



EARTHWATCH INSTITUTE ANNUAL FIELD REPORT

This annual field report allows you to notify us of any major changes to your project during the year and to report on your achievements. It allows us to assess progress towards the agreed objectives stated in your latest project proposal.

Why is your annual field report important?

- ✓ Improved reporting of project outcomes allows Earthwatch to communicate successes to external audiences including funding bodies, which assists in raising further funds.
- ✓ It enables us to monitor projects to assess whether the project is meeting its agreed objectives (please note that annual reports will be taken into account when assessing future renewals)
- ✓ It enables us to conduct internal monitoring – to assess whether EW is meeting its mission
- ✓ Field reports are used by the Earthwatch communications team for external and internal publications
- ✓ It will be posted on the Earthwatch website on your project pages and acts as a tool to recruit new volunteers to your project
- ✓ Reports are sent to your volunteers and fellows each year, informing them of the achievements of the project they have played a part in

Important notes

It is essential that you return this report to your Programme Manager in **Word format** (not PDF). Any maps, images or other accompanying documents that cannot be included in this word template should be submitted to your PM at the same time as this report.

Use of images

Unless you specify to the contrary, The Earthwatch Institute will assume that you are willing to allow any images submitted to be stored and used by Earthwatch in future publications. Please notify your PM of the copyright holder's name, if necessary.

Project title: Sharks and Rays of Monterey Bay

Date completed: 2008

Completed by: S.R. Van Sommeran

Period covered by this report: June 2007 to August 2007

1. Cover letter to volunteers

Please insert a brief, informal, and signed letter to your volunteers here, expressing your thanks, outlining the main highlights of the field season's achievements, and include how volunteers helped to contribute to achieving your objectives.

Dear Sharks and Rays Volunteers,

We had a very good season and collected a record amount of data while surveying more often and at more sites than any other previous season; many of the sites surveyed and mapped had never been sampled or explored before.

Some of the things we were able to identify were zones favoured by large adult, often gravid guitarfishes and bat rays, as well as particular sites favoured by leopard sharks and thornyback rays.

The research teams even succeeded in locating and recovering (logged and plotted position) ancient native artefacts including a spear point used thousands of years ago and preserved in the sediments.

The Earthwatch Expeditions assisted with surveys within the Elkhorn Slough National Estuarine Research Reserve and the Elkhorn Slough main channel and relatively unexplored northern banks and tidal canals. The teams also assisted and participated in wildlife necropsy and dissection as well as being first responders to several reports of stranding events involving sharks and rays in Halfmoon Bay, Santa Cruz and Monterey Bay. Earthwatch volunteers also assisted in disentangling a number of sharks that had become wrapped in monofilament and/or plastic debris related to pollution.

The data gathered shows a high proportion of late term gravid adult females, especially for leopard sharks, bat rays, guitarfishes and thornyback rays, indicating particular areas and zones of preference and site affinity.

We look forward to another successful and eventful season of fielding Earthwatch Expeditions and gaining valuable insights into the ecology of Elkhorn Slough.

Thanks again,
Sean

2. Reporting on research objectives

2.1 Provide a summary of progress this year towards each of the objectives stated in your most recent research proposal. If work has not yet started on some of these objectives, state when you will start to work on them.

Repeated failure to demonstrate progress towards agreed objectives may result in a withdrawal of funding.

Objective 1: Gather data of population structure and habitat utilization of Elkhorn Slough and Monterey Bay by sharks and rays.

We tagged record number of animals and mapped new sites and identified zones of preference and high traffic.

Please see data graphics and tables here:
http://www.pelagic.org/slough/slough_databases.html.

Objective 2: Use acquired data, information and insights in order to more effectively and accurately reflect upon and/or advocate on behalf of these species and associated critical habitat.

Through long term monitoring and rigorous unit of effort, we have been able to identify the Elkhorn Slough as a reproductive habitat and the species to which this is a critical reproductive environment; furthermore we have been able to communicate this to the public at large as well as the popular press and media. Moreover, this has generated renewed interest and increased motivations for students and environmental studies educators and institutions.

Objective 3: Bolster protection through consistent presence, observation and reportage regarding poaching, safety and public information for park and reserve visitors.

We were able on more than one occasion to rescue distressed wildlife, report and interdict poachers and abusers of wildlife, inform the public and interpret wildlife and natural history to visiting kayakers and canoe renters who often visit our research sites.

