

1999

Attack of the coral eaters

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Surtida, A. P., & Ledesma, E. T. (1999). Attack of the coral eaters. SEAFDEC Asian Aquaculture, 21(5), 35-36.

<http://hdl.handle.net/10862/2851>

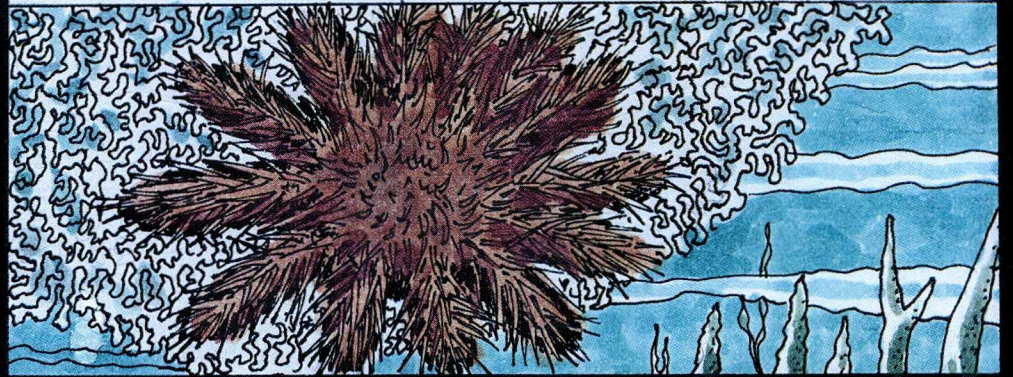
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MARINE SCIENCE ILLUSTRATED

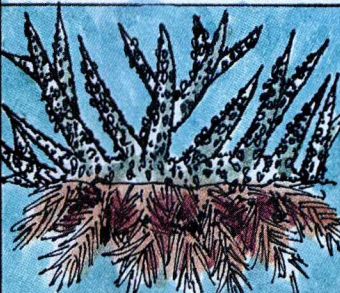
by a.p. surtida &
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ATTACK OF THE CORAL EATERS

LATELY, A SPINY-SPINY SKINNED SEA CREATURE BELONGING TO THE MARINE GROUP OF ANIMALS CALLED ECHINODERMS HAS BEEN CAUSING GREAT CONCERN AMONG MARINE SCIENTISTS AND ENVIRONMENTALISTS. THE CULPRIT- THE CROWN-OF-THORNS (COT) STARFISH (ACANTHASTER PLANCI). OUTBREAKS OF COT POPULATION CAN INFLICT SERIOUS DAMAGE ON BROAD AREAS OF CORAL REEFS.



COT IS A PREDATOR. IT EATS SMALL REEF BUILDING ANIMALS CALLED CORAL POLYPS.



THE STARFISH HIDES UNDERNEATH THE CORAL IN CREVICES DURING THE DAY AND FEED ACTIVELY AT NIGHT.

CORAL POLYPS USUALLY CONSTRUCT COMMUNAL LIMESTONE HOMES WHICH ARE BUILT UP INTO A MULTITUDE OF SHAPES AND SIZES THAT EVENTUALLY GIVE RISE TO WHAT IS KNOWN AS "CORAL REEF."



ONE ADULT STARFISH CAN DEVOUR AS MUCH AS 13 SQUARE METERS OF CORAL A YEAR...



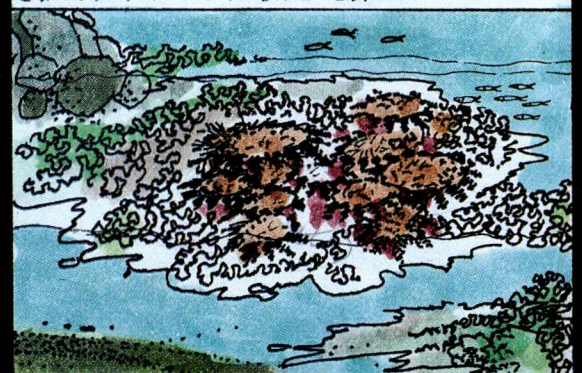
AFTER FINDING A SUITABLE PREY, THE COT PULLS ITS STOMACH OUT THROUGH ITS MOUTH (A PROCESS KNOWN AS "STOMACH EVERSION") OVER THE CORAL POLYPS AND RELEASES DIGESTIVE JUICES ONTO THE CORAL, BREAKING DOWN THE POLYP'S TISSUE INTO A READILY ABSORBED "POLYP SOUP".



