Project MAGO

Bridget Olson, Bear River Migratory Bird Refuge, Brigham City, UT.

Project MAGO was launched in early 2007 with a goal of connecting 4th through 8th grade students of the Bear River Migratory Bird Refuge environmental education program of the Box Elder School District with the communities, wetlands, and biological monitoring program of the Marbled Godwit, *Limosa fedoa.*

The project had both a research and an education component.

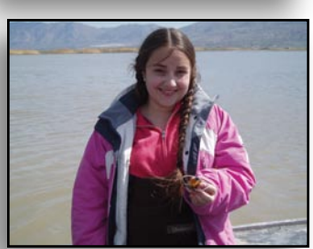
MTI provided two free 9.5g solar powered PTTs to the Refuge for on-going research of the Marbled Godwit. Bear River Refuge, located in the northeast arm of the Great Salt Lake, is considered the largest staging area for godwits in the interior of North America. The objective of our research is to use MTI's miniature satellite transmitters to link the Marbled Godwits that stop at the Refuge to their specific breeding and wintering areas.

In early 2007, about 240 4th graders were introduced to the Marbled Godwit (MAGO) via a brief life history lesson. Educators used the Marbled Godwit as a focal species to help deliver the "Wonder of Wetlands Program". The Wetlands program included several field stations at the Refuge where the students examined habitat aspects of the godwit such as invertebrates, soil and water. A mounted Marbled Godwit was used to explain shorebird adaptations and a globe to introduce latitude and longitude to explain migration patterns. A "dummy" satellite transmitter was used to explain biologists' research efforts and the value and use of science to track the MAGO. Finally, students were invited to participate in a MAGO "naming" contest by writing an essay about the life history and biology of the MAGO. The essay contest was a way to foster an appreciation for birds that use the Great Salt Lake. As a reward the winners were given the opportunity to work with biologists in the field to capture the birds they named, thereby promoting active involvement of youth in the conservation of a species.

Of the 120 students that participated in the essay contest, one 4th and one 7th grade winner was selected. The 4th grader selected the name "Pinocchio" and the 7th grader selected "Marby". In April 2007, the 7th grader and her mother were able to accompany biologists into the field and participate in the capture, banding and attachment of the satellite transmitter on both Pinocchio and Marby the Marbled Godwits. Unfortunately, the 4th grader was unable to be there on capture day.

Weighing and measuring Pinocchio.

Pinocchio departed the Refuge about 5 days after capture. This bird migrated approximately 690 miles to apparent breeding grounds in central North Dakota. By July 1st, Pinocchio had migrated back to Bear River Refuge, Utah. Pinocchio remained on or adjacent to the Refuge for about 2 weeks before heading south to wintering grounds, reaching Laguna Ojo de Liebre, a large estuary adjacent to the small Mexican town of Guerrero Negro on Baja Sur, Mexico on July 27th, 2007. Pinocchio continued to transmit from this location until early October.



All photos courtesy of the US Fish & Wildlife Service

7th grade essay contest winner Abby Payne holding marbled godwit "Marby". Abby holding free MTI 9.5g PTT.

Marby headed to breeding grounds in north-central Montana by the end of April. Marby was back at the Refuge by July 5th and remained until around August 7th. By August 16th Marby had joined Pinocchio at Laguna Ojo de Liebre in Baja, Mexico. Unfortunately, the last transmission from Marby was received on February 28, 2008 while the bird was still in Mexico.

Through this project, we were able to collect new scientific data linking Marbled Godwits that stop at the Refuge to their specific breeding and wintering areas as well as determine the migration pathways they utilize during these north and southbound treks.

Throughout May, the coordinates of Marby and Pinocchio were given to a small group of dedicated Box Elder 7th graders who took part in an after-school computer class project. The students created Google Earth™ maps for each bird in order to track the birds' movements on a weekly basis.

Dr. Adrian Farmer watching Abby release "Marby" after attaching a 9.5g PTT, April 2007.

Through the project, Box Elder elementary and intermediate students learned the natural history of the Marbled Godwit. By following the movements of the tagged birds, students learned where the birds go to breed and where they go to winter after departing from the Refuge at the Great Salt Lake. In addition, the students learned about latitude and longitude coordinate systems, the use of technology in science, and how their world at the Great Salt Lake is linked to other parts of the world through birds.

We consider Project MAGO a great success as the school teachers have requested a repeat of the Project in spring of 2008.