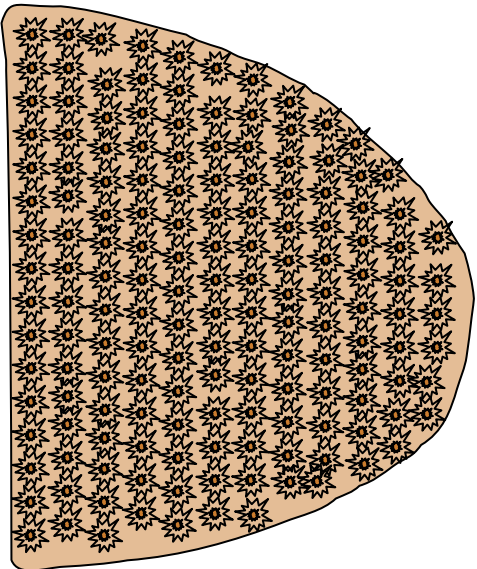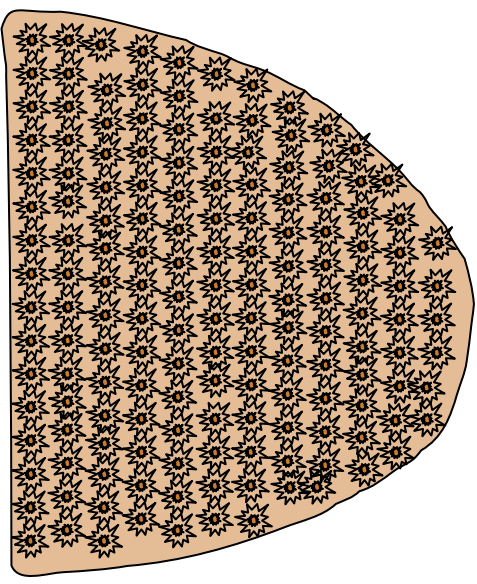# Card Sets: The Changing Coral Reef Community Game

Coral Reef Organism Card Set--36 cards (16 corals, 8 sponges, 8 seaweeds and 4 empty spaces) that are contained on pages/slides 2 through 11.

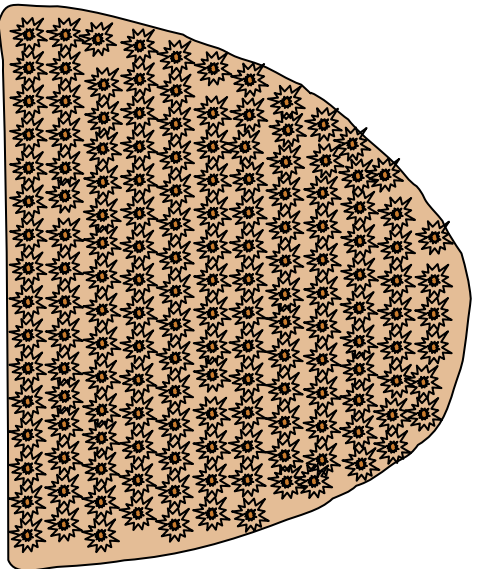Scenario Card Set--contained on pages 12 through 21

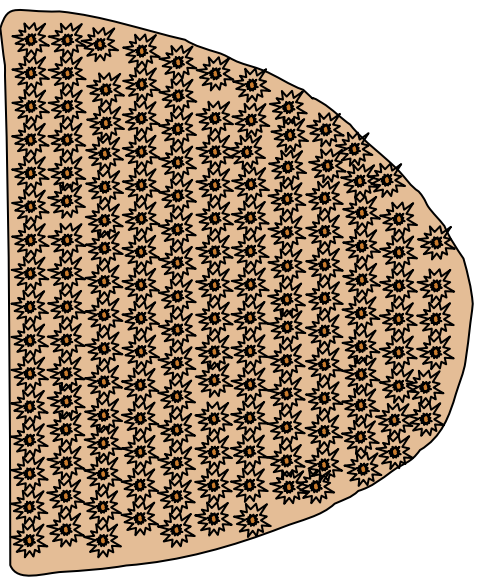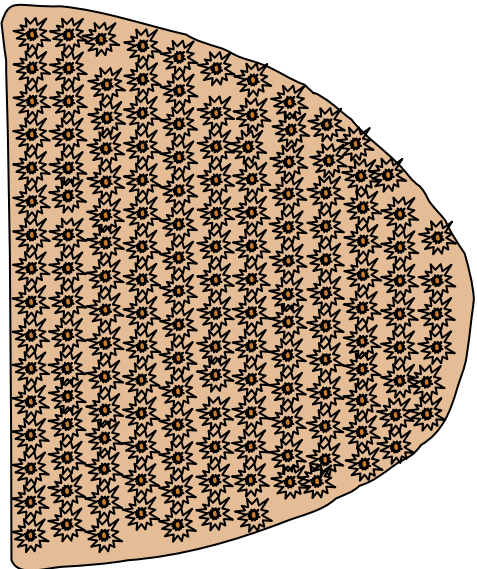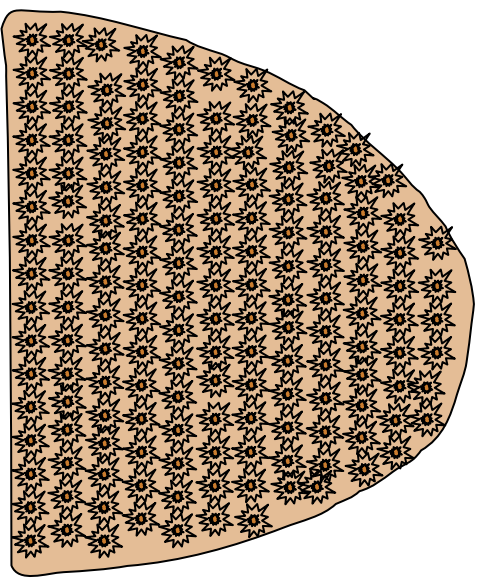Extra Organism Card Set--contained on pages 22 through 27
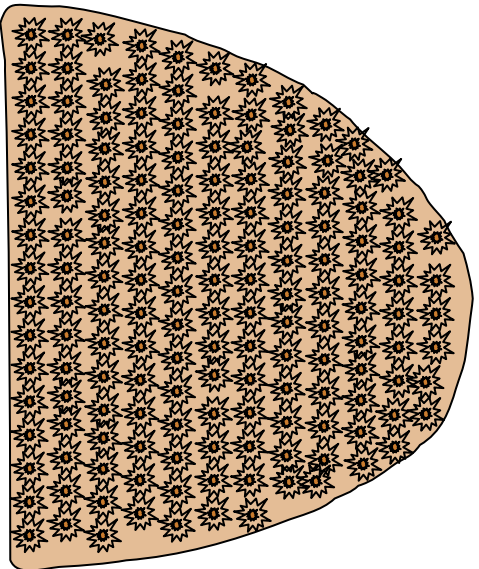
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Coral