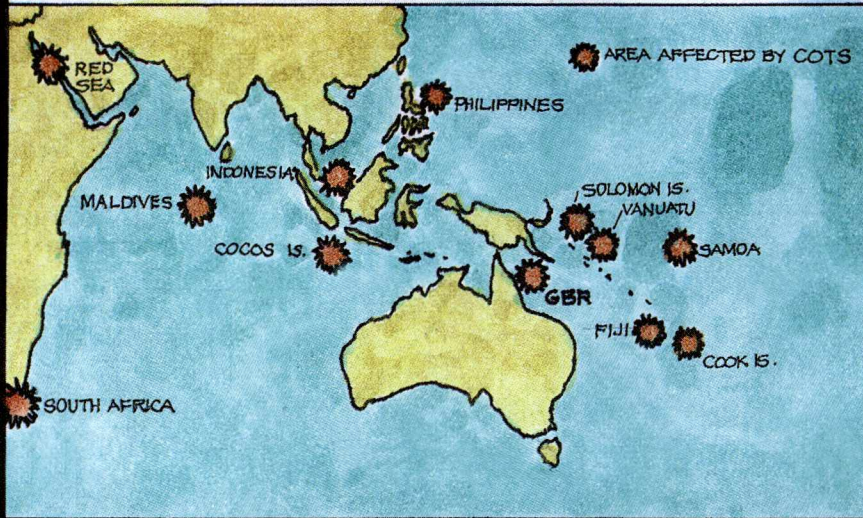
IT LEAVES ONLY A BLEACHED-WHITE CORAL SKELETON WHICH IS SOON INVADDED BY ALGAE, WORMS BORING MOLLUSCS OR REEF SETTLING ORGANISMS...



WHEN PRESENT IN LARGE NUMBERS, THE COT OFTEN EAT TOGETHER IN A GROUP CALLED "AGGREGATIONS." RESEARCH HAS SHOWN THAT CHEMICALS RELEASED DURING THE DIGESTION OF CORALS CAN ACTUALLY ATTRACT OTHER STARFISH TO A FEEDING SITE...



MARINE COT RESEARCHER THINKS THAT COT OUTBREAKS ARE NOT UNIQUE. OUTBREAKS ARE BEING RECORDED IN THE INDO-PACIFIC AREA WHICH ARE AFFECTED BY SUCH OUTBREAKS...



MARINE SCIENTISTS CLASSIFY REEFS INTO FOUR CONDITIONS ACCORDING TO A NUMBER OF COTS FOUND IN A CERTAIN AREA:

- * NON-OUTBREAK - THERE ARE LESS THAN 30 COTS PER HECTARE OF REEF
- * INCIPENT OUTBREAK - PRESENCE OF HIGH DENSITIES OF COT JUVENILE
- * SPOT-OUTBREAK - HIGH DENSITY POPULATION OF COTS IN PARTS OF A REEF
- * ACTIVE OUTBREAK - THERE'S MORE THAN 30 MATURE COTS PER HECTARE OF REEF.



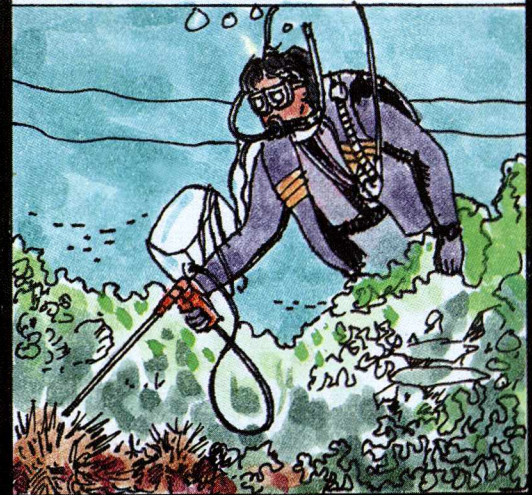
COTS RESEARCHERS ARE WORKING CLOSELY WITH THEIR COUNTERPARTS IN OTHER COUNTRIES...



... SHARING RESEARCH RESULTS AND ADDING TO THE POOL OF KNOWLEDGE SO THAT THEY MAY BE ABLE TO OBSERVE THE WHOLE CYCLE AND CONTROL SPECIFIC AREAS ...



AMONG THE NEW DEVELOPMENTS: INJECTING COTS WITH DRY ACID, (SODIUM BISULPHATE) LETHAL, YET ENVIRONMENT-FRIENDLY...



DRY ACID IS LIMITED TO SMALL-SCALE CLEARING OF COTS IN AREAS IMPORTANT TO TOURISM OR RESEARCH...



Other developments:

- NEW SURVEILLANCE TECHNIQUES ALLOWING EARLY DETECTION OF ANY INCREASE IN COT JUVENILE POPULATION WHICH LEADS TO ...
- PINPOINTING FACTORS THAT LEAD TO COT OUTBREAKS, AND...
- CONTINGENCY PLAN TO BE ACTIVATED IN DEALING WITH OUTBREAKS INCLUDING LOCALIZED CONTROL MEASURES AND EXPANDED OBSERVATION NETWORK AND NEW RESEARCH INITIATIVES ...



FOR MORE INFORMATION ABOUT COTS:

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