



Pintail
Action
Group

Pintail Action Group Newsletter

June 15, 2008

Spring Habitat Conditions

Overall spring habitat conditions in Alberta are poor to fair in the prairies grading to good in the northeastern parklands and Peace region. In Saskatchewan, low runoff resulted in poor to fair wetland conditions on the prairies but conditions are good through much of the parklands. The pothole region of southwestern Manitoba was poor in the extreme southwest but improves to good at its northern extent. Average to above average precipitation has created generally good wetland conditions across the eastern Dakotas, Minnesota, and northeastern Iowa. Conversely, drier weather has prevailed in the central and western Dakotas and eastern Montana, where wetland conditions are generally fair to poor. Given relatively dry conditions in much of the core southern breeding range, above average overflight of pintails is predicted. Habitat conditions throughout the Canadian boreal forest and Hudson Bay Lowlands are generally good. In Alaska, the outlook for waterfowl production is good along the coast and fair in the interior (source: Ducks Unlimited spring habitat report)



Integrating Habitat and Harvest Management for Northern Pintails

In September 2007, the PAG formed a Task Team to review work since the 2001 Sacramento Workshop with the intent of updating hypotheses explaining the pintail decline. As a result of that meeting, the Team recommended that a necessary management tool in helping to explore various influences on population trajectory would be a continental demographic model. In concept, this model would link models of breeding and wintering habitat influence on vital rates (recruitment, survival) together with models used in the Adaptive Harvest Management process. This is a timely initiative since recent reviews of waterfowl management in North America have stressed the urgent need to develop a unified approach to decision-making for both habitat conservation and harvest management programs. We believe a continental pintail demographic model could help achieve the unity sought between habitat and harvest management.

A proposal to begin development of this modeling framework was submitted by PAG to the NAWMP Science Support Team (NSST) in January. With support from USFWS, this effort took a giant step forward in early May 2008 when the PAG convened a workshop in Minneapolis where

population and habitat modelers defined the structure of the model and identified key information needs and steps required to construct the model. Our goal is not to develop a complex, all-encompassing model but rather to capture the essential dynamics of the population as simply as possible while accounting for habitat conservation efforts and harvest management decisions. Initially, this model is envisioned to simultaneously estimate abundance, survival, reproduction, and movement associated with two core breeding areas (PPR, Alaska) and two core wintering areas (California, Gulf Coast), all of which can be linked to environmental conditions, population density, and location-specific management actions.

One of the products of the workshop was a USGS Science Support Program proposal seeking support for initial modeling work in FY09. A work plan is also in development which will outline the objectives, timelines and lead investigators for various components of this work. The work plan will form the foundation for proposals for funding and institutional in-kind support as needed. For more information, contact Jim Devries (j_devries@ducks.ca)



Pintail Nesting Ecology Study Wraps Up

The third and final year of Ducks Unlimited Canada's (DUC) Pintail Nesting Ecology Study was completed in 2007...at least the field component! Study sites were located in the prairie ecoregion of Saskatchewan and Alberta in areas of expected high pintail breeding density. This study was designed to gain understanding of pintail nest site selection and nesting survival in landscapes ranging from cropland to grassland-dominated. Further, the study was designed to test the response of pintails to habitat interventions promoted under DUC's *Pintail Initiative* (i.e., winter cereals, tame pasture, hayland). Over the course of this study, we nest searched approximately 20,000 acres of spring and fall-seeded cropland, fallow cropland, tame and native grasslands, and haylands. All habitats were searched 4 times between late April and early July.

Over the three years, we found 2,013 duck nests of which 398 were pintail. As expected, pintails used all cultivated lands (cropped and fallow) much more than other species. For example, 11% of pintail nests were in spring-seeded cropland versus 0–5% for other dabbling duck species. Similarly, 7% of pintail nests were in summerfallow versus 0–2% for other dabblers. Approximately 24% of pintail nests were in winter wheat versus 14–20% for other species.

