

# SARGASSUM SEAWEEED

THE  
"GOLDEN RAFT OF THE OCEAN"

A GENUS OF LARGE BROWN SEAWEED (MACROALGAE) THAT FLOATS IN ISLAND-LIKE MASSES AND NEVER ATTACHES TO THE SEAFLOOR. A FLOATING ECOSYSTEM THAT VISITS ALL CARIBBEAN ISLANDS.

EXPLORATIONENCYCLOPEDIA BRITANNICA

BERMUDA IS IN THE HEART OF THE SARGASSO SEA, A MAJOR REGION FOR FLOATING SARGASSUM SEAWEED. THIS ENVIRONMENT SUPPORTS LARGE MATS OF FREE-FLOATING SPECIES. THE MAIN SPECIES ARE SARGASSUM NATANS AND SARGASSUM FLUITANS, BOTH WHOLLY FREE-FLOATING (HOLOPELAGIC).



## DESCRIPTION:

BRANCHES, LEAFY APPENDAGES WITH ROUND "BERRY-LIKE" FLOATS THAT ARE FILLED WITH OXYGEN CALLED PNEUMATOCYSTS.\*

HOME TO OVER 120 SPECIES OF MARINE LIFE AND FISH.

\*ADDS BUOYANCY TO THE PLANT STRUCTURE

## BENEFITS BEYOND THE SEA?

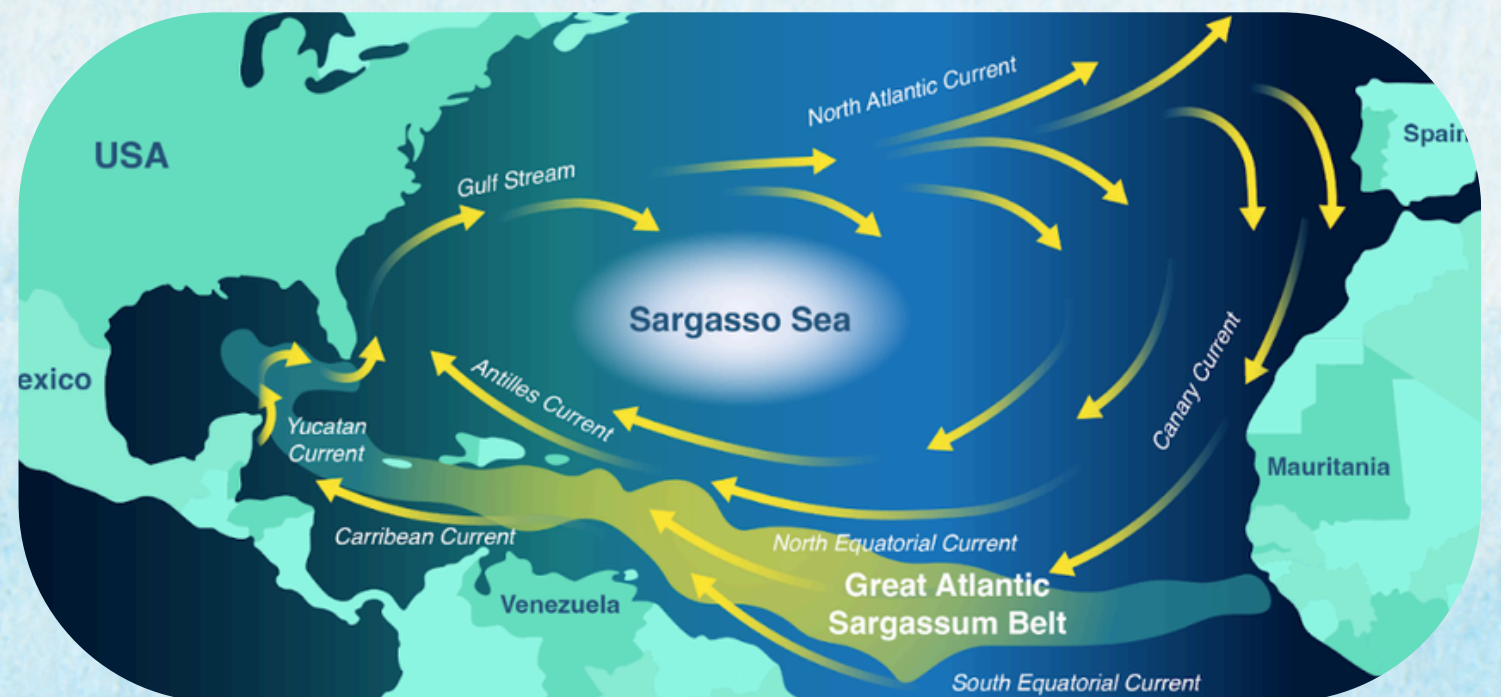
ON LAND, SARGASSUM HELPS ANCHOR SAND, STABILIZE DUNES, AND ENRICH SOILS AS A NATURAL COMPOST.

