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COLORADO RIVER DELTA
Research Coordination Network
DELTA DEL RÍO COLORADO
Red Coordinadora de Investigaciones
NEWSLETTER / GACETA INFORMATIVA

What's Going on in the Delta?

Delta Trip: From January 8th to 11th, Steve Nelson, Arnold Schoeck, and Karen Hyun traveled along the Colorado River from El Tapón to La Bocana to explore the connection between the river and its estuary. They were interested in seeing the sandbar, which formed because decreased freshwater flows allowed sediment to be deposited by the tides. There may be a potential connection during high tides. The photo on the left shows the end of the channel, north of the sandbar. The photo below is taken from the sandbar looking south. Arnold is standing by the higher, outer bank of the channel. For more information about this trip, please contact Karen Hyun(khyun@mail.uri.edu).

Steve Nelson went back to the site in April, please see the next Newsletter for an update. A research team is planning to visit the area again in early May to continue monitoring the connection between the river and the estuary, as well as water quality. For more information or if you would like to join the team please contact Karl Flessa

Feature

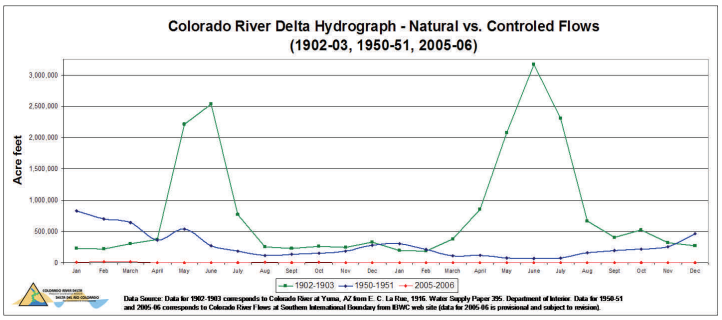
Jaramillo-Legorreta A, L Rojas-Bracho *et al.* (2007). Saving the vaquita: Immediate action, not more data. *Conservation Biology*, 21:1653-1655.

The recent extinction of the *baiji* (Chinese river dolphin, *Lipotes vexillifer*) makes the *vaquita*, the Gulf of California porpoise (*Phocoena sinus*), the world's most endangered cetacean. The vaquita has the smallest range of any porpoise, dolphin, or whale and, like the *baiji*, has long been threatened primarily by accidental deaths due to bycatch.. Despite repeated recommendations from scientific bodies and conservation organizations, no effective actions have been taken to remove nets from the *vaquita's* environment. Here, we address three questions important to drive vaquita conservation: (1) How many *vaquitas* remain? (2) How much time is left to find a solution to the bycatch problem? (3) Are further abundance surveys or bycatch estimates needed to justify the *immediate* removal of all entangling nets from the range of the *vaquita*? Our answers are: (1) there are about 150 vaquitas left, (2) there are at most 2 years within which to find a solution, and (3) further abundance surveys or bycatch estimates are not needed. The first questions make clear that action is needed now, while the last question removes the excuse of uncertainty as a delay tactic.

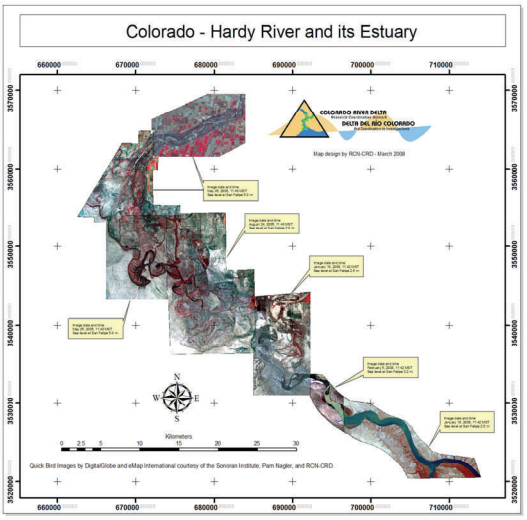
The number of *vaquita* remaining was estimated using the abundance estimate for 1997, the mortality rate in fishing nets in 1993, the estimated level of fishing from 1993 to 2007, the maximum population growth rate for porpoises and a standard population model for population growth. Our analysis suggests that about 150 vaquitas remain. In only two years, the population will be 100 vaquitas, a threshold below which the chances of recovery diminish. This threshold assumes that 50 mature individuals are needed for a population to retain reproductive fitness and that approximately half of the population is mature individuals. *Vaquita* are difficult to see because they are small and avoid boats. The resulting imprecision in abundance estimates makes using trends in abundance to signal either declines or recovery very costly. Similarly, estimating the number of *vaquitas* killed in a fishery of thousands of small boats would be prohibitively expensive. For more information please contact Lorenzo Rojas: lrojas@cicese.mx. To see some vaquita pictures and more information click here.

