Shorebird Sister Schools Program — Shorebird Education in North America and Beyond

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The Shorebird Sister Schools Program (SSSP) uses the tool of environmental education to integrate shorebird conservation across geographic scales, cultural experiences, and shared ecologies (Andrew & Andres 2002). The linkage of students along the North American Pacific Coast migration route of the Western Sandpiper (Calidis mauri) was the major impetus for launching SSSP. Learning about sandpipers during their brief spring stopover in Kachemak Bay, Alaska, students questioned where the sandpipers spent the rest of the year. Educators responded by initiating an electronic network of 17 Pacific coast schools that tracked the progress of the spring Western Sandpiper migration, and the U.S. Fish and Wildlife service began developing an Arctic-nesting shorebirds curriculum. Growing from these local beginnings, SSSP has now expanded to cover all Western Hemisphere, Central Pacific, and East Asian-Australasian flyways. The program involves teachers, students, youth groups, nature center interpreters, and protected areas educators at sites that support breeding, migrating, or wintering shorebirds. Equally important is the involvement of professional biologists and amateur enthusiasts who share their research and observations with other participants. Their participation greatly enriches the experience and knowledge gained by students and educators. The vision of the SSSP is to engage public participation in the conservation of shorebirds and their wetland, grassland, and shoreline ecosystems. Public participation begins with increasing the understanding and awareness of local species and habitats, which participants gain through the primary components of the program — an educator's guide for school grades 2–12 (ages 7–18), a student's activity booklet, and a World Wide Web site. The website provides background shorebird information in English, Spanish, and Japanese (http://sssp.fws.gov). Field trips are an important tool to create first-hand awareness of shorebirds, their habitats, and their conservation issues, and information is provided to educators on how to conduct meaningful field trips. In the U.S.A., seven regional coordinators have committed, in conjunction with other professional duties, to develop materials and conduct workshops to familiarize teachers with the activities and resources of the program. These regional SSSP coordinators focus on "train the trainer" workshops rather than on making individual schoolroom visits. SSSP activities have also been communicated through professional education journals (Grafe 2004).

Sharing cultural experiences among SSSP participants has always paralleled the geographic linkages of shorebirds. E-mail and written letter exchanges expand the students' education beyond biology. In Japan, staff of the World Wide Fund for Nature (WWF) have translated and modified SSSP materials and have held workshops in Japan and South Korea (http://www.chi-

dori.jp/education/). WWF has developed educational materials specific to the Yellow Sea, which is a critically important stopover site for many migratory shorebirds. Using efforts in Japan and the U.S.A. as a model, the Wetland Centre Australia developed a website, "Feathers, Flyways, and Friends", that contains background information on East Asian-Australasian migratory shorebirds and has been translated into Chinese and Japanese (http://www.wetlands.org.au/shorebirds). Their "postcard program" was designed to invite children to use the blank side of the postcard to draw a picture about shorebirds and send it to another school. Within the Western Hemisphere, coordinators in Argentina and Mexico have dedicated their time to promote and adapt concepts of the SSSP for use in Latin America (Streeter 2004); the educator's guide and student activity booklet have been translated into Spanish. A strong partnership, in which SSSP plays a central role, has been formed between biologists and educators at the Great Salt Lake, Utah, U.S.A., and Marismas Nacionales, Nayarit, Mexico.

Integration across taxonomic boundaries is accomplished in SSSP by developing activities that promote the general conservation of grassland, wetland, and beach ecosystems. Activities have also been designed to reach beyond biology: the educator's guide is correlated to the U.S.A. National Science Education Standards in science, geography, social studies, visual arts, language arts, and mathematics. Shorebird tracking projects, field trips, and other participatory activities engage students in reallife science - the successes, challenges, and setbacks. Students learn that habitats in their own community are part of a chain of healthy habitats that are critical to shorebirds and other migratory species. In keeping with the program's primary goal of flyway conservation, SSSP connects with researchers and managers through the U.S. Shorebird Conservation Plan Council (http://shorebirdplan.fws.gov). This linkage ensures that SSSP is integrated with shorebird conservation priorities, which in turn strengthens the program's relevance. The success of this education program is due to agency support, partner commitment, and participant enthusiasm. We invite you to cruise the super shorebird highway with Shorebird Sister Schools at: http://sssp.fws.gov. For further information, send an e-mail to the National Shorebird Sister Schools Program Coordinator at: sssp@fws.gov.

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