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FEATURE

SCUBA Divers and Satellites

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What do satellites and SCUBA gear have in common?

Image to left: SCUBA Scout divers inspect a coral reef near Florida. Credit: NASA

Both are tools used by a group of students who are studying the condition of coral reefs near Florida. This group is the SCUBA Scouts. It is a group of 12- to 18-year-old boys and girls from the Tampa/St. Petersburg area. They are involved in a long-term project to monitor transplanted coral reefs in Tampa Bay and the Gulf of Mexico.

Coral reefs provide a home for many different types of marine plants and animals. They also protect the coast from storms, and help form Florida's sandy beaches. Since the group was formed in

2001, the SCUBA Scouts have visited the reefs on a monthly basis. Each month, they evaluate the condition of the reefs. They also find out what impact human activities have had on the corals and their habitat. Many different marine experts work with the SCUBA Scouts to help them with this work.

And the SCUBA Scouts learn more than just SCUBA techniques. They have learned the proper way to collect and analyze the data used in their study. They record data such as water temperature and the amount of salt in the water. They also monitor fish populations and record conditions with photographs and video. The SCUBA Scouts also help the coral reefs recover when they are damaged. They transplant coral to damaged areas, working with the National Oceanic and Atmospheric Administration as part of NOAA's Coral Rescue and Salvage program. The transplanted coral helps restore the reefs.

During the summer months, the SCUBA Scouts conduct underwater marine science projects in the Florida Keys. Recently, they visited Aquarius. It is the world's only undersea science laboratory. It is located 5.6 kilometers (3.5 miles) offshore, near Key Largo. The SCUBA Scouts conducted a 15-meter (50-foot) dive to visit Aquarius and meet with the researchers staying in the habitat.

Image to right: Astronaut Michael Barratt was an "aquanaut" on NASA's NEEMO-7 crew. Credit: NASA



Aquarius is also used by NASA. NASA uses the underwater habitat to learn more about spaceflight. In the NASA Extreme Environment Mission Operations (NEEMO) program, astronauts live in the confined habitat of Aquarius. In some ways, this is similar to living in the confined area of a spacecraft. Through the program, astronauts learn about living in space without leaving the Earth.

After meeting some of those astronauts during a visit to Aquarius, SCUBA Scouts leaders got in touch with NASA about the possibility of working together. When they found out about the scouts' coral reef program, NASA's Ames Research Center was eager to help. They provided the group with airborne imagery of the areas they are studying. The group uses the images to compare what can be seen from above with what they find at sea level and underwater. They also use them to track changes in the areas since the images were taken. They are especially interested in the damage caused by the hurricanes that struck Florida last year.



Image to left: NASA Ames provided the scouts with airborne imagery of the reef sites. Credit: NASA

SCUBA Scout leader Dave Olson said that the partnership not only provided the SCUBA Scouts a new angle for looking at reef conditions, but it helped them to better understand the broad range of NASA's mission. He said that he hopes the two organizations can continue working together in the future.

Some of today's young people will be the ones to explore other worlds in the future. The SCUBA Scouts show that you can make a difference in our world, today!

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