## ECOLOGICAL IMPORTANCE?

IT IS THE HOME TO FISH, SHRIMP, TURTLES, CRABS AND EVEN SEABIRDS. PROVIDES FOOD, REFUGE, NURSERY GROUNDS FOR MARINE LIFE SUPPORTING A COUNTLESS AMOUNT OF SPECIES DURING THEIR EARLY LIFE STAGES.

## HOW DOES IT TRAVEL?

THE GREAT ATLANTIC SARGASSUM BELT (GASB) AND GULF STREAM CARRY SARGASSUM FROM THE SARGASSO SEA, SPREADING IT ACROSS ATLANTIC BEACHES.



# HAWAI'I SARGASSUM

## HOOKWORM *HYPNEA MUSCIFORMIS*

THE INVASION OF HOOKWEED PRESENTS SERIOUS ECOLOGICAL AND ECONOMIC CHALLENGES.

- ▶ COMMONLY FOUND ON WAVE-SWEPT BEACHES, TIDEPOOLS, AND REEF FLATS
- ▶ HAWAI'I DOES NOT EXPERIENCE THESE LARGE FLOATING MATS (YET) MOST LOCAL SARGASSUM IS ATTACHED, NOT FREE-FLOATING
- ▶ THESE SPECIES PLAY A ROLE IN REEF HABITAT STRUCTURE, SHADING, AND ECOSYSTEM DYNAMICS IN SHALLOW COASTAL ZONES
- ▶ FORMS DENSE, BUSHY THALLI\* THAT CAN DOMINATE BIOMASS IN THOSE AREAS

## "LIMU KALA" *SARGASSUM AQUIFOLIUM*

A NATIVE SPECIES THAT HOLDS CULTURAL IMPORTANCE IN HAWAII, USED IN CEREMONIES LIKE THE HO'OPONOPONO FORGIVENESS RITUAL.

\*A PLANT BODY THAT ISN'T DIVIDED INTO STEM AND LEAVES, AND IT LACKS TRUE ROOTS AND A VASCULAR SYSTEM. IT IS TYPICAL OF ALGAE, FUNGI, LICHENS, AND SOME LIVERWORTS.

## SARGASSUM *OBTUSIFOLIUM*

## ENVIRONMENTAL CONCERNS?

- INVASIVE ALGAE (NOT ALWAYS SARGASSUM) THREATEN CORAL REEFS
- NUTRIENT RUNOFF AND WARMING OCEANS FUEL OVERGROWTH
- HUGE VOLUME CAUSING TOURISM IMPACTS AND ODOR ISSUES

### A CLIMATE CHAMELEON

SARGASSUM EARNS THE NICKNAME "CLIMATE CHAMELEON" BECAUSE IT RAPIDLY ADAPTS TO CHANGING OCEAN CONDITIONS. WARMER WATERS, SHIFTING CURRENTS, AND INCREASED NUTRIENT RUNOFF FROM HUMAN ACTIVITY HAVE FUELED ITS EXPLOSIVE GROWTH ACROSS NEW REGIONS. ONCE LIMITED TO THE SARGASSO SEA, IT NOW FORMS MASSIVE BLOOMS ACROSS THE ATLANTIC AND CARIBBEAN, HIGHLIGHTING HOW CLIMATE CHANGE IS RESHAPING MARINE ECOSYSTEMS.



