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# Meeting Review

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## Enhancing Educational Opportunities at Biological Field Stations and Marine Laboratories

The report of the National Science Foundation sponsored workshop on Education and Recruitment in the Biological Sciences: Potential Role of Field Stations and Marine Laboratories, has been published and is available on the Organization of Biological Field Stations web page <[www.obfs.org](http://www.obfs.org)>

The goals of the workshop were to explore educational opportunities that capitalize on the unique learning environment of Field Stations and Marine Laboratories (FSMLs) and to explore the role that FSMLs can play in enhancing recruitment into the biological sciences. Three audiences were addressed: K–12 students and teachers, undergraduates, and community and continuing education audiences. For each group participants discussed the current conditions at FSMLs, the challenges to greater participation by the educational group, and research and evaluation needs. A common discussion was an exploration of ways to increase the diversity of participants within all forms of educational programming at FSMLs. In addition, the need for an evaluation component to educational efforts was included in all discussions. The report contains recommendations for the FSML community and for the NSF.

Recommendations for K–12 include that initial exposure to inquiry investigation in field biology needs to begin early and be continued, as single immersion experiences are often not successful or can be detrimental to continued interest. Successful K–12 programs are based on district, state, and national standards that are integrated into the school curriculum. Fostering the exposure of teachers to field experiences is likely to improve the quality and frequency of a student's experience.

An important recommendation for undergraduate participation in FSMLs is based on the realization that a large percentage of students attend community colleges for their first two years of study, and get their initial, and perhaps only, biology coursework in this period. Unfortunately, FSMLs are rarely associated with community colleges; to facilitate field experiences for these students, linkages between FSMLs and community college faculty and students must be improved. Because a higher than average proportion of underrepresented minority students attend community colleges, improving these ties is likely to aid in the recruitment of minorities into biology.

Opportunities for experiences for community participation in FSMLs outside of the formal school setting include strengthening connections with groups such as minority-dominated church youth groups, tribal organizations, Girl and Boy Scout troops, 4-H, and boys and girls clubs. The report recommends repeated exposure to nature and research in field biology for these groups, and the encouragement of parent participation during the field experiences; these actions are likely to reinforce the experience for the child and increase the probability of subsequent field activities.

When assessing the current nature of education programs at FSMLs, it is apparent that there is little quantitative information about these programs. The report recommends a detailed survey of the current education programs at all FSMLs, and the development of common evaluation instruments to provide a quantitative assessment of the impact of FSML experiences.

Printed copies of the executive summary and the report are available from the e-mail address below.

Jan Hodder  
Oregon Institute of Marine Biology  
University of Oregon  
E-mail: [jhodder@uoregon.edu](mailto:jhodder@uoregon.edu)