



**Pintail Action Group**  
**Best Western Ramkota Hotel**  
**Bismarck, North Dakota**  
**Aug 22, 2006, 8:30 AM – 5:00 P.M.**

**In Attendance**

Bob Clark (EC), Jane Austin (USGS), Dale Caswell (CWS), John Eadie (UC Davis), Rich Wright (CWA), Mike Runge (USGS), Dave Haukos (USFWS), Jena Moon (USFWS), Mindy Rice (Texas Tech), Mike Eicholtz (SIU), David Howerter (DUC), Scott Boomer (USFWS), Don Kraege (Washington DFW), Shaun Oldenburger (UC Davis), Dan Buffet (DUC), Chris Nicolai (UNV Reno), Jim Sedinger (UNV Reno), Bobby Cox (USGS), Ray Alisaukas (CWS), Kiel Drake, Jim Ringelman (DU), Johann Walker (DU), Bruce Barbour (USFWS), Joe Fleskes (USGS, PAG-Chair), Jim Devries (DUC, PAG-Vice Chair), Karla Guyn (DUC-Minutes),

**Meeting Objectives**

- review actions from past meetings
- review short term action items
- review on going research
- discuss planned research
- set meeting dates

**Agenda Adjustment**

- It was suggested that the group have a frank discussion about the progress the group is making. Are there things that could be done differently to make things more efficient? Provide insights and guidance on how we move forward. This discussion would help this group and the scaup action group.

***Action: This will be discussed at the end of this session***

**Action Items (\*) and Task Team Updates (Status, Progress, Challenges, Revisions)**

- \*Pintail Workshop: Workshop will be held Friday evening. Devries, Haukos and Fleskes will be giving overviews on breeding, migration and wintering ecology, followed by open discussion.
- Website Status - \*Add Links to PAG Website

New information is needed; members should forward material to Mike for addition. Manuscripts could be added or linked to. Progress reports could also be added....

- **Action: Mike will add a counter to the website.**
  - **Action: Send manuscripts (pdf) to Mike with a cc to Joe. Authors will contact editors from journals for permission to post or link to personal website.**
  - **Action: Add minutes to website once approved.**
  - **Action: Add an ongoing projects link. Researchers to submit progress reports for posting.**
  - **Action: PPT from workshop could be added in pdf format.**
  - **Action: Members need to check that their respective agencies have links to the PAG website.**
- **Communications/Articles - \*Conservator & National Wildlife articles**  
Paul Flint contacted Joe to increase banding relative to avian influenza sampling. Joe sent a letter to Alaska banders to encourage them to band more than their quota of pintails if possible. One response was received; they are going to try and band more pintails. Karla reviewed several newspaper/magazine articles that have appeared in Canadian publications re: pintails.

**Action: Karla to email PDF of Alberta Outdoorsman article to Mike**

**Action: Joe to contact CWA for possible article in their magazine**

### **Task Team Updates**

- **Demographic Models - \*Linking Nest Survival to Pop & Habitat (Devries)**

Current continental models ignore much of the landscape vital rate interactions observed in field studies. Continental population modeling rarely uses this information – typically the number of ponds counted in prairie Canada or latitude of the population is utilized. This discussion was primarily conceptual in nature. Concept: try to model the interaction of pintail populations and the habitats they settle in across the PPR in a way that is scalable to the continental level. This approach accounts for annual spatial distribution of the population and underlying habitat influences on productivity. In both US and Canada we have thunderstorm maps of where ducks tend to settle. By using the annual pond data the thunderstorm map can be adjusted to show annual distribution. In the current AHM model Canadian May ponds are the primary variable utilized. However, the PHJV Assessment nest success model includes the amount of grass in the landscape and pond index (locally driven – measure of local wetlands). Given the information we have now we can get an estimate of the % grass across the PPR. A percent nest success surface can also be generated. Therefore, an estimate of duck productivity per year can be generated for each area. Jim wanted to introduce the idea of AHM, landscape change, and annual productivity. This approach could be used retrospectively to do a crude validation.

This is one way of introducing density dependence, but we typically don't pick up the density signal at local scales. This approach is related to the hot spot idea. For pintails: might want to include pond class. Sheet water is not included but it is counted on the ground transects.