## SARGASSUM FACTS YOU MAY NOT KNOW!

### Did You Know?

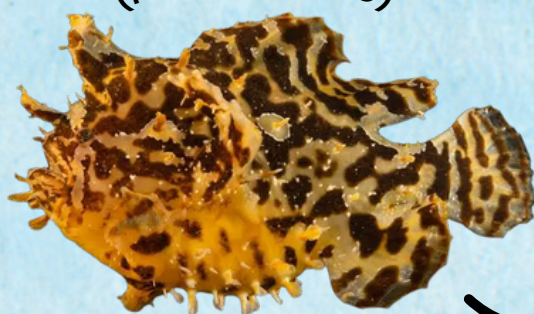
THESE CREATURES AREN'T JUST VISITORS — THEY ARE ENDEMIC, MEANING YOU'LL ONLY FIND THEM IN SARGASSUM.

#### SARGASSUM SWIMMING CRAB (PLANES MINUTUS)



- BORN ON SEAWEED. LIVES ON SEAWEED.
- THIS TINY CRAB NEVER TOUCHES THE OCEAN FLOOR.
- IT ZIPS THROUGH THE TANGLE OF SARGASSUM, USING IT AS SHELTER AND A HUNTING GROUND.
- A MASTER OF HIDE-AND-SEEK AND SURVIVAL IN THE OPEN OCEAN.

#### SARGASSUM FISH (HISTRO HISTRO)



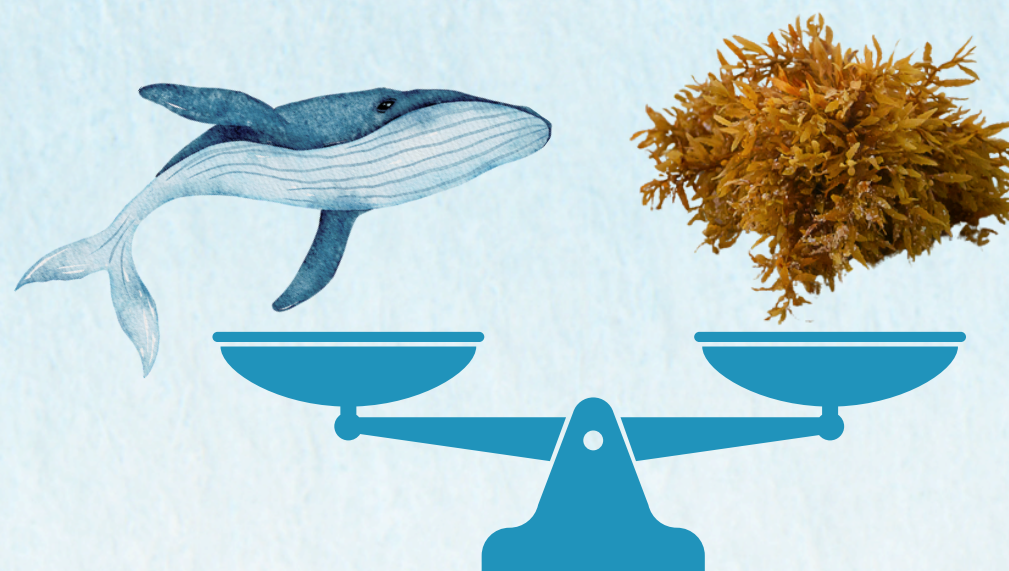
- LOOKS LIKE SEAWEED. ACTS LIKE A NINJA.
- THIS UNSUAL FROGFISH IS CAMOUFLAGED TO PERFECTION, HIDING IN PLAIN SIGHT.
- IT CAN JUMP OUT OF THE WATER AND EVEN "WALK" ACROSS SEAWEED USING ITS FINS.
- A DEADLY AMBUSH PREDATOR — IT WAITS, STRIKES, AND SWALLOWS PREY WHOLE.

