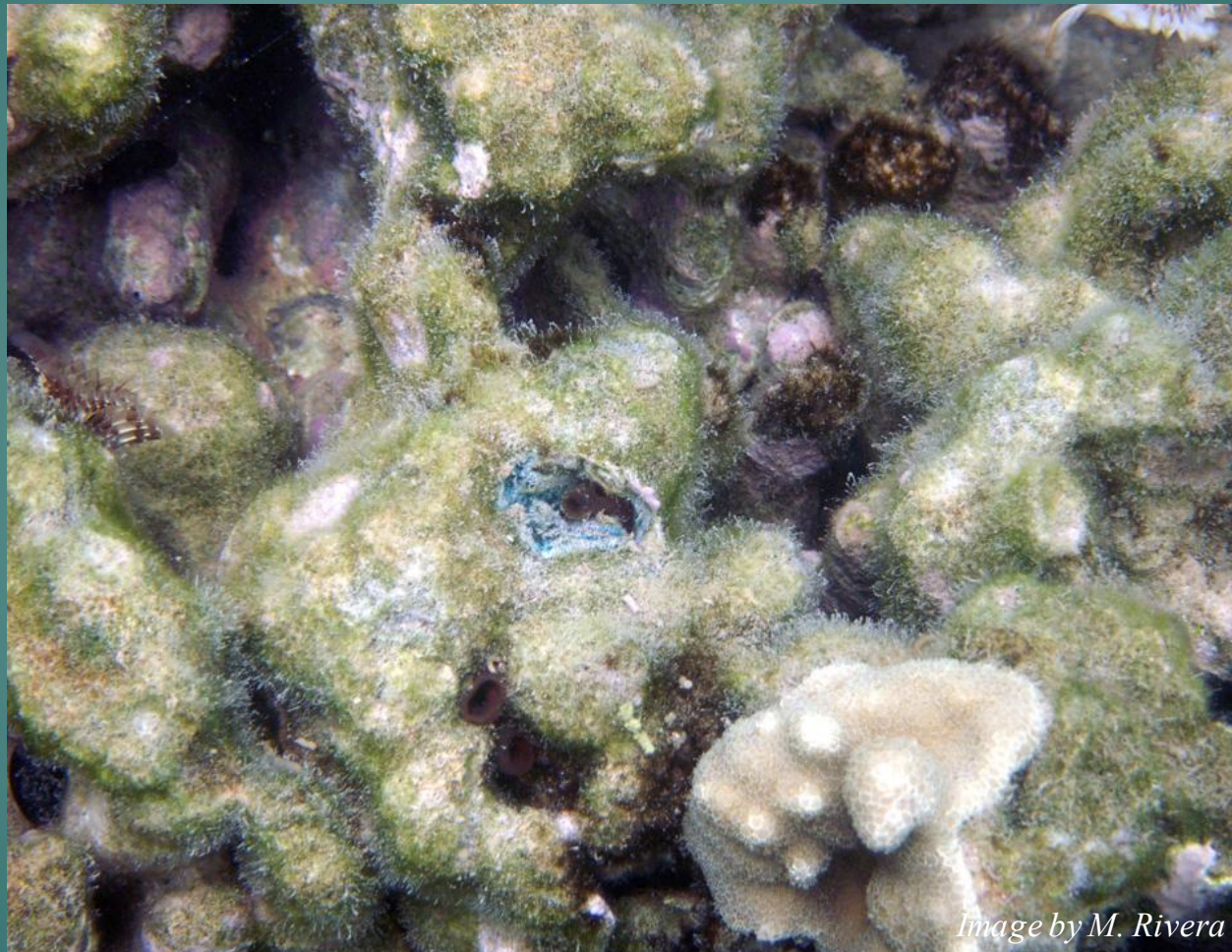


Image by M. Rivera

Green algae



Halimeda discoidea



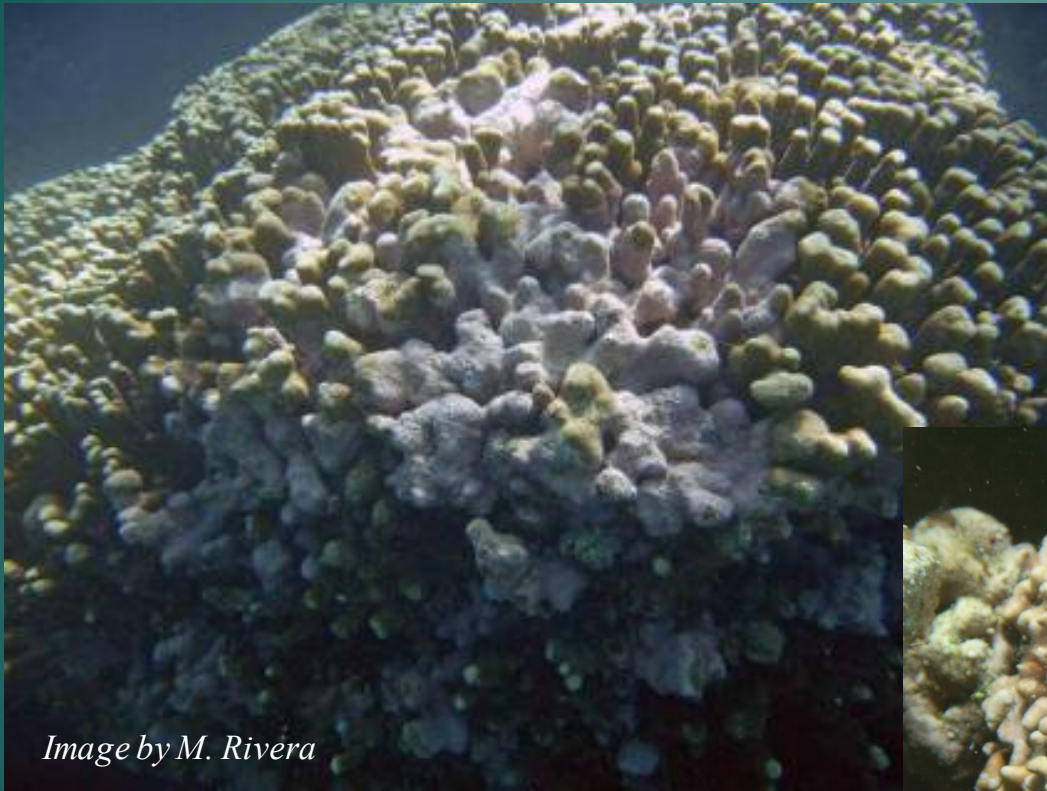
Ventricaria ventricosa

Green algae



Dictyosphaeria cavernosa