News from the RCN—CRD

RCN-CRD Webpage improvements: After May 1st, the website will feature the Colorado Delta Slide Show, where you will be able to find different types of pictures and figures divided by geographic area or theme. We are also adding a new resource called, "Data you could use," which will contain GIS, Hydrology, Flora and Fauna data. The graph below is an example of the data available:



Estuarine research: The RCN-CRD and some of its members are beginning a collaborative effort to explore opportunities for restoring portions of the Colorado River estuary. As part of this effort, the RCN-CRD acquired some high resolution images to develop a base map. The map shows the area and date of the images available for this analysis. For more information please contact Karl Flessa



Congratulations to Glen MacDonald of UCLA, RCN participant and Workshop III presenter, for his 2008 Guggenheim Fellowship.

Events: Workshops, Meetings, Symposiums, etc,

The bi-national border conference "Common Ground," was held April 10 & 11, 2008 in Yuma, Arizona. The conference included field trips to restoration areas as well as round table discussions to explore how restoration can work in combination with public safety and economic development initiatives in the limitrophe of the Colorado River. During the conference, the organizers, the Yuma Crossing National Heritage Area and Pronatura Noroeste, presented the Draft Plan for Phase I of the Limitrophe Binational Restoration effort, which integrates four key features: public safety, recreation, economic development, and healthy native habitat. For more information contact Osvel Hinojosa osvelhh@gmail.com

The Multistate Conservation Grant Program (MSCGP) is soliciting Letters of Intent for the 2009 cycle of this competitive grant program. (Due by Friday, May 2, 2008) For more information please visit the MSCGP website.

The U.S. and Mexico met on March 11, 2008 to address cooperative actions for the Colorado River basin. Convened by the IBWC, a binational group will look at opportunities to assure sustainable water management in the basin. Details here: English, Español

New Publications, Thesis and Books

Isotopic and geochemical evidence of palaeoclimate changes in Salton Basin, California, during the past 20 kyr: 2. 87Sr/86Sr ratio in lake tufa as an indicator of connection between Colorado River and Salton Basin. Hong-Chun Li *et al.* (2008) Palaeogeography, Palaeoclimatology, Palaeoecology, 259: 198–212.

Hotter and Drier. The West's Changed Climate. Rocky Mtn Climate Organization and NRDC publication**.** 54 pgs.Saunders, S, C Montgomery, et al. March 2008.

http://www.fs.fed.us/psw/cirmount/postings/pdf/west_warming.pdf

The Southern Nevada Water Authority has published a report on Colorado Augmentation Ideas. Here is a summary of Augmentations options.

Fish without water: Validation and application of δ18O in Totoaba macdonaldi otoliths. Rowell, K., C True, KW Flessa. And DL Dettman, Ciencias Marinas (2008), 34(1): 55–68. Bilingual

Diverting the Colorado River leads to a dramatic life history shift in an endangered marine fish. Rowell, K, KW Flessa, DL Dettman , MJ Roman, LR Gerber, LT Findley L.T. (2008)Biological Conservation, 141: 1138-1148