- Brood Pair Analysis - \*Examination of July Brood Survey (Trost/Cox/Caswell)

Caswell: Production surveys were typically done in the past by flying transects. Ground surveys were not done so there was no correction factor, and broods were not split out by species. Due to budget cuts these surveys are not flown any more. CWS was interested in quantifying success of NAWMP – primarily broad productivity index. So they decided to try and run some brood surveys. In 2005 they sampled 23 transects in June, July and August. They are passive surveys. They also did some “brood beat outs”. Double counts were done on aerial surveys. In 2005, there was excellent production in Missouri Coteau and most broods were counted during August. 2006 production surveys were underway at the time of the meeting but early results indicate even more broods in 2006 than 2005.

- Uncertainty in Nest Success (Ringelman/Flint)  
No new update.
- May Survey Bias (Runge/Miller)

Fleskes: Miller et al. team is continuing work on the satellite telemetry project paper reporting how pintails migrate relative to the May survey.

- Pintail Harvest Strategy/AHM (Boomer/Runge)

Discussion about evolution of interim pintail harvest strategy. Interim Strategy: done in 1997. Conditions for closure 1.5 million birds. Max bag 3 birds. 6% population growth implicit in strategy. Model was telling us one thing, but triggers were not in sync. In 2002, a subtle departure. Bpop 1.8 so prescription would be 1, but projected 2003 Bpop was 1.23 (below threshold). Solution was season within a season. In 2003, another departure. Projected Bpop was decrease of 6%. 2004 strategy was amended to include when season within a season would be used. This resulted in a modified harvest strategy. In 2006, more changes. Overflight bias correction; updated recruitment model (density dependent) and updated harvest model. Concerns: currently is assuming completely additive harvest. Harvest and BPop are measured on the same scale. Absolute harvest does not depend on population size. Harvest strategy is prescribed, not derived. Any derivation of optimal strategy objectives must be specified and all have tradeoffs. Max harvest- Pop is held at a lower level, harvest not distributed evenly, and could have high freq of closed seasons. Harvest on the right shoulder- Hold pop a bit higher, less risk and volatility, forego some potential harvest, and might still need to use partial season. Max harvest with NA

constraints- hold pop higher, more stable regs, fewer closed, but will forego harvest. Min closed season – fewer closed or partial, forego liberal season. MSY strategy gives lots of L3's but also lots of closed seasons. There is a lot more work to be done on this and the MSY objective needs to be examined closer.

What is needed to do this under a compensatory model? The survival/banding data are not sufficient at this point to support this model. Compensatory model would likely result in the development of competing models. How do you reconcile whether the NAWMP goal can actually be reached – this would impact this model. The NAWMP goal is in there because this keeps coming up in the objective setting discussion. Bias correction: empirical correction. They chose 1969 as base year. There is evidence that pintails are settling farther north. The inclusion of this term did improve the model. Not trying to infer a causal relationship.

- Banding Program (Trost/Caswell/Haukos)

Pintail banding is basically a function of money and manpower. 2005: 4 areas were targeted for pintail banding (2456 AHY and 1312 HY banded). This program is continuing in 2006. Also banding earlier in MB and SK. Banding areas are mainly pintail molting areas. Will this become operational? This will depend on the partners. At least do it long enough to validate the assumption in the AHM.

Question: Andy Royal: mark/resighting. It was an effort to estimate recruitment using ground surveys and enumerate species and ponds. Get a resighting probability. This study has not been written up.

- Pintail Band-Recovery Data Assessment (Rice/Haukos/Dubovsky Mindy Rice)

Assessment of continental band recovery data. Started on this project at the beginning of this year. Objectives: determine annual survival and recovery, how that varies spatially and temporally and recommendations for a operational banding program. Banding data from USGS. 390,141 birds banded. Recovered 27,000. Identified regions with dissimilar recovery distributions. 12 and 6 group analysis could not be used because model did not converge. 5 and 3 region groups were used. Obtained hunting periods based on liberal, moderate and restrictive (not based on AHM definitions). Main objective to look at influence of hunting period and region on survival. For females, survival for adults and immature was not different. 5 region analysis: Top model was fully interactive for survival and recovery. No difference between region for adult males but survival of adult females in eastern region was much lower. West central had a high survival for immature female. Immature Male – east still lowest, Hunting period: no diff for adult females, no diff immature females; males restrictive

seasons higher survival. 3 region: fully interactive best model. Region all age sex differences. East was once again lower. Males all regions different but east still lowest. Hunting period ; no diff for female, but males the restrictive still had higher survival. Conclusions for 5 region: adult males not effected but eastern was lower. Hunting period no effect on females but increased survival for males. 3 region: eastern lower for all age sex classes. No effect for females, restrictive had high survival rates for males. Survival appears to be constant for females across hunting periods. Next step planned is to include winter banding data to see if improves precision. Also want to see if 1-800 bands influences model. Develop an operational banding program.