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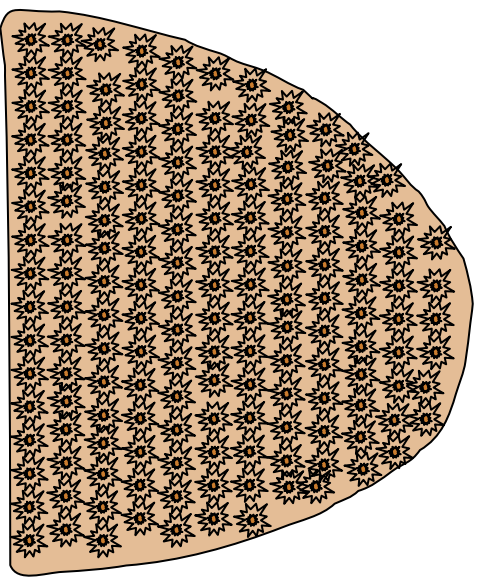
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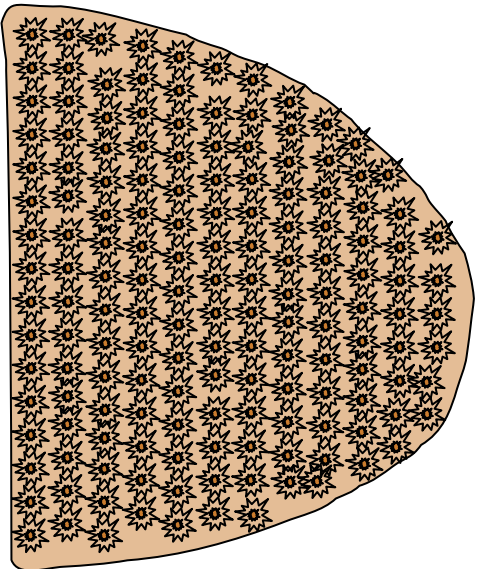
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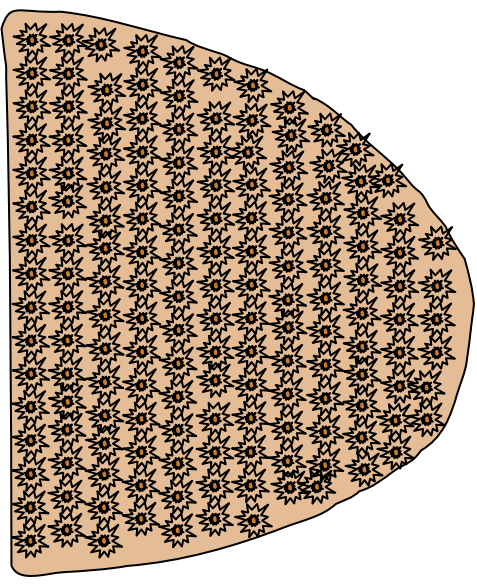
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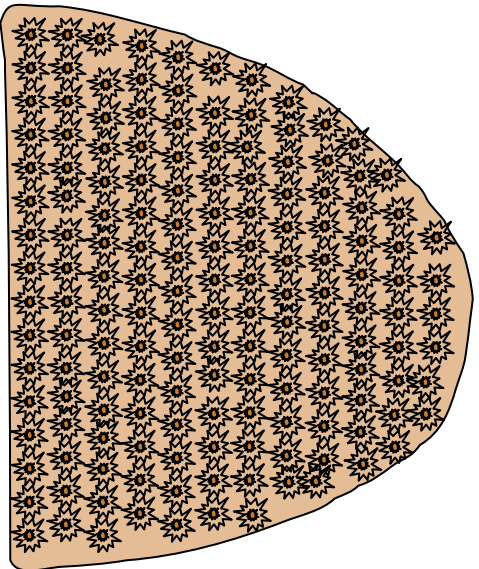
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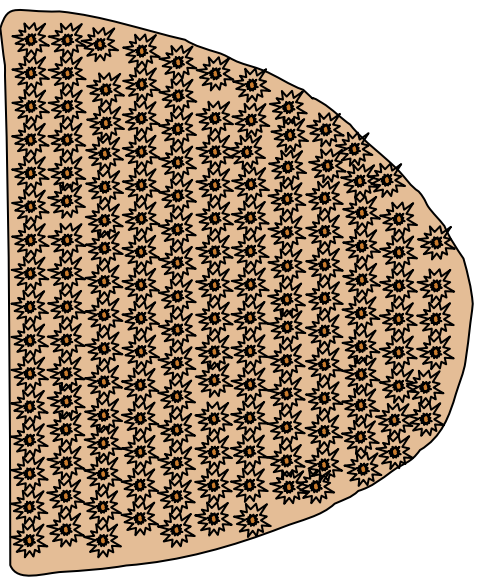
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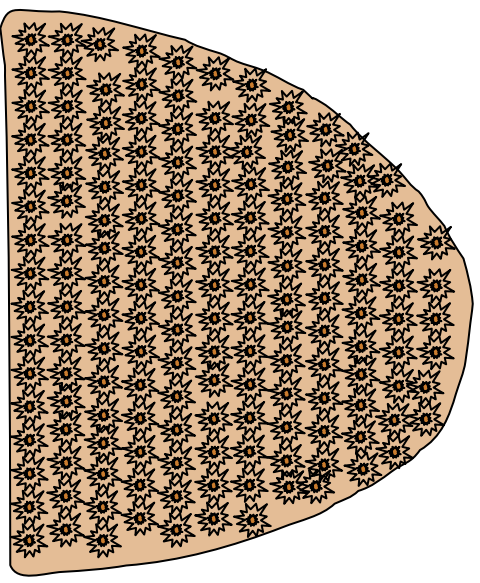
Coral