Red algae: Crustose coralline algae



Red algae: Crustose coralline algae

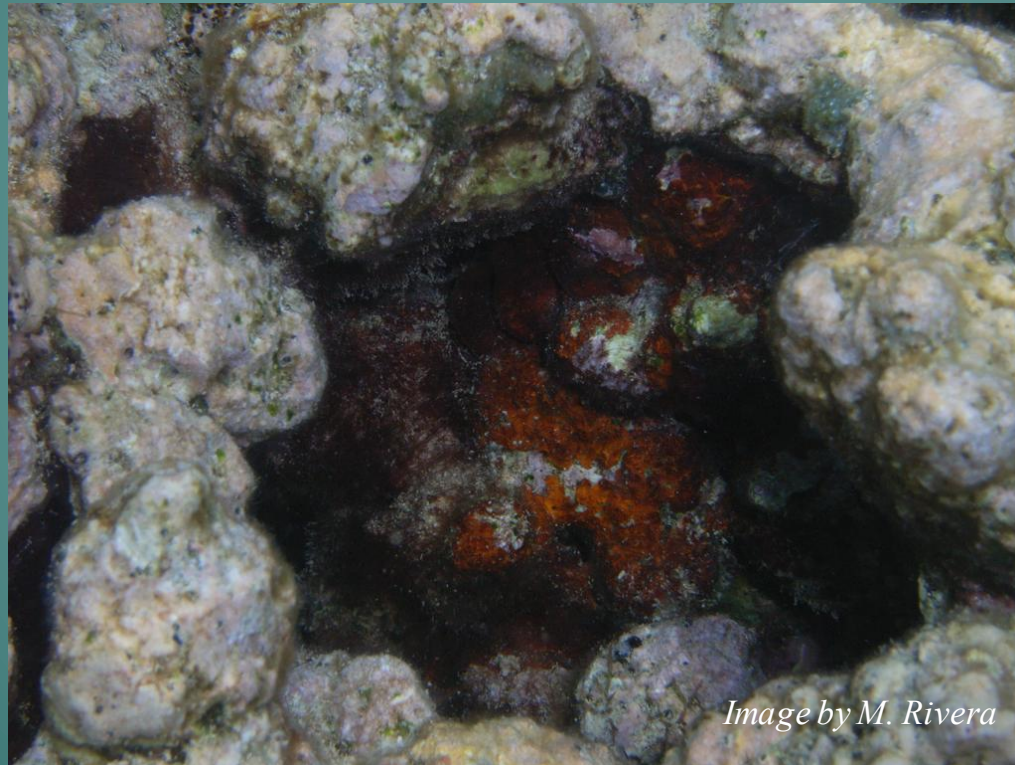


Image by M. Rivera

Red algae



Image by M. Rivera

Acanthophora specifera

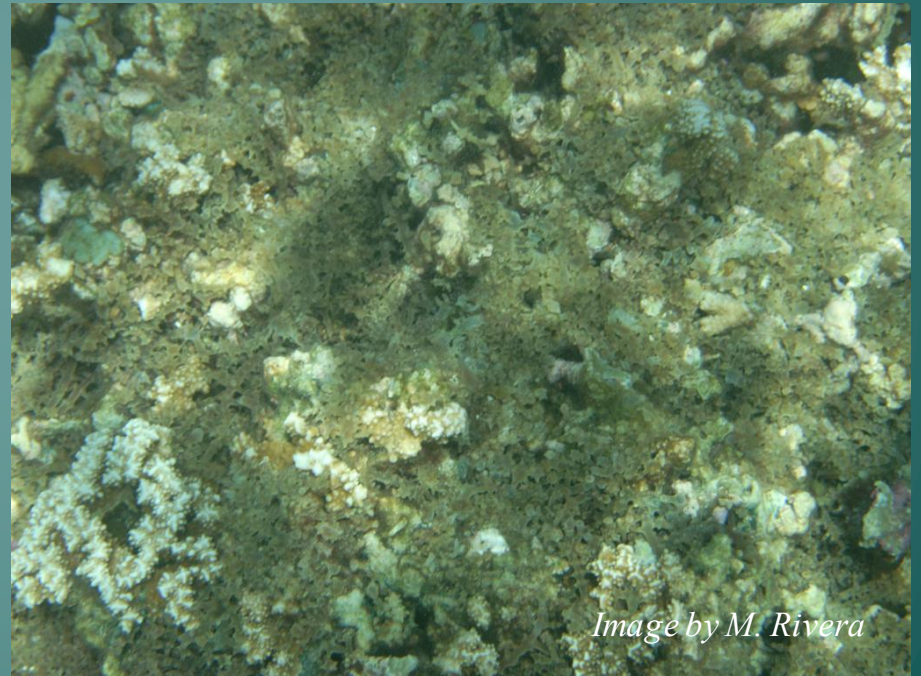


