



Manatee captures and health assessment



Florida Manatee in Crystal River National Wildlife Refuge

Over the last decade, the USGS has successfully captured, examined, and released over 300 manatees, creating an extensive sample and data archive. Research in greater Crystal River, Florida is providing needed baseline health information of West Indian manatees. This is the fourth year of the wild manatee study at the Crystal River National Wildlife Refuge.

Health assessments are a valuable tool to determine the fitness, specifically related to environmental and medical issues, of any population of wildlife. Marine mammals, such as manatees, are often used as sentinels for emerging threats to the ocean environment and human health.

A two-team approach is used to capture and exam manatees. The Capture Team and Assessment Team both consist of biologists and veterinarians representing federal, state

and local government agencies. All procedures are conducted by experienced biologists and veterinary personnel. Manatees selected for capture are circled with a large net and pulled onto the beach by an experienced capture team.

Once on shore, the manatees will receive a complete medical examination by veterinarians on the assessment team. Blood is drawn under sterile conditions from a flipper, centrifuged for plasma and serum separation, and submitted for routine blood analyses. Other laboratory tests are employed when necessary. A manatee physical exam includes the following:

- General Appearance
- Body Condition
- Photo-documentation of lesions and wounds
- Heart/Pulse Rate
- Respiratory Rate
- Temperature
- Body weight
- Complete body measurements (body length and girths)
- Eye exam
- Implantation of PIT tag
- Subcutaneous fat layer exam
- Analysis of blood, feces, urine and skin
- Reproductive parameters

Improvements in the handling of wild manatees are possible by monitoring individuals using ECG and evaluating inflammatory response to injury or disease during capture. Blood biochemistry and hematology research has benefited manatee clinical medicine by establishing normal ranges for veterinary evaluations of healthy wild manatees.

Other published studies incorporating capture data include research on several biological subjects including:

- Hormone levels for determining pregnancy
- Capture stress levels in wild manatees
- Epiphytes (living organisms that grow on manatees)
- Trace element contaminants in manatee tissues compared to levels in the local environment

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Swimmer and a wild manatee in Crystal River National Wildlife Refuge, Fla

For additional information, please contact:

Robert K. Bonde

USGS Florida Integrated Science Center

2201 NW 40th Terrace

Gainesville, FL 32605-3574

Phone: 352-264-3555

Fax: 352-374-8080

rbonde@usgs.gov