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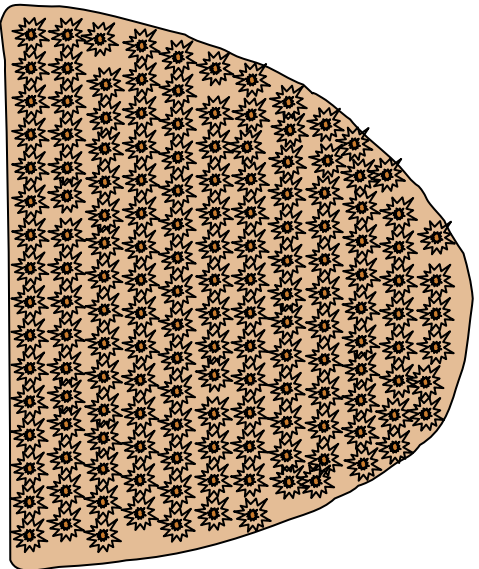
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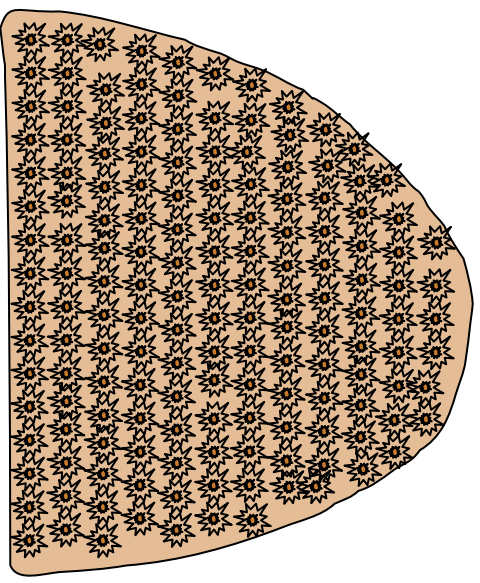
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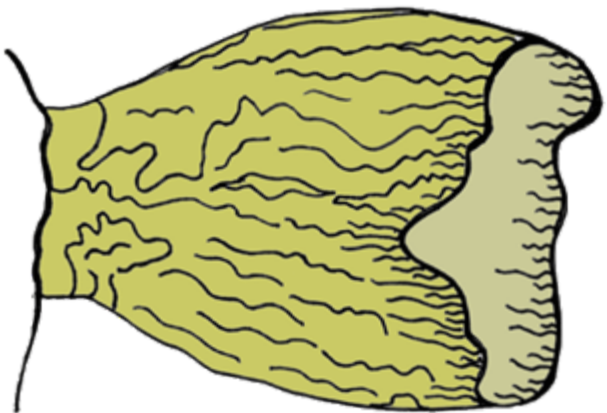
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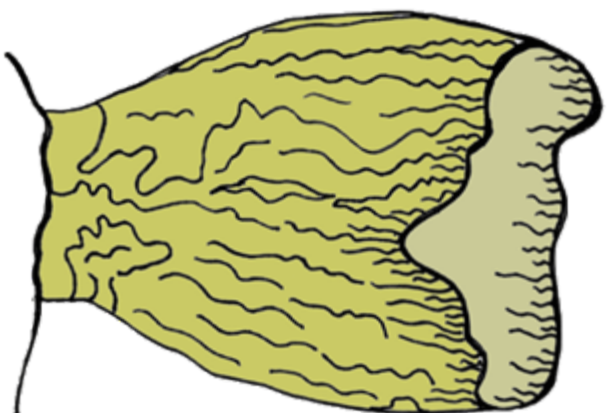
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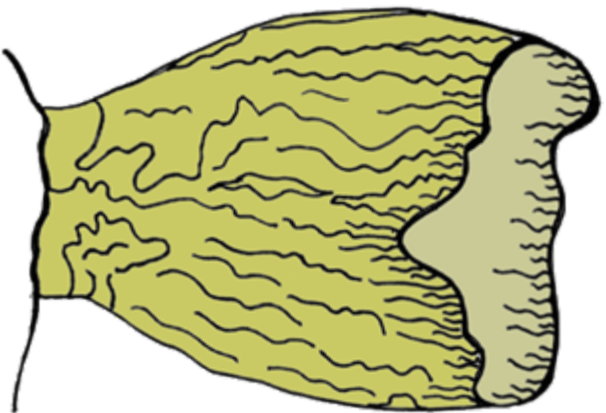
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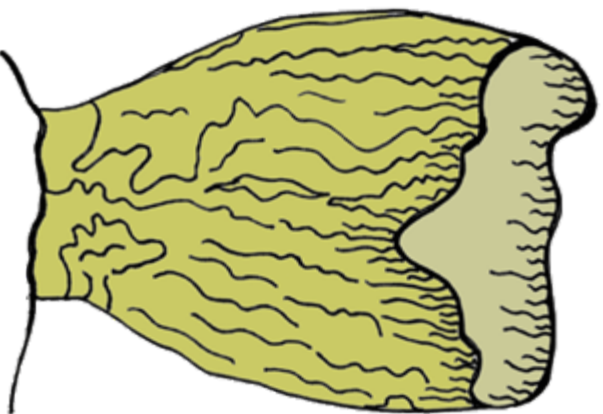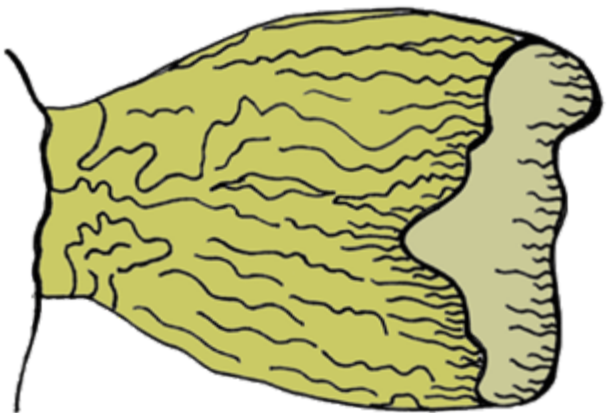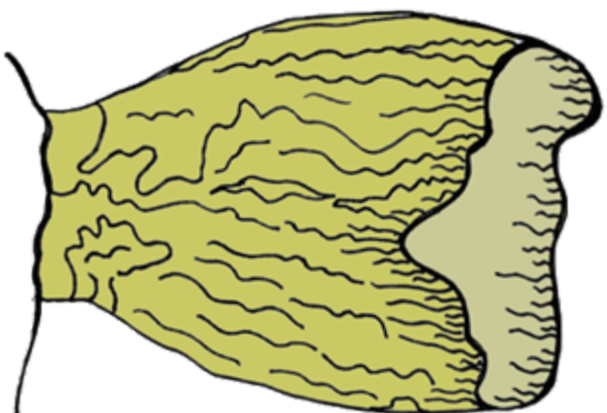
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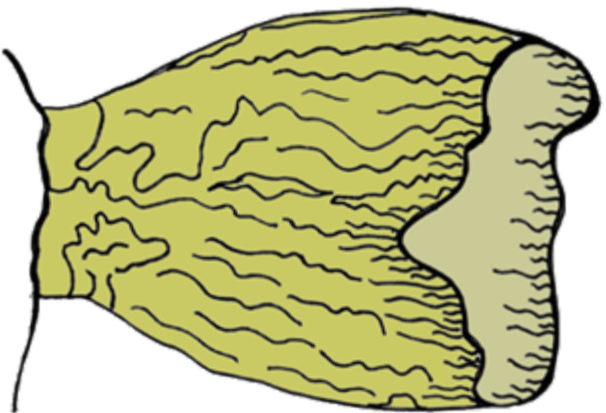
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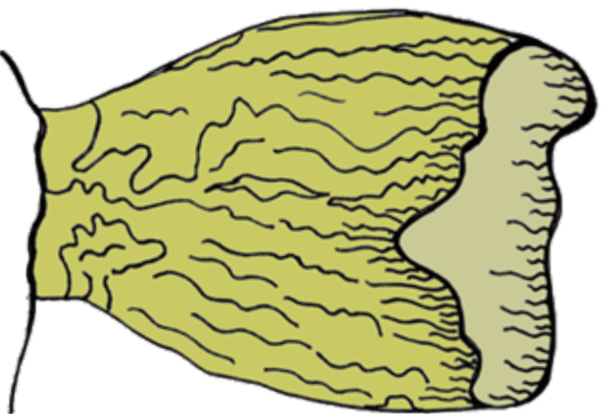
Sponge