Image by M. Rivera

Kappaphycus alvarezii

Red algae: *Gracilaria salicornia*



Image by K. Stender



Image by M. Rivera

Brown algae: *Lobophora variegata* *Padina australis*



Image by Y. Stender



Image by M. Rivera

Sponges



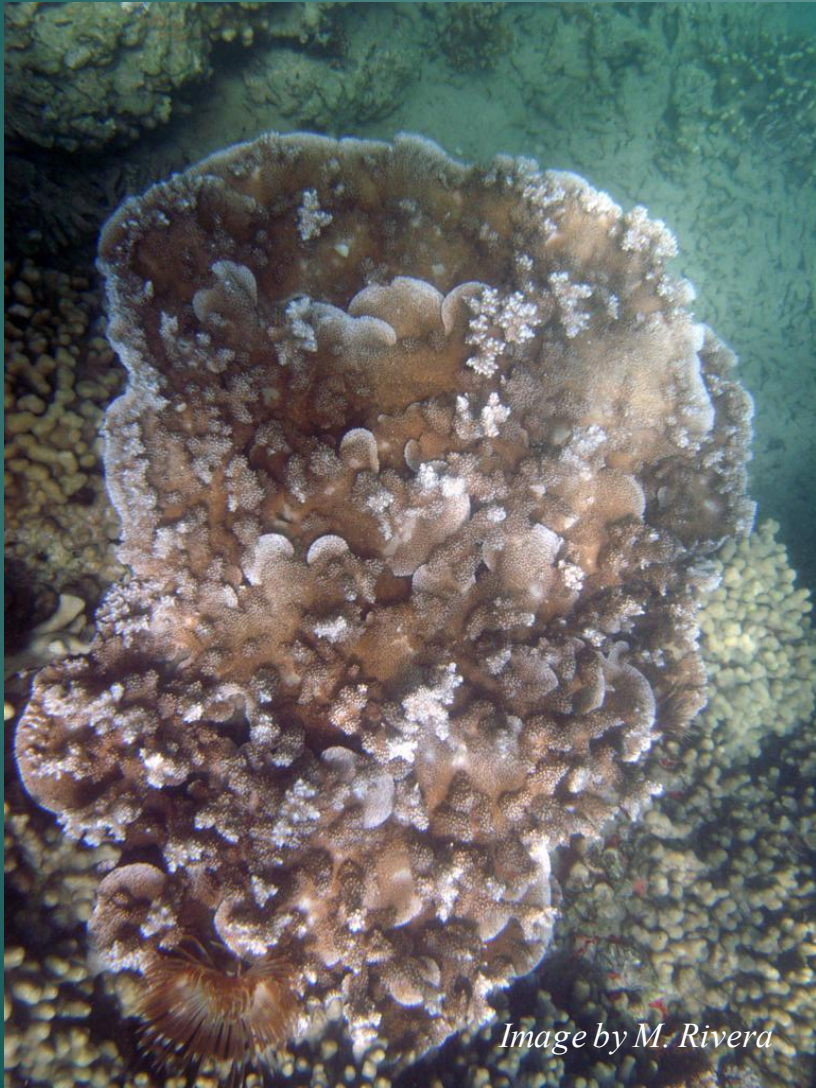
Corals, anemones

Rice coral, *Montipora capitata*



Image by M. Rivera

Rice coral, *Montipora capitata*



Finger coral, *Porites compressa*, pōhaku puna

