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Living Marine Invertebrates: An Interactive CD-ROM

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Final Report for Period: 03/2004 - 02/2005**Submitted on:** 05/03/2007**Principal Investigator:** Watling, Leslie E.**Award ID:** 0231135**Organization:** University of Maine**Submitted By:****Title:**

Living Marine Invertebrates: An Interactive CD-ROM

Project Participants**Senior Personnel****Name:** Watling, Leslie**Worked for more than 160 Hours:** Yes**Contribution to Project:****Name:** Eckelbarger, Kevin**Worked for more than 160 Hours:** No**Contribution to Project:****Post-doc****Graduate Student****Undergraduate Student****Technician, Programmer****Other Participant****Name:** Lowry, James**Worked for more than 160 Hours:** No**Contribution to Project:**

Dr. Lowry, a senior curator at the Australia Museum, Sydney, provided transportation and dive support for a trip to Queensland, Australia, where subtidal invertebrates were collected and set up in aquaria at a field station for videotaping of activities.

Research Experience for Undergraduates**Name:** Zolotusky, Asya**Worked for more than 160 Hours:** Yes**Contribution to Project:**

This student was hired for the summer on a NSF REU award and was responsible for setting up a series of video assignments.

Years of schooling completed: Junior**Home Institution:** Other than Research Site**Home Institution if Other:** Cornell University**Home Institution Highest Degree Granted(in fields supported by NSF):** Bachelor's Degree**Fiscal year(s) REU Participant supported:****REU Funding:** REU supplement**Organizational Partners**

Other Collaborators or Contacts

We have contracted with Mary Tyler, University of Maine, Orono, and her group to produce the CD.

Activities and Findings

Research and Education Activities:

About 200 hours of video were taken using a 3-chip camera purchased on a grant from Pew Foundation. The video has been edited to about 30 1-minute segments illustrating some of the main functions of living invertebrates, especially feeding and locomotion. The text to accompany these video clips has not yet been completed due to various other activities that have come up. However, many of the video files have been used in our invertebrate zoology class to great effect. A general testing of the videos, however, remains to be done.

Findings:

This project was a proof-of-concept project which has not yet been completed so there are no findings from the educational perspective. However, we have demonstrated that it is feasible to make high quality videos of animal activities in an aquarium setting that can be used to illustrate principles of functional morphology associated with marine invertebrates. Whether these will ultimately be of interest to students taking marine invertebrate zoology courses has yet to be demonstrated.

Training and Development:

Outreach Activities:

I have used subsets of these videos in public presentations. In at least two cases I made 45 minute movies with subtitles to show during evening public lectures at resorts and hotels along the coast of Maine. These lectures were well received and provide confidence that ultimately a DVD with these vignettes will be useful to people trying to understand what the concept of 'biodiversity' actually means.

Journal Publications

Books or Other One-time Publications

Watling, L., J. Fegley, and J. Moring., "Life between the tides: marine plants and animals of the northeast", (2003). Book, Published Bibliography: Tilbury House Publishers, Gardiner, Maine, 108 pp.

Web/Internet Site

Other Specific Products

Contributions

Contributions within Discipline:

We have developed methods for getting high quality video of animals living in water, using aquaria, without elaborate supporting equipment in order to keep costs down, and have shown that these videos can be made to look like they were shot underwater.

We have also demonstrated that with luck and patience it is possible to get high quality video of a variety of unusual or rare marine invertebrates.

We have also shown that functional morphology of marine animals can be demonstrated using relatively simple techniques.

Contributions to Other Disciplines:

Contributions to Human Resource Development:

We trained one REU student in techniques that she otherwise would never have had the chance to use. This student has gone on to verterinary school at the University of Pennsylvania and I have no idea to what extent she used techniques she learned in our lab.

Contributions to Resources for Research and Education:

Contributions Beyond Science and Engineering:

We have used the book we wrote and the videos taken to illustrate some simple concepts about biodiversity to members of the general public: viz., that these animals, no matter how small or seemingly insignificant, are just like us in that they spend their time making their homes, finding food, and raising their kids.

Categories for which nothing is reported:

Organizational Partners

Activities and Findings: Any Training and Development

Any Journal

Any Web/Internet Site

Any Product

Contributions: To Any Other Disciplines

Contributions: To Any Resources for Research and Education