Pintail Action Group Newsletter

May 31, 2007

Pintail Banding Analysis Update

Mindy Rice (Texas Tech Univ.), David Haukos (USFWS), and Jim Dubovsky (USFWS) have completed a comprehensive analysis of pintail banding and recovery data from 1970 to the present to provide data to manage pintails and help design a possible pintail banding program. They have updated and estimated annual survival and recovery rates utilizing models incorporating different geographic scales and time periods based on historical harvest regulation packages. These analyses will help development of adaptive management models for the pintail population. Modeling results will be discussed at the 22 Sep 2007 Pintail Action Group meeting that will be held in association with TWS Conference in Tucson, AZ.

Avian Influenza and Pintails

The U. S. Geological Survey (Alaska Science Center, National Wildlife Health Center, Western Ecological Research Center) and USFWS (Region 7, Alaska) have initiated a study with Japanese scientists to assess the likelihood that migratory birds could transmit highly pathogenic avian influenza (HPAI) H5N1 virus from Asia to North America. The project is using pintails as a focal species because they frequently migrate across continental boundaries and a relatively high proportion carry avian influenza strains. Japan is the main wintering area for pintails in East Asia. The study includes four components: (1) analyze band recovery data to identify areas in Russia where pintails from North American wintering areas would likely come into contact with Japanese pintails during migration and nesting, (2) use satellite telemetry to model spatial and temporal distribution of Japanese pintails during migration and nesting, and to estimate the likelihood that they occur in areas occupied by North American pintails, (3) assess transcontinental transmission of avian influenza by comparing non-H5N1 viruses in pintails wintering in California to those from Japan, and (4) compare genetic similarities between Asian and North American pintails to evaluate the degree of reproductive isolation between populations.

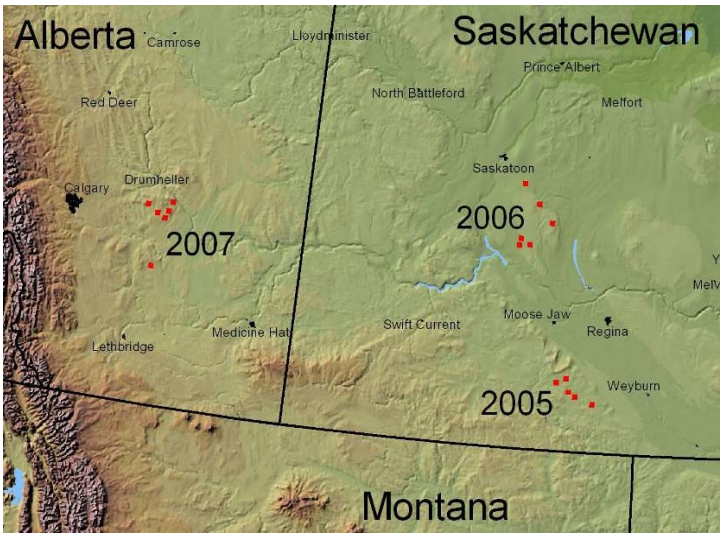
Progress on study objectives has begun. Collaborating with Yamashina Institute of Ornithology scientists, a comparative analysis of band recovery data has started. While direct recoveries of pintails banded in Japan have occurred in North America, and vice versa, numerous recoveries of birds banded in both areas occur in Eastern Russia. These recovery distributions will be analyzed in terms of age and sex composition and recovery timing.

Samples for pintail genetics and avian influenza testing have been collected in Japan and North America. Working during 11–21 Feb 2007 with colleagues from the Univ. of Tokyo, pintails near Izunuma and Uchinuma lakes in Miyagi Prefecture in the NE region of Honshu Island were captured and sampled; 16 males and 11 females were tagged with 18-g solar PTTs. Working with California Waterfowl Association, 1,000 pintails were captured during Jan 29 – Mar 22 in the Central Valley and northern California and sampled for Avian Influenza; DNA samples were collected earlier from hunter-shot and other pintails throughout California. These data will allow assessment of exchange rates between populations of pintails wintering in Asia and North America and the prevalence of Eurasian lineage AI viruses in NA pintails. For more info contact Paul Flint pflint@usgs.gov)

Update: DU Canada's Pintail Nesting Ecology Study

The Pintail Nesting Ecology Study being conducted by Ducks Unlimited Canada (DUC) had another successful year in 2006. This was the second year of a 3-year study designed to gain understanding of pintail nest site selection and nesting survival in landscapes ranging from cropland to grassland-dominated. Embedded in the study design is an adaptive management component focused on testing the response of pintails to habitat interventions promoted under DUC's Pintail Initiative (i.e., winter cereals, tame pasture, hayland). Six -16 mi^2 study sites were examined in 2006 in the Allan Hills region of Saskatchewan southeast of Saskatoon (see Fig). On 4 of the 6 study sites, approximately 1,115 acres of winter wheat were planted in the fall of 2005 for evaluation during the 2006 nesting season. Approximately 55 quarter sections of nesting habitat were searched for waterfowl nests in total.