Comments: Might want to include season length in the model as a continuous variable. Did you try to do any goodness of fit testing?

### **Review of Current Pintail Research and Management Actions**

- Pintail Nest Success on the Prairies (Stephens/Walker)

2000 – 2005 data. On going study of nest survival of ducks, shorebirds and raptors in the Missouri Coteau. Looked at survival on 50 4 mi<sup>2</sup> study sites. Predictor variables (just for pintails) - date, age and year in all models also included habitat classes and veg measurements, landscape level habitat characteristics. Used logit – linear models corrected for exposure. Nest sample: 747 pintail nests (7%) of all duck nests. 90% of failed nests due to predators. 75 – 200 nests /year. Most nests in grassland and planted cover (don't search cropland). Model selection: Landscape top model. Habitat and landscape second model and in the running. Best approximately model: % grass , wetland area, wetland count (negative at township scale); road length (for edge) positively related. Annual variation in DSR – not a lot of variation (11 – 33% ns). Relationship between nest survival of pintails and predictors were unsurprising given current knowledge. Pintail are not experiencing radically different NS than other species. Locating and monitoring large samples of pintail nests across the PPR would be challenging. Current conservation strategies in this region are probably consistent with pintail conservation.

Comments: If you used cropland in the sample would it break out differently? Discussion about species difference or the lack there of.

- Pintail Info From the SpATS Study (Howerter)

Objectives: 1) nest density and success versus habitat type, 2) Nest success and amount of perennial cover, 3) Nest success versus pair density, 4) Annual variability in nest success, 5) Updates to productivity models. PPR separated into 4 general areas. Each cluster has 5 different sites. Within each site (16 mi<sup>2</sup>) nest searching done on 4 main landuse types. 108 individual sites studied so far

30 sites visited twice. Not many pintail nests except in southern prairies. Model selection: all species, candidate variables (study area, init date, biome, veg density, perennial cover (herb cover), pair density, species, couple of simple interactions. Results. Area, nest age, biome and veg density. Competitors: included herbaceous and perennial cover. Parklands: slight positive relationship with herb cover. Prairie – slight positive. Prairie nest success is much higher than parkland. NOPI model: area, age and biome (only 300 nests).

Note: cropland was not searched extensively

- Pintail Nesting Ecology in S. Alberta (Kowalchuk/Clark)

Milk River Ridge is the study area. Objectives: contrast 3 landscape types relative to pintail pair density, timing of nesting, nest success and female quality. Landscape types: plots on grassland sites (5 km from ecotone), and out onto grassland. Main questions: do pintails distribute themselves at similar densities across all 3 landscapes, do pintail have higher nest success in large grassland areas, do grassland areas attract higher quality of female pintails. Pair counts: count ducks for all spp by social grouping. 3 nest searches from mid to late April. capture pintails/shovelers. Mayfield: 2004 – 2006: pair density vs NS - need to examine site by site. Nest success all ducks – wide variability. 2006 tended to have higher NS due to it being wetter. Pintail nest success: Ag sites tend to be low, eco tone mid range, grassland higher. Field work is now done –analysis will now begin.

- Evaluation of DUC Pintail Mgmt Program (Devries)

Objective to determine pintail nest habitat selection and habitat specific nest success in landscapes ranging from crop dominated to grassland dominated (both native and tame). Winter cereals were planted on 4 of 6 sites each year. Study sites are chosen the year previously, based on wetland conditions. 2 quarters of each land use type were randomly chosen for searching. Also did pair counts, veg measurements. 2006 Preliminary data: 1042 total nests, 185 pintail nests. Need to search cropland habitat or a significant portion of pintail nests will be missed. Habitat use versus availability: Use hayland similar, native grass similar, tame less, fall seeded crop use in proportion to availability, spring seeded – somewhat less, but more than other ducks. Summer fallow used in proportion to availability, other ducks don't use it. Wetland veg don't really use it – other ducks do. Nest Success: 2006 winter wheat was the highest again > 20%. Species: overall pintails had somewhat lower Nest Success. Low grass cover: one site had high Nest Success. Somewhat higher Nest Success in high perennial cover. Next year site will be in Alberta near Bassano.