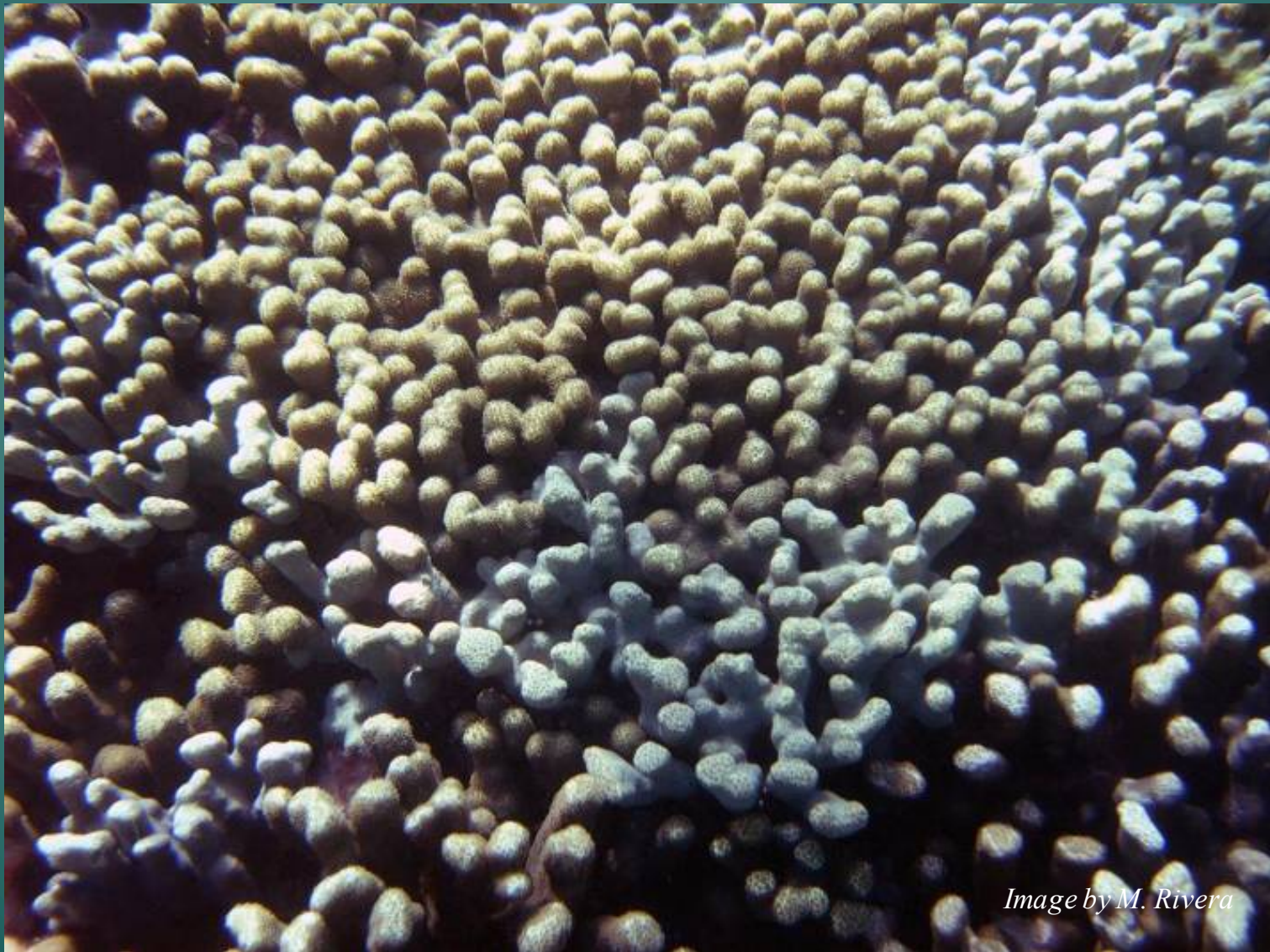


Image by M. Rivera

Finger coral, *Porites compressa*, pōhaku puna



Image by M. Rivera



Image by M. Rivera

Finger coral (*Porites compressa*) with rice coral (*Montipora capitata*)