Sponge

Sponge

Seaweed
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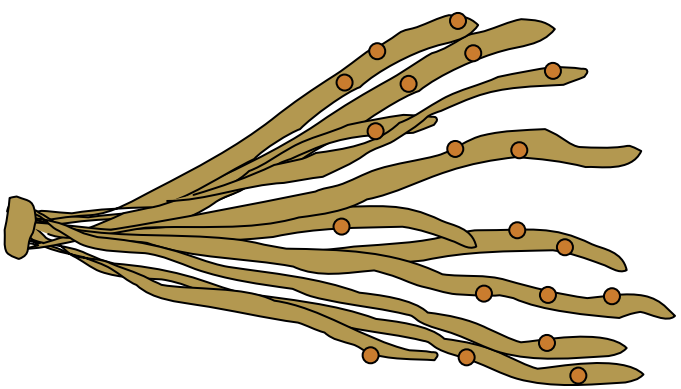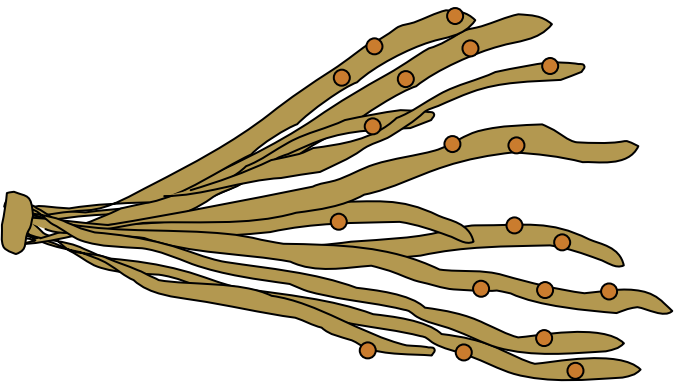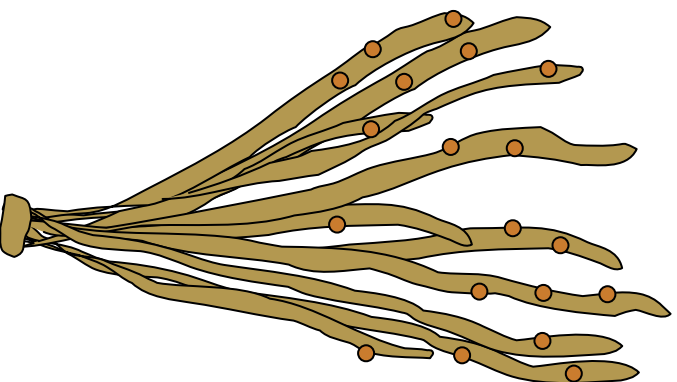
Seaweed
(macro-algae)

Seaweed
(macro-algae)

Seaweed
(macro-algae)
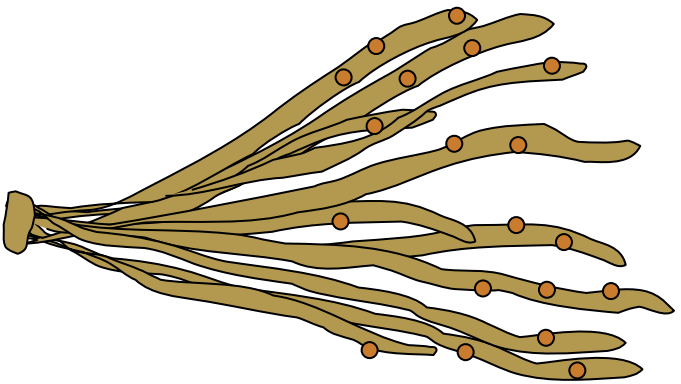
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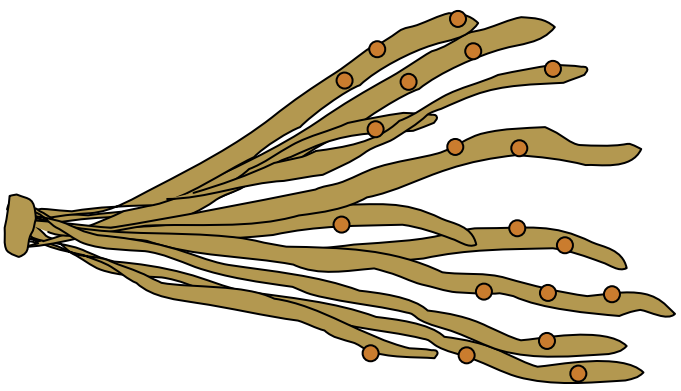
Seaweed
(macro-algae)
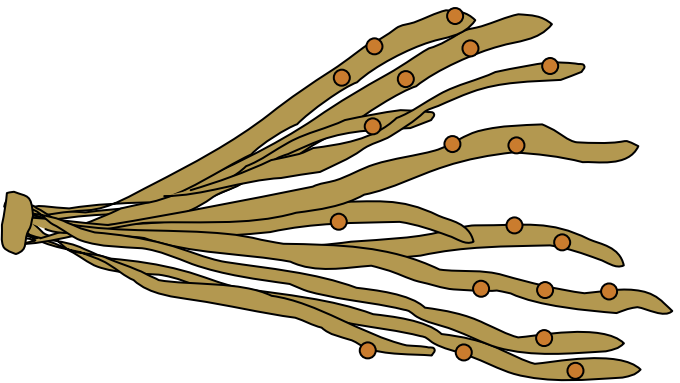
Seaweed
(macro-algae)
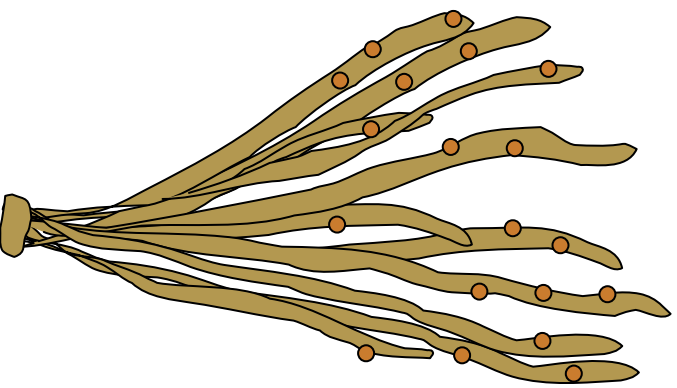
Seaweed
(macro-algae)

