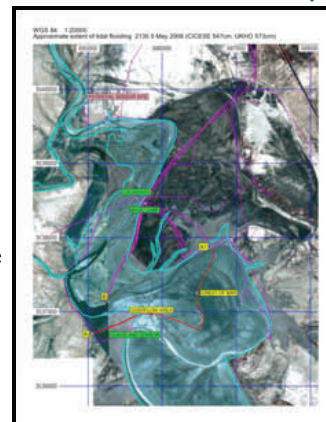


What's Going on in the Delta?



🌀 **Estuarine research:** In May 4-6, 2008 a team of ten researchers from several institutions visited the estuary to monitor the connectivity between the river and the estuary. The team installed a water level data logger and two water gauges to investigate changes in water elevations associated with tides, took water samples to look for evidence of freshwater and sea water mixing using isotope, and surveyed the topography of 3km of the river channel. Steve Nelson, who has visited the area regularly since 1980s, created this map from field observations made during this trip. As reference, the map shows the location of the campsite and a causeway use to cross from the east side of the delta to the west toward San Felipe, and the crest of the sandbar. In addition, Alejandra Calvo collected fish species at the causeway site, weighted and measured them as part of her masters research.



Field observations indicate that sea water is able to reach areas upstream from the sand bar, but only during very high tides, like the one observed during this trip in May. Isotope results from the water samples taken at the northern and southern end of the surveyed area (6 river miles) indicate no mixing of fresh and seawater. The mixing zone, if any, is between these two points and in August 2-3 the team will travel along the river upstream from the causeway to take additional water samples and to try to identify the extend of the mixing zone. For more information please contact Francisco Zamora fzamora@sonoran.org



🌀 **Recovering the Curvine Fishery in the Upper Gulf:** As part of the project Sustainability of Fisheries in the Upper Gulf of California, two new undergraduate theses have been recently completed. They provide information about the biology of curvine (*Cynoscion athonopterus*) and document an increase in catches of curvine from 1,600 tons in 2004 to 3,000 tons in 2008. For more information contact: Alberto Aragón-Noriega CIBNOR- Unidad Guaymas Sonora. aaragon04@cibnor.mx. Download both thesis using the links provided on page 2 of this newsletter.

Feature

🌀 **Payment for environmental services: The service of protecting winter habitat of shore birds at the Pacific Flyway.** By: Enrique Sanjurjo esanjurjo@wwfmex.org and Rodrigo Alatorre-alatorre@hotmail.com.

In this study we analyze the value of coastal wetlands on Mexico northwest coast, as winter habitat for shorebirds along the pacific flyway, using Contingent Valuation (CV) survey to more than 400 bird-watchers from bird watchers clubs at United States or Canada. The purpose is valuing the migratory route as an integrated conceived network of coastal wetlands. We obtain the value for assuring healthy habitats for migratory birds and a happy return to United States and Canada during the summer. These values only apply if a fully integrated strategy for protecting wetlands as a network is conceived. Results show that if we ensure that shorebirds on the pacific flyway return home safely every year, the welfare of birdwatchers of United States and Canada would increase in about 40 million dollars a year.

Results indicate that to realize these benefits a mandatory fee will be a bad idea because many people will refuse the policy, and because the maximum fee will have to be relatively low to get acceptance of the policy. An alternative mechanism is a voluntary donation from birdwatchers. This requires the engagement of bird watching associations and the compromise of Conservation organizations to create a network of wetlands designed for assuring healthy habitats for migratory birds. Voluntary donations would be at least half of the 40 million increases in welfare experienced by birdwatchers from habitat conservation of coastal wetlands in Northwest Mexico. [More details here.](#)

News from the RCN—CRD

☞ Eugene Clyde LaRue Papers: The Huntington Library, San Marino California

Diane LaRue has prepared a finding aid for the Eugene Clyde LaRue papers at the Huntington Library in San Marina, CA. Over the course of his life, E.C. LaRue (1879-1947) was a hydraulic engineer with United States Reclamation Service, when it was within the USGS, the Arizona Engineering Commission, and the Army Corp of Engineers. He was a key-player in the taming of the west's rivers for flood control, irrigation and power generation, including the Colorado River and its watershed from Wyoming to the delta. He strongly believed that conserving water meant storing it and controlling for human activities. The collection at the Huntington Library includes LaRue's personal and work correspondence, diaries, organizational details for various river trips, written papers (published and unpublished), maps, photos and congressional testimonies. The collection includes correspondence with many of the famous figures involved in the Colorado River at that time, including the political controversy about building of the first large dam at Boulder Canyon. Anyone interested in Colorado River history, alternatives to Boulder Dam (Hoover Dam), the Arizona High Line Canal, Arizona's position in terms of the 1922 Compact discussions and the political controversies in the 1920s over the control of the Colorado River would find the information interesting. [Download the information here](#)

