



TERN AND PLOVER CONSERVATION PARTNERSHIP NEWSLETTER

AS THE PLOVER TERNS

This issue is dedicated in memory of John Dinan, our colleague, mentor, and friend. May his perseverance of conservation live on in our Partnership.

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Fall 2005

A Newsletter for and by Volunteers and Partners

Hello and Happy Autumn! It's been another exciting year for the crew and volunteers. We had over 60 volunteers this year, contributing close to 400 hours of their time! We would like to express our heartfelt gratitude to all of you. You're what makes this Partnership successful! This year our job shadowing program got off the ground, with

two students participating. We received some excellent feedback from their experiences. I hope 2006 brings even more students to the program.

We also expanded the Adopt-a-Colony program this year to include great blue heron rookeries. Several volunteers monitored the rookeries, and we will build on this experience next season.

In August, we were saddened by the loss of one of our founders, John Dinan. He was an inspiration and will be enormously missed. We will work earnestly to continue his vision - building partnerships with diverse groups that work together to conserve wildlife. Together, we will accomplish great things! *Chris Thody - Editor*

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Remembering John

by Chris Thody

August 13, 2005, we lost a colleague, mentor, and friend. John Dinan, nongame bird program manager from Nebraska Game and Parks Commission, and one of the founders of the Tern and Plover Conservation Partnership, lost his courageous battle with leukemia. Surviving family members include his wife Jeanine Lackey, and his daughters Amber, Michaela, and Erin.



John holding an American Kestrel - photo courtesy of Nebraska Game and Parks Comm.

John worked for the Nebraska Game and Parks Commission for over 25 years. He became nongame bird biologist in 1993. The Tern and Plover Conservation Partnership was one of many projects John had a hand in starting. Other bird programs that he helped initiate are the Nebraska Partner-

ship for All-Bird Conservation and Rocky Mountain Bird Observatory's Prairie Partners Program.

I would like to share part of an article that was written by Kelly Rezac, Coordinator of the Nebraska Partnership for All-Bird Conservation.

"John's immense knowledge of Nebraska's birds, his dedication to wildlife, and his genuine heart for people, will be impossible to replace. We will continue to do our part to fulfill the mission we share with John, to be good

stewards of Nebraska's wildlife resources. As we do so, let us think to the future, and remember to keep all birds, indeed all wildlife in mind, as John did. To do so requires the building of partnerships among those having expertise in specific aspects of conservation, and

among those sharing the resources we seek to conserve."

To read the entire article, go to <<http://www.nebraskabirds.org>> and click on updates; or contact Kelly Rezac at 402-471-5363 for a copy.

John loved being in the field, and his enthusiasm and dedication was contagious.

"He wasn't an armchair ornithologist" - *Mace Hack, assistant administrator of Nebraska Game and Parks Wildlife division. (August 16, 2005, Lincoln Journal Star article)*



Top: Checking a tern nest.
Middle: Piloting an airboat during river surveys.
Bottom: Trapping a banded piping plover

Regional Coordinator Notes

by *Diane Beachly*

It was late in the nesting season. There had been many nests at this gravel mine location throughout the summer but few chicks had hatched, except for plover clutches that had been "safe" within exclosures. I had noted three late least tern nests with apprehension. Because of how the season had progressed, I was always expecting not to find these nests on subsequent visits. So I was particularly glad when all three least tern nests, and even a surprise fourth tern nest, hatched.

The week following hatching I was on the opposite shore watching from a shaded location for these broods. I could only find one of the broods which was being shaded by an adult. Two young chicks would occasionally be visible underneath the adult's body. One adult tern left as the other tern parent arrived carrying a fish. This fish was notable because it was too large for the chicks to eat. This adult eventually flew down by the shoreline and then flew off leaving the chicks alone.

Having recently read a study where foraging quality diminished as the nesting season progressed, I thought that I would check whether I could determine the condition of the chicks. The large fish offered to the chicks could indicate that the adult birds were not finding enough small fish to feed the brood, and the chicks might therefore appear thinner than expected. In addition, the weather had been hot recently which could also be stressful for the chicks. I never had a chance to note the condition of the chicks. A kestrel flew in and devoured the chicks while I watched. I only witnessed this one act of predation but I suspected foxes, common terns, and great blue herons as other predators of chicks.