Empty Space

Empty Space

Empty Space

Empty Space

Nutrients and pollutants from land were carried to the reef by currents and stayed over the corals for several weeks. Later, 4 corals became diseased and died.

If there were no living corals on the reef when the bad water moved in, there were no changes in the reef community.

The temperature of the seawater at the reef became very high for many weeks during the warm calm summer months. This caused 4 corals to bleach and then later die.

If there were no living corals, there was no visible change to the reef community.

Coral larvae (young) floated in on the currents and settled in all empty spaces where they grew into new coral colonies.

If no empty spaces existed when the larvae floated in to the area, the larvae did not find suitable habitat and died. There were no changes in the reef community.

Coral disease killed 6 corals on the reef.

If there were no living corals, there were no visible changes to the reef community.

Sponge larvae float in from a nearby reef and begin to grow on half of the empty spaces.

If there are no empty spaces, then the larvae float out of the area and there is no change in the reef community.

Sponges create conditions that promote the growth of seaweeds by pumping out nitrogen waste products that act as fertilizer for the seaweeds. Because of this, new seaweeds grew on all of the empty spaces.

If there are no empty spaces, then there is no change in the reef community.

A sponge fisherman legally harvests (takes) half of the sponges on the reef and then angelfish eat the bases left behind killing the sponges.

If there are no sponges on the reef, the fisherman moves on to find them elsewhere.

A disease kills most of the long-spined urchins at the reef, allowing each seaweed to grow twice as large and occupy the space next to it (if available).

If there are no spaces next to seaweeds, then the seaweed can grow and there is no change. If there are no seaweeds to begin with, then there is also no change.

A hurricane passes across the reef, breaking off living pieces from of corals and carrying them to nearby empty places where they begin to grow into 10 new corals.

If the reef has no living corals, there are no changes to the reef community.

A hurricane passes across the reef, causing one large coral to turn over and become covered up by sand, which eventually kills it.

If the reef has no living corals, there are no changes to the reef community.

Many long-spined urchins move into the reef area to feed on the seaweeds. All but one seaweed was eaten by the urchins.

If the reef has no seaweeds, the urchins move on to find food elsewhere and there are no changes to the reef community.

A cold snap affects the reef for over a week, killing one half of the seaweeds and all of the corals growing at the reef.

If there are no living corals or seaweeds, there are no changes in the reef community. If there is an odd number of seaweeds, then the cold snap kills one half plus one seaweed present on the reef.

A school of gray angelfish move across the reef, feeding on sponges, but not killing them.

If the reef has no living sponges, the angelfish move on to find food elsewhere and there are no changes to the reef community.

A boat grounds on the reef, crushing and killing one of the corals.

If the reef has no living coral, there are no changes to the reef community.

Conditions are good for coral growth. One coral grows twice as large, occupying the space next to it (if available.)

(Overlap the original coral card with the added one to show that they are one coral occupying two spaces--they are one coral for population curve purposes, too).

If the reef has no corals, there are no changes to the reef community.

Coral larvae (young) floated in from a nearby reef and settled in all empty spaces where they grew into new corals.

If no empty spaces existed when the larvae floated in to the area, the larvae did not find suitable habitat and died. There were no changes in the reef community.

Sponge larvae float in from a nearby reef and begin to grow on half of the empty spaces.

If there are no empty spaces, then the larvae float out of the area and there is no change in the reef community.

Sponges create conditions that promote the growth of seaweeds by pumping out nitrogen waste products that act as fertilizer for the seaweeds. Because of this, new seaweeds grew on all of the empty spaces.

If there are no empty spaces, then there is no change in the reef community.

A school of fish that feeds on seaweed visits the reef and completely eats half of the seaweeds found there.

If no seaweeds existed, the fish swam on to find food elsewhere. There were no changes in the reef community.

Coral larvae (young) floated in on the currents and settled in all empty spaces where they grew into new coral colonies.

If no empty spaces existed when the larvae floated in to the area, the larvae did not find suitable habitat and died. There were no changes in the reef community.

Nutrients and pollutants from land were carried to the reef by currents and stayed over the corals for several weeks. Later, 4 corals became diseased and died.

If there were no living corals on the reef when the bad water moved in, there were no changes in the reef community.

The temperature of the seawater at the reef became very high for many weeks during the warm calm summer months. This caused 4 corals to bleach and then later die.

If there were no living corals, there was no visible change to the reef community.

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If there are no empty spaces, then there is no change in the reef community.

A sponge fisherman legally harvests (takes) half of the sponges on the reef and then angelfish eat the sponge bases left behind, killing the sponges completely.

If there are no sponges on the reef, the fisherman moves on to find them elsewhere.

A disease kills most of the long-spined urchins at the reef, allowing each seaweed to grow twice as large and occupy the space next to it (if available).