Four complete nest searches were conducted on native and tame grass pastures, idle tame grass, haylands, winter wheat, spring-seeded cereal crops, and summerfallow. Among study sites, spring pintail pair densities ranged from 4 – 10 pairs/mi^2. We found 184 pintail nests and just under half of these were found in croplands and summerfallow. Nest survival ranged from 1% in spring-seeded cropland to 22% in winter wheat. As with our 2005 results, pintails used cropland habitats much more than other waterfowl species. Full analysis of landscape influences on nest site selection and nest survival will be conducted upon completion of the 2007 field season.



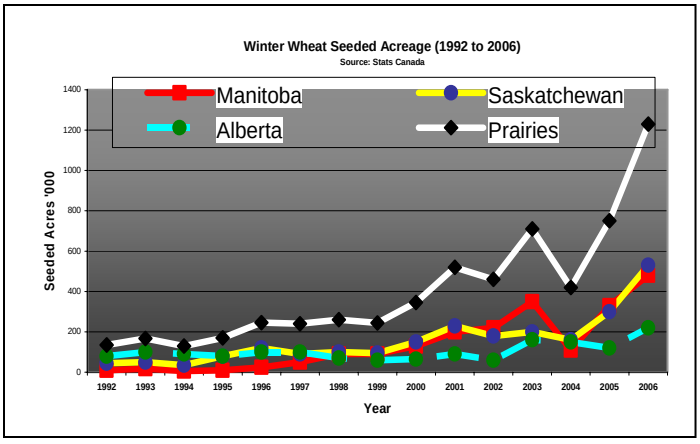
Location of Ducks Unlimited Canada's Pintail Nesting Ecology study sites during 2005-2007 in Saskatchewan and Alberta.

Study sites in 2007 are located east of Calgary near Hussar, AB. Approximately 1,200 acres of winter wheat were planted on these sites in the fall of 2006 and are currently being searched for nests in addition to other habitats. Initial pair counts indicate pair densities range from 3 – 10 pairs/mi^2. Updates on this research will be presented at the Pintail Action Group meeting held in Tucson, AZ on September 22, 2007. For further information, contact Jim Devries (j_devries@ducks.ca) or Karla Guyn (k_guyn@ducks.ca).

Winter Wheat Delivers the Green on Canada's Prairies

DU Canada applauded prairie producers that seeded more than 1.2 million acres of winter wheat in fall of 2006, a 60 % increase in acreage over last year. "Winter wheat provides a crop alternative that solves many challenges faced by producers" said Pat Kehoe, DUC's Western Region manager of conservation programs. "It also provides productive nesting habitat for prairie waterfowl. Ducks that choose to nest in winter wheat are ten times as likely to successfully hatch as those that nest in spring-seeded cereals." The increase in winter wheat acres is particularly beneficial to northern pintails. Kehoe says this benefit to waterfowl has led DUC to invest in excess of $3.5 million in support of variety development, agronomic research, producer group support and financial incentives to producers in the past six years.

"This dramatic increase in seeded acreage could not have been achieved without the cooperation of our many partners in the agriculture industry and, of course, the prairie producers," said Kehoe.



Body Condition Study in The Central Valley of CA

The first field season of a cooperative project (USGS-Western Ecological Research Center, USFWS-Central Valley Joint Venture, California Department of Fish and Game, California Waterfowl Association, Univ. of California-Davis) to examine the effect of habitat changes on the body condition of pintails and other waterfowl wintering in California's Central Valley has been completed. During September 2006-March 2007, body condition data were obtained from 9,300 hunter-shot ducks throughout the region and 450 additional ducks were collected for body composition analyses. The data will be compared with similar information obtained before Joint Venture habitat programs were in place.

Results of this work will complement recent information on waterfowl movements, distribution, and survival to evaluate waterfowl response to Joint Venture habitat programs and help guide future implementation. Contact Joe Fleskes for more info.

Pintail Banding in California

Progress is being made in California towards a long-term goal of increasing pintail banding data to enhance estimation of annual survival and harvest rates, and refine our understanding of linkages between summer and wintering populations. These data will become increasingly important as we move towards Pintail Adaptive Harvest Management.