The historic Platte River channels were surrounded by flowing water which provided protection from many predators. It is difficult to imagine now but the Platte River was virtually treeless in historic times which would have limited avian predation. The ideal nesting location was wide open sandbars surrounded by flowing water. These sandbars were subject to periodic flooding which could be detrimental to colonies, but flooding was also beneficial as it cleared the sandbars of vegetation and provided nesting habitat. Predation is just one of the hazards facing least terns and piping plovers.

We greatly appreciate that the sand and gravel mining industry realizes that they play an important part in the conservation of least terns and piping plovers. We at the Tern and Plover Conservation Partnership welcome our newest cooperators, Bruners Sand and Gravel Inc., Ulrich Gravel Inc., and Overton Sand and Gravel Company. Central Sand and Gravel has added two new locations, one at St. Paul and the other at Genoa. There are several more sites that are willing to work with us if terns and plovers start nesting at their locations as well.

This summer in central Nebraska the partnership utilized mylar as a deterrent, put exclosures around plover nests, put an electric fence across the sand access to one nesting colony, and put up "Do Not Enter" signs. The sand and gravel operators and land owners have been very gracious in allowing us to do this and monitor the colonies on their property. We hope that our continued efforts will increase the number of these birds which are a part of our heritage, and allow us to find answers to many other questions about tern and plover biology.



Diane Beachly is located in Hastings. Her contact information can be found on page 5.

Thank you to all of the sand and gravel mine employees who make this work possible!

2005 Volunteer Appreciation Picnic - Branched Oak Lake

Our Volunteer Appreciation Picnic was held Sunday, September 11th, at Branched Oak Lake northwest of Lincoln. Volunteers and staff enjoyed a barbeque meal followed by homemade ice cream. Live music was provided by Ron Johnson (a.k.a. P.P. Tern), and Renae Held. The wind and heat didn't dampen the enthusiasm of picnic attendees.



Seasonal Adventures

by Clare Welch



One of the benefits to being a Tern and Plover Technician for two consecutive seasons is the unique opportunity to witness the natural changes that take place from year to year. To the majority of humanity, these changes are minute and often inconspicuous. To a technician, a changing environment is usually confined to the ever-shifting dunes of a sand and gravel mine, always in the process of depositing new habitat and eating away the old; burying coveted monitoring spots and opening the way for new vantages. To terns and plovers, however, each subtle change can represent a successful clutch or a failed one, a spotted sandpiper as your nearest neighbor or a family of foxes, survival or extinction.

The 2005 season began as any other would; April arrived and it was business as usual. Each gravel mine was visited and surveyed for available habitat. Areas deemed high-traffic were covered with mylar and territories considered low-traffic or unusable were claimed as safe-haven for nesting terns and plovers. This was going to be a busy summer for several mines, and consequently, a staggering number of mylar flags were erected over sections of 10 gravel mines. This seemingly infinite task was finally finished the first week of May...just in time for the rain to begin.

Nebraska, as a whole, did not receive an abnormally large amount of rainfall this year. In fact, we received less than average. However, the rains that did come coincided with the tern and plover migration and the beginning of their nesting season. The abundant rains that fell in western Nebraska flowed into the Platte and Elkhorn rivers. The Fremont area was a consistent target for heavy rainfall, and received several inches of rain from multiple storms. Before long, these two rivers were banked; hope of an empty, barren sandbar had foundered beneath the deluge. Any plover nest that may have been initiated in April or early May was lost in the inch-by-inch rise of the water. The birds had two choices: continue north to find more suitable grounds or stake their claim at a nearby sand and gravel mine. Several chose to stay.

One such gravel mine overwhelmingly caught the fancy of many: Waterloo #40, a Lyman Richey gravel mine near Valley. During the last two weeks of May, the number of adult piping plovers blossomed from two to 14. During the first two weeks of June, the population of adult least terns ballooned from 18 to 125. It was chaos! Waterloo is a relatively large gravel mine with two lakes and three separate sandy shorelines which provide desirable nesting habitat. The birds had moved in, taken over, and were everywhere!

Managing the site was quite a challenge from beginning to end. Early in the season, approximately 300 mylar flags were erected in a large sandy area which was slated for extraction in June. We hoped the mylar would hold up and be useful at preventing nesting in the area. However, roughly one third of the nests at the site were within the mylar. Sometimes site fidelity (nesting in the same area season after season) is stronger than the disturbance caused by mylar flags.