If there are no spaces next to seaweeds, then the seaweed can grow and there is no change. If there are no seaweeds to begin with, then there is also no change.

A hurricane passes across the reef, breaking off living pieces from of corals and carrying them to nearby empty places where they begin to grow into 10 new corals.

If the reef has no living corals, there are no changes to the reef community.

A hurricane passes across the reef, causing one large coral to turn over and become covered up by sand, which eventually kills it.

If the reef has no living corals, there are no changes to the reef community.

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If the reef has no seaweeds, the urchins move on to find food elsewhere and there are no changes to the reef community.

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Conditions are good for coral growth. One coral grows twice as large, occupying the space next to it (if available.)

(Overlap the original coral card with the added one to show that they are one coral occupying two spaces--they are one coral for population curve purposes, too).

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Sponge larvae float in from a nearby reef and begin to grow on half of the empty spaces.

If there are no empty spaces, then the larvae float out of the area and there is no change in the reef community.

Sponges create conditions that promote the growth of seaweeds by pumping out nitrogen waste products that act as fertilizer for the seaweeds. Because of this, new seaweeds grew on all of the empty spaces.

If there are no empty spaces, then there is no change in the reef community.

A school of fish that feeds on seaweed visits the reef and completely eats half of the seaweeds found there.

If no seaweeds existed, the fish swam on to find food elsewhere. There were no changes in the reef community.

Coral larvae (young) floated in on the currents and settled in all empty spaces where they grew into new coral colonies.

If no empty spaces existed when the larvae floated in to the area, the larvae did not find suitable habitat and died. There were no changes in the reef community.

Seaweed
(macro-algae)
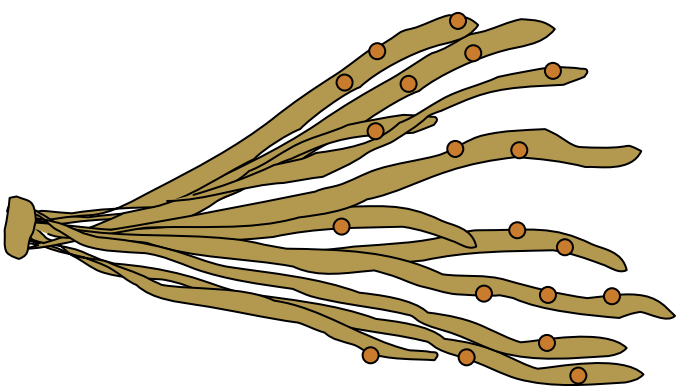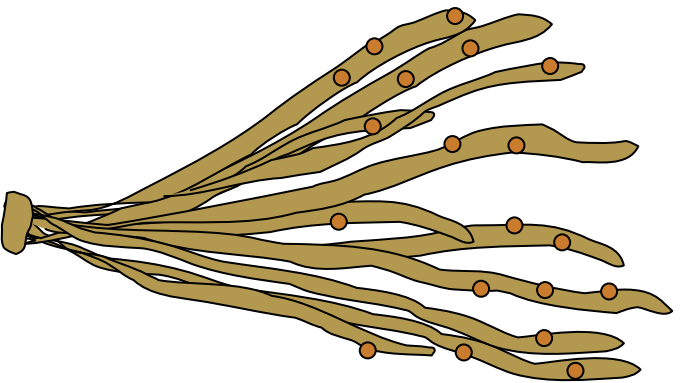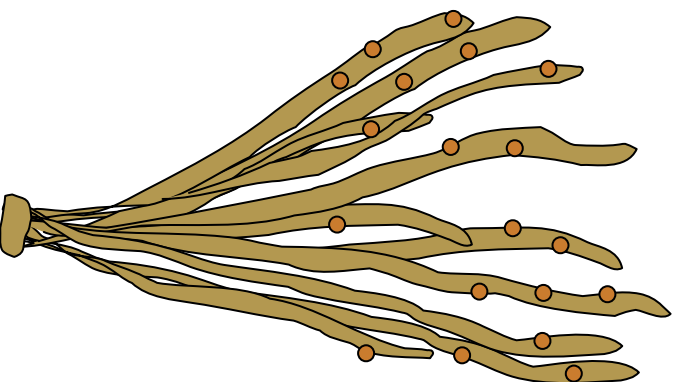
Seaweed
(macro-algae)

Seaweed
(macro-algae)