Image by M. Rivera

Lobe coral, *Porites lobata*, pōhaku puna



Image by M. Rivera



Image by M. Rivera

Lobe coral, *Porites lobata*, pōhaku puna

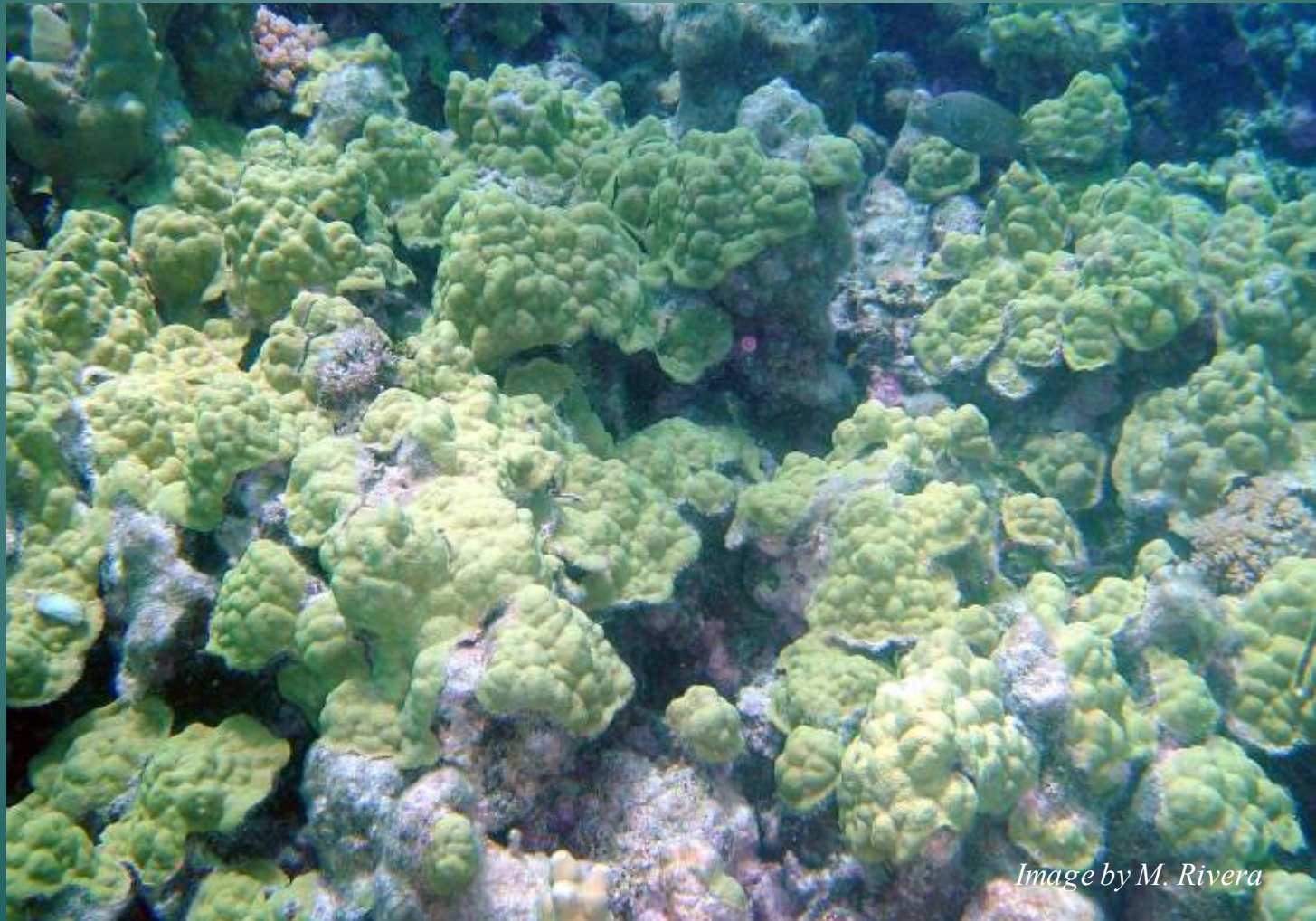


Image by M. Rivera

Lace coral, *Pocillopora damicornis*



Cauliflower coral, *Pocillopora meandrina*



Mushroom coral, *Fungia scutaria*, 'āko 'ako 'a kohe



Image by M. Manning



Image by M. Rivera

Glass anemone, *Aiptasia pulchella*



Tubed worms



Feather duster worms

Feather duster worm



Christmas tree worm



Image by J. Puritz

Sea Cucumbers: Ioli



Sea urchins: vana



Banded urchin



Slate pencil urchin

Sea urchins: vana

Rock boring urchin



Collector urchin

Tiger cowry: leho



Shrimps and crabs



Get to know the reef

- Take pictures of as many organisms as you can
- For each picture, record what you think it is
- The last three pictures should be unknowns that we didn't cover or that you don't remember seeing in this presentation
- Use the field guide books to confirm your knowledge of the reef!