As the first plovers began migrating through, many stopped to rest and forage. Territories were established and defended and, before long, we had seven plover nests. Many of the plovers had chosen nesting sites that were visible from roads throughout the mine, making for easy monitoring. Although predation at the Waterloo gravel mine had been low in past years, Melissa and I spent most of one morning placing exclosures around five of the seven plover nests. Not only did this protect the nests from predators, but it also made the nests easier to find.

As the terns moved in and began establishing territories of their own, Melissa and I realized our ingenuity was going to be tested. In mid-June, we spent two ten-hour days mapping and naming each tern nest we found, floating each nest to estimate its hatch date, and posting signs around the colonies to ward off trespassers. We scrambled to find the best monitoring sites, each of which viewed a separate area of sand or shoreline. In total, we needed 10 vantage points to cover all nesting ground and complete an accurate population count on each visit.

As the season progressed, several of the 65 tern nests began to hatch. By mid-July there were just four nests left. It took several hours on each visit to find and count chicks in each brood. Often I would stand at the spotting scope for a quarter of an hour or more waiting for a single tern chick to lift its head from behind a rut in the sand. Many times, the sound of a shrieking tern or a *peep-lo* from a plover were the only clues to the whereabouts of a family. On July 22nd, the heat index had climbed to 113°F; I knew young chicks would be under cover, lacking the feathers needed to regulate their body temperatures. On this day I saw 45 fledglings, but no young chicks. I made a note to return by 7 a.m. on the next visit; during the cool morning hours young chicks are often waiting patiently for a parent to bring their breakfast of minnows and shiners. This makes for easy counting.

As the first of August came and went, both terns and plovers began leaving Waterloo for the river. By this time, water levels in both the Platte and Elkhorn rivers had fallen dramatically and foraging was much easier in the shallow, slow moving current. By August 24th, all the birds had flown the coop. Waterloo was quiet, desolate, and tame; the wind in the sunflowers was all that remained.

In the end, we had six plover chicks and 61 tern chicks survive to fledgling stage. This was a successful site. Other gravel mine colonies were not so lucky. Some were lost to foxes, some to coyotes, and some to human disturbance. Many nests may have been lost to the rise in the river. But the terns and plovers survived; they persevered throughout and came out shining. I hope it stays this way for many more years in the future. With the help of the Tern and Plover Conservation Partnership and its many volunteers and partners, I believe it will.



Piping Plover Mating Displays

by *Melissa VanderLinden*



Piping plovers (*Charadrius melodus*) are an interesting little shorebird that has fascinating mating displays demonstrated primarily by the male. There are three main mating displays: aerial courtship, nest scraping, and tilt. The displays progress through the nesting season in the pursuit of a successful pair bond.

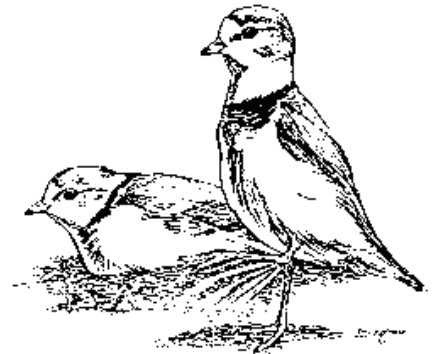
First, aerial courtship display occurs when the male demonstrates elaborate flights over a breeding territory to attract a female into the area. The male establishes a slow flowing figure eight in the air while vocalizing a continuous high-pitched *pipe-pipe-pipe-pipe*. Adjacent males may display at the same time to lure a female plover away from the courting male.

Secondly, nest scraping display is generally displayed just prior to copulation. The courting male walks around the breeding territory deliberately tossing shell fragments and small pebbles. The male stops, sporadically squats, and pivots around kicking up sand behind him to make a scrape or shallow

depression. This procedure may be done several times until the one perfect scrape is picked for the nest.

Finally, the tilt display is performed once a pair bond is formed. The male stands in a scrape while the female is nearby, lowers his head, spreads his wings and raises his tail to entice the female to crouch and walk underneath the male's tail. The female stays underneath the tail until the male moves away. This process may be repeated several times.

At last, the male walks slowly towards the female in a low crouch. The male then proceeds to an erect posture with the neck outstretched, the breast band extended and breast expanded while high stepping in an increasing tattoo of both feet. Depending on the female's willingness, the male will climb on her back to copulate. Afterwards, both the male and female will preen or clean their feathers. This process rarely gets witnessed by researchers, but this year the tilt display was witnessed twice by Partnership technicians. The process seemed a little comical from our perspective but intriguing at the same time.