Seaweed
(macro-algae)
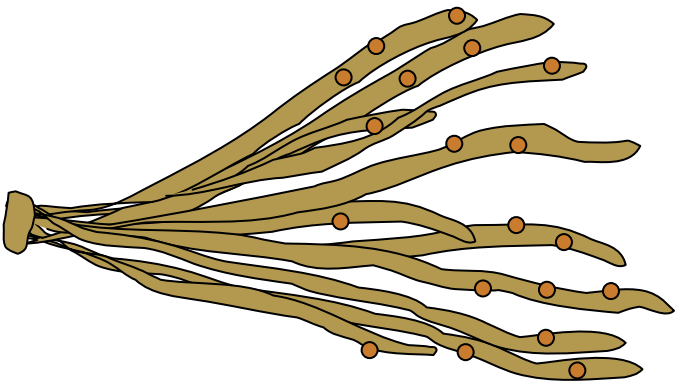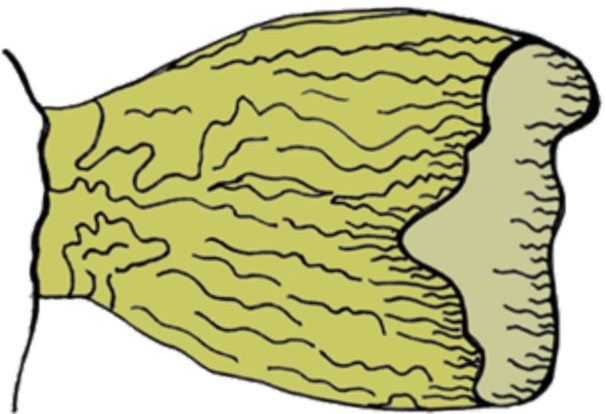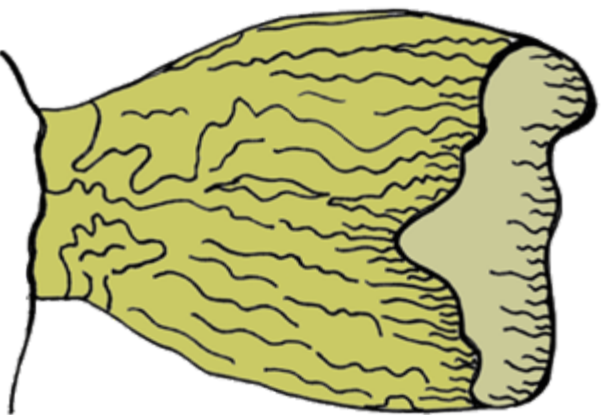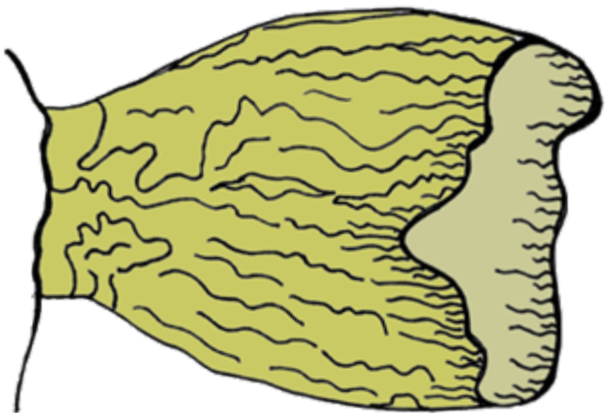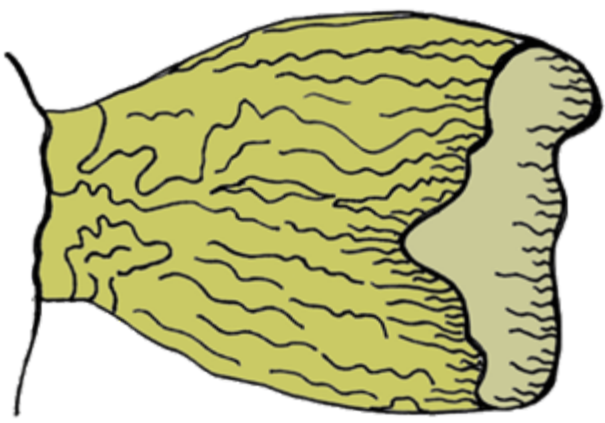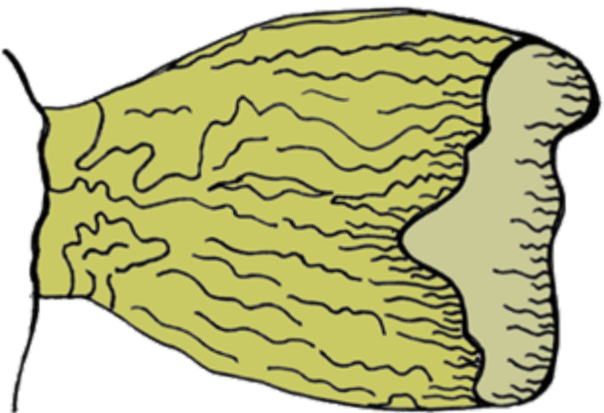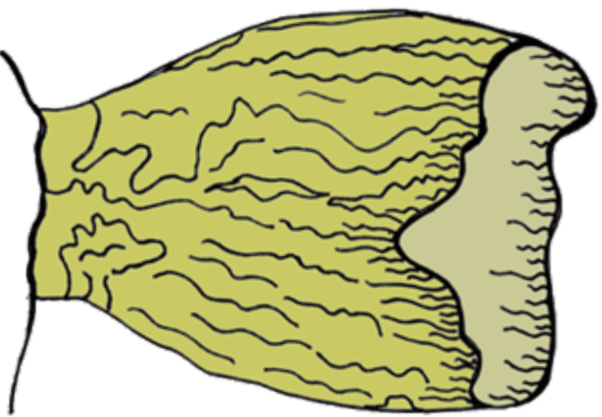
Seaweed
(macro-algae)
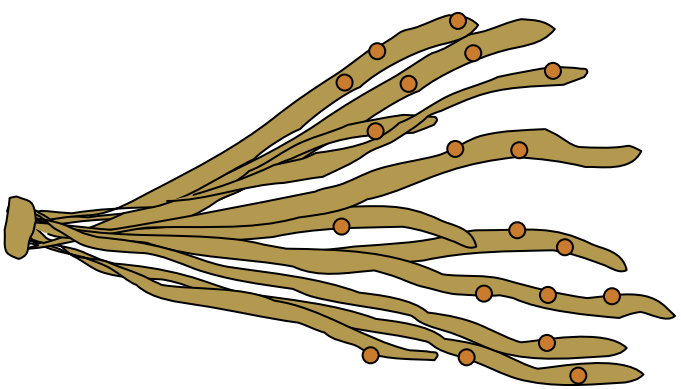
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(macro-algae)
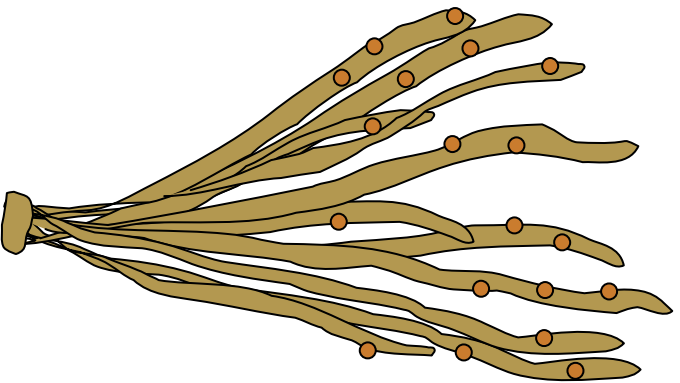
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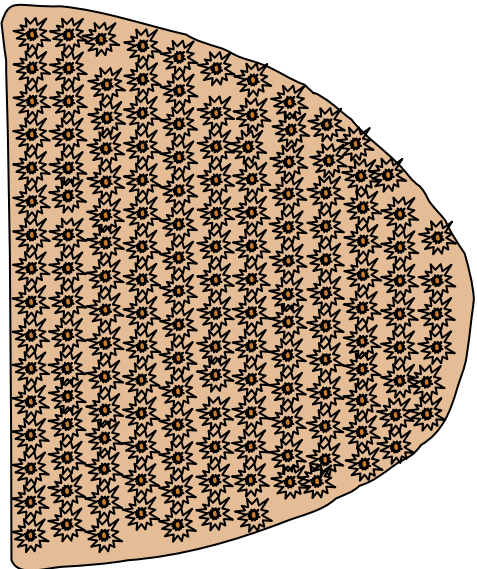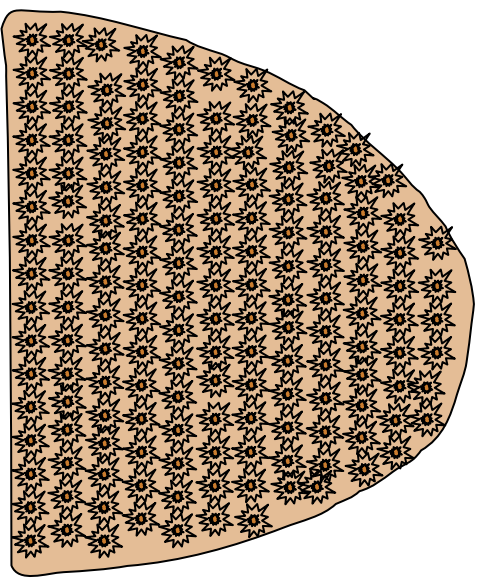*(macro-algae)*
