

# SEATURLECAM: LIVE INTERACTIVE VIDEO FEED OF BASKING HAWAIIAN GREEN TURTLES

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## INTRODUCTION

A cooperative venture between SeeMore Wildlife, the Hawaii Preparatory Academy (HPA), and the National Marine Fisheries Service (NMFS) has led to the placement of two remotely controlled video cameras on the Kona coast of the Island of Hawaii (Balazs et al. in press). These cameras are being used by HPA and NMFS to monitor the basking behavior of green turtles in the area. The video signal is also being intermittently streamed over the internet for public viewing. Camera control is browser based and can be handled by anyone with password access.

## THE SETUP

Two digital Sony video cameras are sequestered in water resistant plastic spheres containing pan and tilt servo motors as well as controller circuit boards. The cameras are hardwired to a master circuit board and to the video transmitter unit located some 75 meters from the cameras, away from tidal and wave action. Power is supplied to the unit via solar panels and 2, 12V gelcel batteries. The

video transmitters and receivers are made by Premier Wireless. The normal range of these transmitters is only a few hundred feet so 24 dBi parabolic antennas have been used to send the signal the 19 miles to the Hawaii Preparatory Academy Campus.

## THE BENEFITS

The use of the remotely operated video cameras has allowed us to maintain a constant daytime presence at the research site. This has made research on the basking behavior of green turtles much more convenient and efficient. Work done by Quaintance et al. (this volume) has clearly demonstrated the successful use of the cameras to identify individual turtles and study their basking behavior.

A side benefit of the installation is the effect it appears to have on human behavior. The area where the cameras are located is frequently visited by tourists and locals and we believe that the cameras act as a deterrent to inappropriate human / sea turtle interactions.

Future work with the cameras will involve adding environmental data gathering and transmission capabilities. Using either broadband or microwave transmission equipment, we will be able to monitor temperature, wind velocity and direction, relative humidity and light intensity on a 24 hours / 7 days a week basis.

#### **LITERATUE CITED**

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