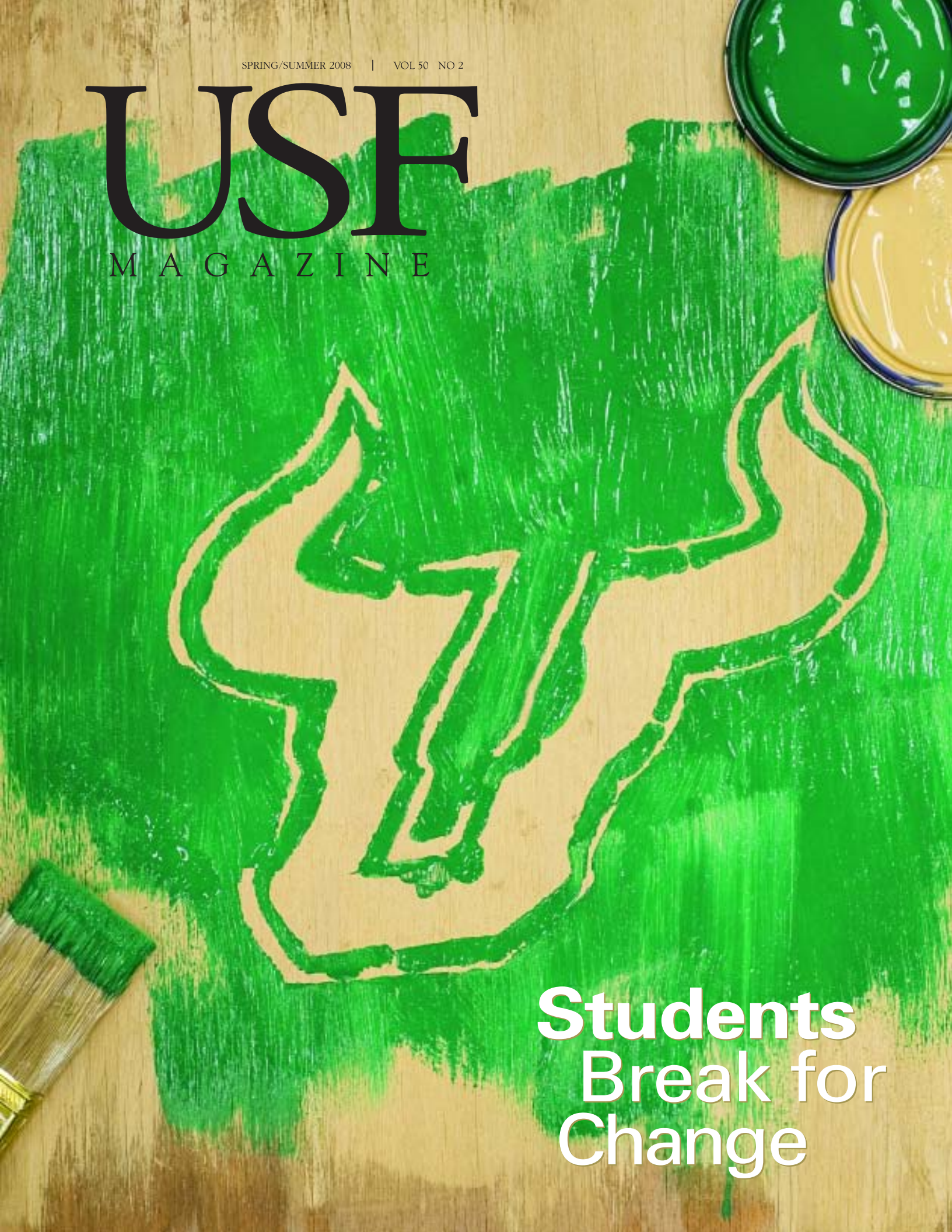


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USE

MAGAZINE

The background of the cover is a wooden surface. A large, irregular shape is painted in bright green. The shape is a stylized outline of a person sitting at a desk, with their hands clasped. The paint is applied with a brush, creating a textured, slightly uneven appearance. In the top right corner, there are two small, round paint containers. One is filled with green paint, and the other is filled with yellow paint. In the bottom left corner, there is a paintbrush with a wooden handle and a metal ferrule, with green paint on its bristles.

**Students
Break for
Change**

Testing Future Waters

USF marine scientists inspire ocean researchers and explorers of the future.

THE INKY BLACKNESS OF DEEP OCEAN waters. The infinite darkness of outer space. Marine scientists and astronauts probe widely divergent environments, yet they share a similar passion for research and exploration as well as concern for the future. That's why scientists from these two diverse realms, with fundamental leadership and support from members of USF's College of Marine Science (CMS) community, are nurturing the next generation of potential researchers and explorers.

It's an effort involving volunteers from several state, national and international organizations including NASA, the National Oceanic and Atmospheric Administration (NOAA), National Marine Sanctuaries, Florida Fish and Wildlife Conservation Commission, and the Global Learning and Observations to Benefit the Environment (GLOBE) Program. Working together, oceanographers, geologists, volcanologists, marine archeologists, astronomers, historians, military personnel—and a space shuttle commander—most recently



provided a unique opportunity for young people who are members of the Tampa Bay chapter of SCUBAnauts International: a mission dubbed Operation: Deep Climb.

SCUBAnauts promotes interest in science and technology learning and careers by involving middle and high school-age students as explorers in marine science research activities. Members conduct meaningful research and experience the thrill that comes from scientific discovery.

Operation: Deep Climb was an extraordinary journey that began last fall when the SCUBAnauts and their mentors traveled to Hawaii to collect atmosphere, hydrology and archaeology data and to study the geology of the island. To do so, they dove in a deep-sea submersible to 1,800 feet below the ocean's surface, and they hiked to the 13,796-foot summit of Mauna Kea. In both locations, the SCUBAnauts unfurled their expedition banner representing all mission sponsors including USF. The adventure was a collaborative



Photos (l to r): The 'nauts visit an underwater habitat off Key Largo; Diving in Hawaii; At the Keck Observatory on Mauna Kea; The group's expedition banner traveled to space in March.



venture with Wild Life Productions, which filmed the journey as a documentary.

To culminate the effort, NASA astronaut Dom Gorie brought the banner aboard the space shuttle Endeavor when he was STS-123 mission commander this past March. Gorie had spoken with the SCUBAnauts about space exploration at NOAA's Pacific Service Center on Oahu when the group was in Hawaii.

USF's CMS has been affiliated with SCUBAnauts for several years. Faculty members such as Paula Coble and Pam Hallock; graduate and doctoral students Jennifer Dupont, Julie Galkiewicz and Sennai Habtes; alumni Christopher Moses (U.S. Geological Survey), David Palandro (Fish and Wildlife Research Institute); and courtesy faculty, including Walter Jaap, have provided leadership and direction to the organization and instruction and mentoring to students.

"The close ties SCUBAnauts and USF share are incredi-

ble," says Galkiewicz. "The 'nauts' hear lectures from USF professors, work on dive skills with marine science students and learn about oceanography from everyone involved. They benefit from the cutting-edge ideas and technology that we, as USF students, are exposed to."

The SCUBAnauts are involved in research with USF in areas of global importance including efforts to better understand the growth of Tampa Bay's sea grass beds—research that contributes to NASA's ability to map coral reefs and sea grass beds and estimate coastal productivity.

"The opportunities these students have to work with scientists collecting real data in the field are exceptional," says Coble, associate professor of chemical oceanography. "SCUBAnauts is an example of the wonderful spirit in our college of engaging young people in the excitement of research."

— Mary Beth Erskine