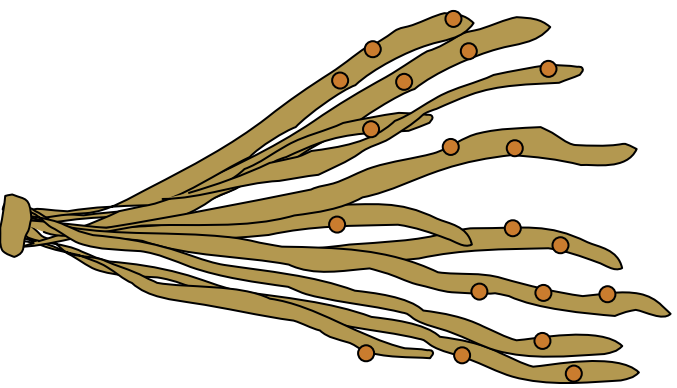
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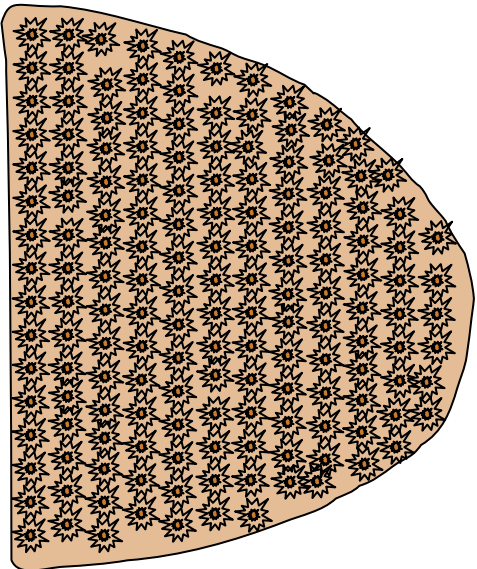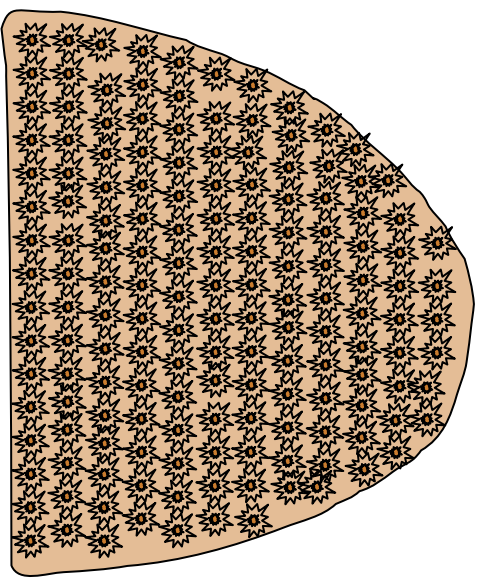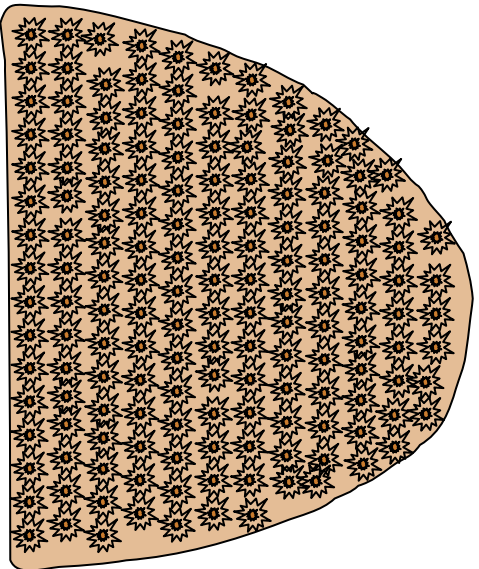*(macro-algae)*
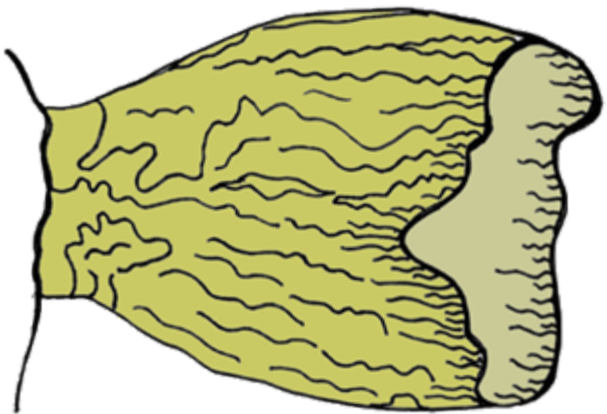
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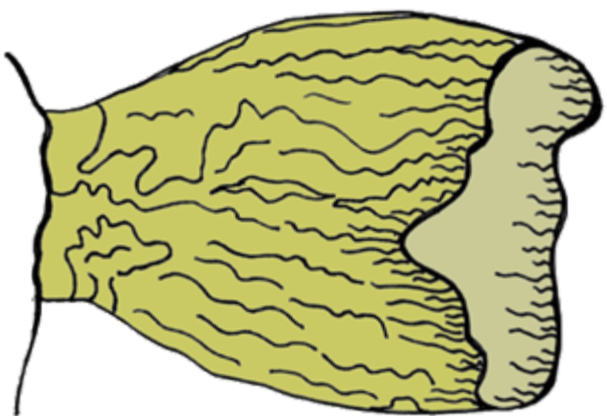
Sponge

Sponge

Sponge

Sponge

Sponge

Sponge

Sponge

Coral

Coral

Coral

Coral

Coral

Coral

Coral

Coral