Pintail nest survival over all sites and years was ~12% (95% CI: 9–15%). Nest survival was



low in spring-seeded croplands (~2%; 95% CI: 1–8%) and summerfallow (~5%; 95% CI: 1–23%), but much higher in fall-seeded crops (~20%; 95% CI: 13–32%). Nests in seeded grassland pastures survived poorly (~1%; 95% CI: 0–4%) whereas those in native pastures had somewhat higher survival (~9%; 95% CI: 4–19%). Nest survival in haylands was ~15% (95% CI: 9–26%).

Further analysis of landscape composition effects on nest survival and habitat preference will occur over the summer. Updates on this research will be presented at the Pintail Action Group meeting held in conjunction with the NAWMP Science Support Team (NSST) meeting this fall (see meeting info at the bottom of this newsletter). For further information, contact Jim Devries (j_devries@ducks.ca) or Karla Guyn (k_guyn@ducks.ca).

Pintail Banding Analysis Update

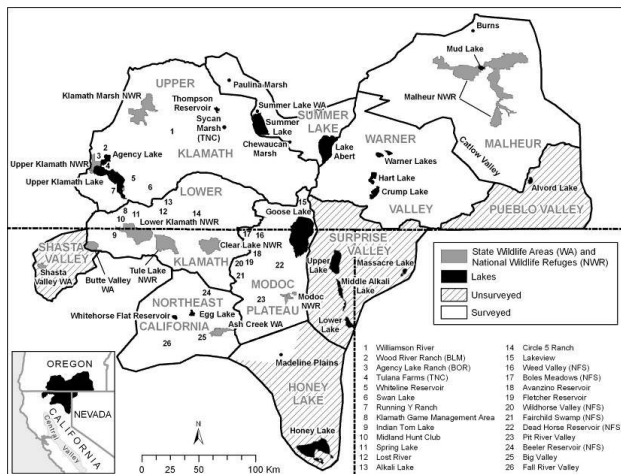
Mindy Rice (Texas Tech Univ.), David Haukos (USFWS), and Jim Dubovsky (USFWS) have completed a comprehensive analysis of pintail banding and recovery data (1970–2003) to inform banding strategy and future banding programs. Models examined have updated annual survival and recovery rate estimates and explored differences among various geographic regions and temporal periods based on historical harvest regulation packages. The survival and recovery model with greatest support included an age by sex by region (western, central, and eastern) interaction with additive time (year), age by time, and region by time terms. Adult survival seems to be increasing over time; whereas, juvenile survival estimates appear to be declining. Survival is remaining steady in western and eastern regions, while increasing slightly in the central region. Changing harvest regulations (bag size, season length) did not appear to greatly influence estimates of annual survival. These analyses will contribute to development of adaptive management models for the pintail population. Following internal review, the final report will be available at the upcoming fall Pintail Action Group meeting.



Pintail Research in the SONEC Region

Biologists with the USGS-Western Ecological Research Center recently completed the first field season of a project to determine spring food habits of northern pintails and other waterfowl migrating through southern Oregon-northeastern California (SONEC) and measure densities of important food items in spring-flooded pasture and hay. Lab work is underway to process the samples. Information from this study is needed to guide habitat conservation programs of the Intermountain West Joint Venture (IWJV). Funding for the project is provided by USGS, USFWS, IWJV, and Ducks Unlimited, Inc., with Oregon Department of Fish and Wildlife, California Department of Fish and Game, and numerous land owners cooperating.

female pintails from the Central Valley of California using SONEC for up to 2-3 months on their way to Alaska and Prairie-Parkland breeding areas (Miller et al. 2000). Northern pintails are the single most common waterfowl species using SONEC, comprising about 25% of all waterfowl use days during spring (Fleskes and Yee 2007).



Flooded pasture and hay fields are important habitats in SONEC during spring, especially for pintails. Radio-tracking of pintails during spring in SONEC showed that about 25% of all locations overall, and 50-75% of locations in 5 of 7 SONEC sub-regions during one or both of the years studied, were in flooded pasture-hay (Fleskes and Battaglia 2004). These habitats were heavily used by pintails during both day and night, indicating they are used for both loafing and feeding. However, no studies of waterbird food habits in spring-flooded pasture and hayfields in the region have been conducted. Data from this study, identifying important spring foods and their abundance, will be combined with information from the telemetry study that identified important habitat types, surveys that quantified use patterns, and an analysis of satellite data that will map habitat distribution and dynamics (Fleskes, unpublished data) to guide habitat conservation in the SONEC region. Contact Joe Fleskes (joe_fleskes@usgs.gov) for more information.

