The Ocean World through Turtles' Eyes

One of the great difficulties in studying marine animals is that they spend most of their lives in places where humans can't go. In 1986, biologist Greg Marshall had an idea, a new way to reveal this hidden world. This idea resulted in Crittercam—an animal-borne camera and data-logging device that records behavioral and ecological observations from the unique perspective of the creature wearing the device.

Since their creation, Crittercams have been deployed more than 600 times on 50 species around the globe, providing National Geographic Remote Imaging (NGRI) researchers and their collaborators with unparalleled insights. Green, loggerhead, hawksbill, olive ridley, and leatherback sea turtles have been among the subjects of Crittercam studies that are helping to solve some long-standing mysteries of sea turtle biology. Crittercams have observed some never-before-seen behaviors such as leatherback mating occurring just off the nesting beaches, adult greens frequently eating invertebrates in some foraging locations, and female hawksbills spending a lot of time "hiding" from amorous males.

Images provide a wealth of detail that is simply unavailable through other types of instrumentation data. Researchers can finally see exactly what an animal was doing in a particular location or circumstance, rather than inferring that behavior from indirect means. Crittercam has provided new insights into foraging, habitat use, physiology, and inter- and intra-specific interactions of sea turtles and many other marine species.

THIS PAGE, FROM TOP TO BOTTOM: Sea turtles inhabit a wide variety of ocean ecosystems, such as this coral reef in the North Red Sea. © DAVID DOUBILET Crittercam recorded this unique turtle-eye view of a male leatherback courting a female. Crittercam has been deployed on more than 50 species using a variety of creative attachment techniques including suction cups on leatherbacks and whales and custom-fitted backpacks on emperor penguins. PHOTO COURTESY OF NATIONAL GEOGRAPHIC REMOTE IMAGING AT LEFT: Members of the Sea Turtle Research and Conservation Programme look for signs of nesting green turtles in Cuba, where the Ministry of Fisheries recently passed a resolution banning sea turtle harvesting. © STR / AFP / GETTY IMAGES

Science is always at the core of Crittercam projects, but visual data also have uniquely inherent value for outreach. Crittercam's amazing views of the lives of wild animals are unfailingly fascinating to non-scientists as well. Through use of this footage on TV, the Web, and other media outlets, NGRI is able to connect people to the natural world in ways that inspire them to care about and conserve it.

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Visit **www.SeaTurtleStatus.org** to watch actual Crittercam video!