Piping plover "tattoo" stepping.

Nebraska Partnership for All-Bird Conservation

by *Kelly Rezac*



The Nebraska Partnership for All-Bird Conservation is a super partnership of over 100 agencies and organizations that have united to better understand and manage the bird resources of Nebraska. Its mission is to promote a coordinated, science-based, landscape approach to voluntary land stewardship that will conserve, improve, and expand habitat for all bird species. The group is diverse, with representatives from Audubon Nebraska, Ducks Unlimited, Natural Resource Conservation Service, The Nature Conservancy, NE Assoc. of Resource Districts, NE Corngrowers Assoc. NE Cattlemen, NE Game & Parks Commission, Pheasants Forever, NE Ornithologists' Union, Platte River Basin Environments, Platte River Whooping Crane Trust, all NE Joint Ventures, Sandhills Task Force, US Fish & Wildlife Service, all Congressional offices, Dept. of Economic Development, and many others.

The partnership recognizes and even embraces the broad differences among members. They believe that by focusing on the parallels and similarities among the various missions of the partners, there is much that can be achieved. The resource will benefit the greatest when we focus on our shared objectives and manage systems for greater health.

The groundwork was laid for the partnership through a series of well-attended and energetic meetings in 2002, during which the Steering Committee and workgroups were created. The infrastructure of the NPABC has been well developed, and several projects have already been accomplished, including the development of the bird species-by-habitat association matrix and an exciting, searchable website to encourage birding statewide (www.nebraskabirdingtrails.com). With the approval of their first Annual Plan of Operations in June 2005, the NPABC is gearing up to take on larger tasks, including the implementation of avian aspects of the Nebraska Natural Legacy Plan which will be completed this month. The partnership is developing the process for building community-based conservation plans at local scales to address statewide conservation priorities. For more information about the NPABC, please visit our website at www.nebraskabirds.org.

Job Shadowing Students

by Chris Thody

I'm happy to announce that our job shadowing program got off the ground this season with two students taking part. Each student submitted an application consisting of questions about their goals and accomplishments. The two students chosen were Jacob Blacketer of LaVista, and Molly Staley of Lincoln.

Jacob is a junior at Papillion-LaVista High School, where, in addition to his pursuit of zoology, he plays football and wrestles. His goals are to attend college and major in zoology up to the doctorate level. He would like to have a career in wildlife biology.

Molly is a senior at Northeast High School in Lincoln. She is active in her church's youth group, math club, National Honor Society, and knitting club. She started working at the Folsom Children's Zoo this summer after volunteering on the Zoo Crew for five years. Additionally, she has taught zoologist club classes. Her goals are to attend a four year college and earn a degree in biology or a related field.

These students learned first hand what it is like to be a wildlife biologist. Each student spent two days with Tern and Plover Conservation Partnership staff. The first day was spent in the office, learning about terns and plovers and the Partnership. A field trip to a nesting colony finished out the first day. On the second day, the students were able to accompany Clare and Melissa (Conservation Technicians) to sites they would normally visit during a typical day.

Activities that the students were able to participate in included: putting up "Do Not Enter" signs near active nesting

plovers from nesting in areas that could potentially cause a conflict with mining operations; and/or monitoring the birds by using binoculars and spotting scopes.

The students learned that driving (a lot) was an essential part of the daily routine, because there is a large area to cover in the lower Platte River system. They also found out that it isn't easy to find the birds and count them. Looking through a spotting scope for long periods of time takes practice. And it gets hot out on the sand!

It was a great experience for our Partnership personnel to be able to show students what needs to be accomplished in a short amount of time. I think both the staff and students

learned a great deal from this experience. We are grateful for the students, their parents, and their schools for this opportunity. Our program would like to expand each year, so if you know of any student that may benefit from the Job Shadowing program, please contact Chris Thody. (See contact information below.)



Left: Jacob Blacketer placing "Do Not Enter" signs near a tern and plover colony at a housing development near Schuyler.

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Partners: Overland Sand and Gravel Company, Western Sand and Gravel Company, National Fish and Wildlife Foundation, Girl Scouts-Great Plains Council, Nebraska Game and Parks Commission, Nebraska Environmental Trust, University of Nebraska Cooperative Extension, Arps Gravel and Concrete, Lyman-Richey Corporation, Mallard Sand and Gravel, and United States Fish and Wildlife Service.

<http://ternandplover.unl.edu>