### POTENTIAL USES OF SARGASSUM?

- ECOBLOCKS
- BIOPLASTICS
- FERTILIZERS
- ANIMAL FEED
- BIOFUEL

▶ IN MAY OF THIS YEAR, SATELLITES CAPTURED A STAGGERING VIEW FROM SPACE: **37.5 MILLION METRIC TONS** OF SARGASSUM STRETCHED ACROSS THE ATLANTIC OCEAN. NEW YORK POST

**BLUE WHALE: ~150–200 TONS (LARGEST ANIMAL ON EARTH).**  
**37.5 MILLION TONS OF SARGASSUM ≈ 187,500 BLUE WHALES.**



THE GASB REACHED ITS LARGEST RECORDED SIZE, FORMING A CONTINUOUS MAT OVER 8,850 KILOMETERS LONG. THAT'S MORE THAN TWICE THE LENGTH OF THE CONTINENTAL UNITED STATES.

### RESOURCES:

NOAA: SARGASSUM'S IDENTITY AND BUOYANCY FEATURES [NOAA OCEAN EXPLORATION](#)  
 BERMUDA DEPARTMENT OF ENVIRONMENT (BAMZ): LOCAL SPECIES DETAILS AND ECOLOGICAL ROLE [DENR](#)  
 U.S. NATIONAL PARK SERVICE: JOURNEY FROM SARGASSO SEA AND HABITAT VALUE [NATIONAL PARK SERVICE](#)  
 VISITFLORIDA: GREAT ATLANTIC SARGASSUM BELT AND SHORELINE BENEFITS [VISIT FLORIDA](#)  
 FLORIDA DEPARTMENT OF HEALTH: HEALTH CONCERNS FROM DECOMPOSING SARGASSUM [FLORIDA DEPARTMENT OF HEALTH IN ST JOHNS](#)  
 THE GUARDIAN & OTHERS: DRIVERS BEHIND BLOOMS AND INNOVATIONS IN PROCESSING [THE GUARDIAN+IN NEW YORK POST](#)  
[HTTPS://WWW.THEGUARDIAN.COM/ENVIRONMENT/2025/MAR/25/SEAWEED-CARIBBEAN-GRENADA-SARGASSUM-BIOTECHNOLOGY-ENERGY-CLIMATE-CRISIS-OCEAN? UTM\\_SOURCE=CHATGPT.COM](https://www.theguardian.com/environment/2025/mar/25/seaweed-caribbean-grenada-sargassum-biotechnology-energy-climate-crisis-ocean?utm_source=chatgpt.com)  
[HTTPS://WWW.ZMESCIENCE.COM/SCIENCE/NEWS-SCIENCE/A-MASSIVE-SEAWEED-BELT-STRETCHING-FROM-AFRICA-TO-THE-CARIBBEAN-IS-CHANGING-THE-OCEAN/](https://www.zmescience.com/science/news-science/a-massive-seaweed-belt-stretching-from-afrika-to-the-caribbean-is-changing-the-ocean/)  
[HTTPS://WWW.SEAFIELDS.ECO/BLOG/SARGASSUM-TRANSFORMING-A-COASTAL-MENACE-INTO-AN-INDUSTRIAL-WONDER#:~:TEXT=APPLICATIONS%20IN%20SUSTAINABLE%20CONSTRUCTION,MEXICO%2C%20IS%20DEVELOPING%20SIMILAR%20MATERIALS.](https://www.seafields.eco/blog/sargassum-transforming-a-coastal-menace-into-an-industrial-wonder#:~:text=applications%20in%20sustainable%20construction,mexico%2c%20is%20developing%20similar%20materials.)  
[HTTPS://ENVIRONMENT.BM/SARGASSUM-SEAWEED](https://environment.bm/sargassum-seaweed)