E.C. LaRue was Diane LaRue's grandfather! For Diane's essay relating her life and work to her grandfather's, [please click here](#)

☞ **The RCN-CRD has available travel scholarships** for professional meetings to report on the results of research on the Colorado River delta and Exchange Visit Fellowships for collaborative research to prepare research proposals, work on joint projects, or run preliminary analyses of samples related to the Colorado River delta. [Details here.](#)

☞ **Collaboration:** As part of ongoing collaboration on joint research interests between the University of Arizona and the Sonoran Institute, Dr. Francisco Zamora will be on sabbatical with the RCN-CRD through December 2008. Dr. Zamora will collaborate with Dr. Flessa on writing a chapter of a book, implementing the water quality monitoring project in the Cienega de Santa Clara, and coordinating efforts on the ongoing estuarine research.

☞ Colorado River Delta and Upper Gulf Project Inventory:

The RCN-CRD is creating a data base of the ongoing projects in the Colorado River delta and Upper Gulf of California and we need your help to create this data base. Thanks to those who have responded to our survey we sent a couple weeks ago. If you have not responded, we ask you to please do so since we need this information to create the data base. The data base will help us to evaluate fellowship applications and to better serve the RCN members and users. It will also be available to everyone on our website.

[Survey in English available here.](#)

[Encuesta en Español disponible aquí.](#)



RCN members (Scientist, NGO conservationist and local people) during a visit to the Colorado river estuary as part of ongoing collaboration to study and enhance habitat in the estuary.

Remember that this Newsletter is made with the information you sent, please continue sharing your knowledge with others

Events: Workshops, Meetings, Symposiums, etc,

☞ **The Fate and Future of The Colorado River Conference.** Two-day exploration of the history and future of the West's most important river. This interdisciplinary conference will feature scholars, policy makers, landscape photographers, scientists, and river runners, as well as the remarkable visual and archival holdings of The Huntington Library. October 31-November 1, 2008. The Huntington Library. San Marino, CA.

For more information, contact Kim Matsunaga at kmatsuna@usc.edu

☞ **4th National Conference on Coastal and Estuarine Habitat Restoration "Creating Solutions through Collaborative Partnerships"**. Providence, Rhode Island. October 11-15, 2008. Deadline August 15 2008. [More information here](#) www.estuaries.org/conference

☞ **Symposium: Changing Waterscapes and Water Ethics for the 21st. Century and Global Geosciences Practice, Standards, Ethics, and Accountability.** Hosted by the American Institute of Professional Geologists and Arizona Hydrological Survey . Flagstaff, Arizona. September 20-24, 2008. [Details here](#)

New Publications, Thesis and Books

☞ **Report: Simulation of Groundwater Conditions in the Colorado River Delta, Mexico.** EJ Feirstein, JF Zamora, LB Vionnet, T Maddock III. University of Arizona. May 2008. 173pp. [Download report](#)

☞ **Ecosystem-Based Management in the Colorado River Delta** . Karen Hae-Myung Hyun. Doctor in Philosophy in Marine Affairs. University of Rhode Island, 2008. 258pp

☞ **Valoración Contingente del Hábitat de Invierno de las Aves Playeras Migratorias en la Costa del Pacífico en América del Norte.** Alatorre Sanchez, J.R. Tesis de Licenciatura. Tecnológico Autónomo de México. 2008. 113pp.

☞ **Study of Long-Term Augmentation Options for the Water Supply of the Colorado River System.** Colorado River Water Consultants . March 2008. 24 pp.. [Download report](#)

☞ **Análisis del contenido estomacal de *Cynoscion othonopterus* (Jordan y Gilbert) en el Alto Golfo de California y delta del Río Colorado.** Encinas Rivera Y. M. Tesis Licenciatura, Instituto Tecnológico del Valle del Yaqui, Bacum, Sonora, México.2008. 52 pp.

☞ **Aspectos de la biología reproductiva de la curvina golfina *Cynoscion othonopterus*, en el Alto Golfo de California.** Acosta Valenzuela Y. Tesis Licenciatura, Instituto Tecnológico del Valle del Yaqui, Bacum, Sonora, México. 2008. 65 pp.

Jobs, scholarships and proposal funding opportunities

☞ **Center for Ocean Solutions Early Career Fellowship** seeks one or more recent graduates who have received a JD, MBA or PhD in the natural, physical or social sciences in the last five years, to collaborate with researchers and experts on one or more interdisciplinary projects focused on elevating the impact of the social, physical and natural sciences on ocean policy. Application due on July 14. [Details here](#)

☞ **David H. Smith Conservation Research Fellowships** Smith Postdoctoral Fellows will be awarded 2 years of support for applied research in the broad field of conservation biology (including biological and social sciences) conducted in the U.S. DEADLINE: September 26, 2008. [Details here](#)