The SONEC region of the Intermountain West is a critically important spring-staging area for northern pintails and other Pacific Flyway waterfowl. Based on comparisons of peak abundance in SONEC during spring and midwinter abundance in California, at least half of all waterfowl that winter in California use SONEC habitats during spring (Fleskes and Yee 2007). The percentage of wintering pintails using SONEC during spring is even greater, with about 85% of the





Pintails and Avian Influenza

For a progress report on the collaborative Japan-North American avian influenza study using satellite transmitters on northern pintails to examine movement between Asia and North America, go to:

http://alaska.usgs.gov/science/biology/avian_influenza/pdfs/Assessment_of_virus_movement_progress_report_2008.pdf

Recent Publications

- Clark, R.G., K.A. Hobson, and L.I. Wassenaar. 2006.** Geographic variation in the isotopic (δD , $\delta^{13}C$, $\delta^{15}N$, $\delta^{34}S$) composition of feathers and claws from lesser scaup and northern pintail: implications for studies of migratory connectivity. *Canadian Journal of Zoology* 84(10): 1395–1401
- Fleskes, J. P., J. L. Yee, G. S. Yarris, M. R. Miller, and M. L. Casazza. 2007.** Pintail and mallard survival in California relative to habitat, abundance, and hunting. *Journal of Wildlife Management* 71(7): 2238-2248.
- Fleskes, J. P., and J. L. Yee. 2007.** Waterfowl distribution and abundance during spring migration in southern Oregon and northeastern California. *Western North American Naturalist* 67(3): 409-428.
- Jahangir, A., Y. Watanabe, O. Chinen, S. Yamazaki, K. Sakai, M. Okamura, M. Nakamura and K. Takehara. 2008.** Surveillance of Avian Influenza Viruses in Northern Pintails (*Anas acuta*) in Tohoku District, Japan. *Avian Diseases* 52(1): 49-53.
- Lee, C. K., J. P. Taylor, D. A. Haukos, and M. C. Andersen. 2007.** Winter survival of northern pintails in the middle Rio Grande Valley, New Mexico. *Western North American Naturalist* 67:79-85.
- 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.
- Takazawa, Y., M. Yoshikane and Y. Shibata. 2007.** Toxaphene and other organochlorine compounds in pintails (*Anas acuta*) from Saitama Kamoba in Japan during Oct 2000–Feb 2002. *Bulletin of Environmental Contamination and Toxicology* 79(1): 87-90.
- Winker, K., K. G. McCracken, D. D. Gibson, C. L. Pruett, R. Meier, F. Huettmann, M. Wege, I. V. Kulikova, Y. N. Zhuravlev, M. L. Perdue, E. Spackman, D. L. Suarez, and D. E. Swayne. 2007.** Movements of birds and Avian Influenza from Asia into Alaska. *Emerging Infectious Diseases* 13:547-552
http://mercury.bio.uaf.edu/~kevin_mccracken/reprints/emerg-infect-dis-13-547.pdf
- Yerkes, T., K. A. Hobson, L. I. Wassenaar, R. Macleod, and J. M. Coluccy. 2008.** Stable isotopes (δD , $\delta^{13}C$, $\delta^{15}N$) reveal associations among geographic location and condition of Alaskan northern pintails. *Journal of Wildlife Management* 72:715-725.

Announcements

- The **Annual PAG meeting** will be held on **October 14th**, 2008 in conjunction with the fall meeting of the NAWMP Science Support Team (NSST). Exact time and place will be circulated when finalized. For updates please check the PAG website <http://www.siu.edu/~wildlife/PAG/Index.asp>
 - An update of pintail priority research and conservation needs is currently underway and will be available for review at the fall meeting.
 - Please contact PAG Chair Jim Devries (j_devries@ducks.ca) or PAG Co-Chair David Haukos (David_Haukos@fws.gov) with discussion items for our annual meeting or if you have information items you would like to circulate to the Group.
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