4. Non-technical summary of results

As predicted, we were successful in surveying and mapping out a number of new unexplored sites. We continued to gather data indicating particular zones and habitats of preference for most of the several species of sharks and rays that utilize the Elkhorn Slough and associated Monterey Bay.

Not only were we successful in mapping new sites and sampling a record number of animals, we were successful in recapturing and releasing numerous sharks and rays that were tagged years ago. This is an excellent indicator and data point for establishing patterns of residency and long term site affinity and possible site specific peculiarities in terms of range, diet and population size.

With this bolstered and growing data base, increased and reinforced presence and site and issue familiarity, we are better set to advocate on behalf of these animals and their critical habitat. This habitat is, and has historically been, threatened and compromised by agriculture, industry and destructive recreational and commercial practices.

Locally the project enjoyed a high profile and warm public reception stemming from our cordial, professional and helpful presence on the water and the interesting nature of our educational work, research and wildlife rescues. Furthermore, the robust research effort and related accomplishments have given prestige to the Pelagic Shark Research Foundation (PSRF) and its related field efforts. We have seen an increased respect for the nature of our work and advocacy, as well as maintaining our reputation for forward thinking, proactive task management and first responder capabilities regarding wildlife emergencies and local issues involving sharks.

As one of the largest remaining tidal marine estuaries on the Eastern Pacific coast, the Elkhorn Slough was brought to national attention via news coverage and print media through public interest in our shark and ray research, conservation efforts and outreach. While sharks still have a bad reputation owing to periodic shark related injuries, projects like this highlight that in fact, 'The hunter is the hunted', and that sharks are very much menaced by humanity and not the other way around. The project generated much state-wide interest among wildlife officials and environmentalists, as well as inspired students and teachers.

Overall, the 2007 season and the project's doubled efforts and results were excellent news for the world: it highlighted the effort as an example of a grass roots, public interest generating project that reflected the positive and realistic aspects of sharks that have nothing to do with shark attacks or seafood menus. The story of a restored and recovering (now protected) habitat and a surviving and resurgent population of sharks and rays was another small step in the right direction.

5. Communication of results

You are not expected to complete all of the sections! Please indicate the type of output and provide a full reference. Indicate if the output acknowledged Earthwatch (NB acknowledging Earthwatch in dissemination outputs is a condition of your grant) and **remember to submit copies to your Programme Manager.**

Printed:

Elkhorn Slough National Estuarine Research Reserve, Research symposium.

Elkhorn Slough as critical habitat for shovelnose guitarfish and thorny back ray; 2000 thru 2007. Unpublished manuscript, presented at Moss Landing Marine Labs

Visuals:

Much digital photography was done by staff and volunteers (see <http://www.pelagic.org/archive/>). Elkhorn Slough Foundation film producer is editing together a mini documentary of 2007 effort and Earthwatch Expeditions with Elkhorn Slough; date of completion to TBA.

Digital:

In addition to attaching ID tags, we also digitally photograph each leopard shark so that it may be indentified photographically as well as numerically. Furthermore, staff and crew operations and survey work are constantly being photographed. All these images are archived chronologically on internet archives. Data is transcribed from data sheets and logged into Excel data files; these together with the images are archived on the internet and on the Pelagic Shark Research Foundation website and archives.

Mass media:

The 2007 season generated numerous printed press and TV news blurbs on local news outlets; some of the printed press articles were also circulated worldwide via newswires.

Meetings and conferences:

We recently presented a number of lectures for local schools, the local chapter of Surfrider Foundation as well as community access television and the Eco-Review Program; on May 6, 2008 I presented before the research staff at the Elkhorn Slough research reserve and the Monterey Bay National Marine Sanctuary's Conservation Working Group (CWG). I am scheduled to give a presentation to the docents and rangers at the research reserve on July 17, 2008.

6. Educational Opportunities

The Project is a vector for recreational kayakers and canoes filled with kids during the summer months and we are able to make impromptu presentations and wildlife demonstrations on most days in the field. As a result of this, we get much public press and school and class room group invitations.

8. Acknowledgements

I would like to thank Earthwatch and staff for their kind assistance and support throughout this whole new process and aspect of our work, as well as my loyal and hard working staff who after years of working long hard hours were finally able to be rewarded with more than just the knowledge of a job well done. It was a thoroughly enjoyable season and a turning point for the entire project, staff and affiliates.

Thank you very much,
Sean
PSRF

P.S. Special thanks to Daniela Maldini and Anna Janovicz for assisting me during 2006 and their encouragement throughout 2007; as well all the nice people I met in Massachusetts in March 2007 and to those whom I've been corresponding with but have never met.