In February 2006, a pilot pintail banding project was conducted in the Sacramento Valley and Klamath Basin to determine cost and feasibility of post-season rocket-netting and banding. The California Waterfowl Association (CWA) and California Department of Fish and Game with logistical support from the USGS-Western Ecological Research Center trapped and banded 1,219 pintail, with a few hundred swabbed for Avian Influenza. During Aug – Sep 2006, they again captured, banded, and swabbed several hundred pintails throughout the Central Valley. Following the successful pilot post-season effort in 2006, CWA again conducted a post-season program in 2007, banding 1,274 pintails during Jan 29 – Feb 15 in Sacramento Valley, and Mar 2 – 22 in the Klamath Basin.

As part of the collaborative study with the USGS Western Ecological Research Center, Alaska Science Center, and the National Wildlife Health Center in Madison, WI to assess avian influenza virus movement across continents using northern pintail as a test species, 1,000 of the pintails were swabbed for avian influenza virus. Contact dan_loughman@calwaterfowl.org for more information on the banding effort in California.

Rocket-netting pintails in California

Recent and Upcoming Publications

Recent publications:

Ballard, B. M., J. E. Thompson, and M. J. Petrie. 2006. Carcass composition and digestive-tract dynamics of northern pintails wintering along the lower Texas coast. Journal of Wildlife Management 70 (5): 1316-1324.

Clark, R.G., K. A. Hobson, and L. I. Wassenaar. 2006. Geographic variation in the isotopic composition of feathers and claws from lesser scaup and northern pintail: implications for studies of migratory connectivity. Can. J. Zool. 84: 1395-1401.

Haukos, D. A., M. R. Miller, D. L. Orthmeyer, J. Y. Takekawa, J. P. Fleskes, M. L. Casazza, W. M. Perry, and J. A. Moon. 2006. Spring migration of pintails from Texas and New Mexico, USA. Waterbirds 29: 127-136.

Hebert, C. E., and L. I. Wassenaar. 2005. Stable isotopes provide evidence for poor northern pintail production on the Canadian Prairies. Journal of Wildlife Management 69 (1): 101-109.

Malecki, R., S. Sheaffer, D. Howell, and T. Strange. 2006. Northern pintails in eastern North America: Their seasonal distribution, movement patterns, and habitat affiliations. Atlantic Flyway Council Technical Section Final Report. 67 pp.

Moon, J.A. and D.A. Haukos. 2006. Survival of female northern pintails wintering in the Playa Lakes region of northwestern Texas. Journal of Wildlife Management 70 (3): 777-783.

Moon, J. A., D. A. Haukos, L. M. Smith. 2007. Declining body condition of northern pintails wintering in the Playa Lakes region. Journal of Wildlife Management 71 (1): 218–221.

Peterson, A.T., B.W. Benz, and M. Papes. 2007. Highly pathogenic H5N1 avian influenza: entry pathways into North America via bird migration. PLos ONE 2(2): e261. doi:10.1371/journal.pone.0000261

Richkus, K. D., F. C. Rohwer, M. J. Chamberlain. 2005. Survival and cause-specific mortality of female northern pintails in southern Saskatchewan. Journal of Wildlife Management 69 (2): 574–581.

Upcoming publications:

Fleskes J. P., J. L. Yee, G. S. Yarris, M. R. Miller, and M. L. Casazza. In Press. Pintail and mallard survival in California relative to habitat, abundance, and hunting. Journal of Wildlife Management.

Fleskes, J. P., and J. L. Yee. In Press. Waterfowl distribution and abundance during spring migration in southern Oregon and northeastern California. Western North American Naturalist.

Action Group Funding Under Consideration

North American Waterfowl Management Plan's (NAWMP) National Science Support Team (NSST) is considering a recommendation for the structure and funding of PAG, the proposed Scaup Action Team, and any future similar groups. NSST recognizes the considerable progress that PAG has made towards accomplishing its mission despite being a completely volunteer organization without funding but appreciates that additional support may be needed for action groups to fully provide all of the services they strive to provide to NAWMP. The recommendation under consideration at NSST's June meeting includes a proposal to establish a funded Action Group Coordinator position and describes possible mechanisms to pursue funding for priority conservation and research and monitoring activities. The PAG chair is a voting member of NSST, has represented PAG at earlier NSST meetings, and will participate in the June meeting.

Announcements

- The **Annual PAG meeting** will be 8:30 am – 5 pm on Saturday **September** 22, 2007 in the Mesquite Room of Hotel Arizona in Tucson in association with The Wildlife Society Annual Conference. For updates please check the PAG website http://www.siu.edu/~wildlife/PAG/Index.asp or the associated meeting schedule on the TWS website.

- The PAG chair and co-chair will lead a small working group to update and expand on priority research and conservation needs identified in the PAG prospectus or other documents. The resulting document will be discussed at our September 22 Annual Meeting in Tucson.

- Contact Joe Fleskes or Jim Devries with discussion items for our Annual meeting or if you'd like to update the group on pintail-related items.