- Fraser River Delta (Buffet)

Update on this project – been going on for the last 3 years. Trying to improve understanding of waterfowl foraging both temporal, spatial scale and energy abundance versus availability. Being used to refine Fraser River plan. Activities include habitat sampling, radio telemetry and surveys. Looking at two scales: Fraser Delta and Puget Sound. Habitat sampling: farmland and intertidal. Radio tagged NOP and AMWI, ground telemetry and waterfowl ground surveys. Aerial telemetry at the Puget scale. Captured 172 pintails. 75% of birds classified as wintering (present Jan or Feb). Bird movement: birds move around, most gone by April. Fraser Delta energy abundance: eelgrass is 50% of food abundance, remnant crop (potato) hit this first and exhaust this and then move on. Ground telemetry: pintail use inter-tidal except at high tide.

100k birds typically winter here. Population has been rising in recent years. Landscape is changing with increased berry crops and nursery crops. 80% of inter-tidal habitat is under wildlife management. Focus is now primarily on upland – goal 1000 acres of cropland.

- Update on Ag Policy Initiatives in Canada (Guyn/Ringleman)

Guyn: Review of the Agricultural Policy Framework (APF) (analogous to Canada's farm bill). Two main programs of interest are Environmental Farm Plans (where best management practices are cost shared with the government) and GreenCover Canada which is a perennial cover conversion program. Few biodiversity (wildlife) BMP's have been applied for by farmers. DUC has been successful in having a wetland restoration BMP added to the approved BMP list. More than 240,000 acres have been seeded under GreenCover to date. Agriculture Canada and DUC are primary partners of the "Watershed evaluation of BMP's" research project. Ecological goods and services (EG&S) is becoming of greater interest to producers and governments. ALUS has begun a pilot project in MB –no contracts have yet been made with producers, but appear to be on target for this year. Issues on the horizon include ethanol, and APF II. The Saskatchewan government is now allowing conservation organizations (including DUC) to purchase land without going through the Farm Ownership board.

Jim Ringelman: US Ag Policy: Some CRP is coming out of enrollment. Producers have been approached for reenrollment. Those in upper 20% got reenrollment, others extension. High fuel costs has encouraged people to reenroll but think they will lose 2- 3 million acres of CRP. Ethanol plants are springing up. Bio-diesel as well. Likely push CRP towards this. New varieties of corn are being developed that push it north. Some of this may affect CRP. Cellulosic ethanol has to operate on homogenous feedstock. There are new varieties of switch grass with increased growth. Working with company in California on new varieties. Energy title in next farm bill. Ethanol should be seen as a commodity not a conservation off shoot. Loss of prairie is continuing in South Dakota. 2% /year. Want to disallow commodity payments on any newly broken prairie - Sod Saver provision.

- \*NAWMP Assessment of PAG (Fleskes/Eadie)

PAG was included in the NAWMP Assessment process. Feedback was not evaluated per se from any JV. Initial impression: JV's felt some level of trepidation with the assessment but the assessment process was not intended to be a score card. As a secondary task the team will be providing feedback to JV's – not planned for PAG. There is a section in the report on species JV's. They are sound technically, weakness between population vital rates and landscapes. Lack of integration between species JV's and/or key JV's. For PAG, Mexico is likely a key one.

- **Open Discussion about PAG Progress (All)**

*(note: above discussion flowed into this item which was identified as an action earlier in the meeting)*

Need to integrate harvest and habitat modeling. This group might be a good place to start integrating this. Still working on harvest model, still working on vital rate models etc. Perhaps a subgroup should be charged with this to assess its potential. Need to prioritize action items and what needs to be done and what resources will be needed. Evaluation is not a luxury, how will this be funded? Various ideas have been proposed. What are PAG priorities and what are the key resources that would be needed.

Communication strategy: external (public) and internal (who are the key players, how do we leverage \$\$). Need to convey what we have accomplished.

Which other JV's should we link up with? Do we need a coordinator? These ideas integrate with the assessment team and the AHM joint task group.

Need to review the past action items and where we stand on this. There may be a directed effort to have a representative from JV's on this group.

Probably time to “re” update Flyways on our action. What is our goal – do we need to start approaching them in a supportive role. Need to approach them with a list of priorities. Our 2001 workshop report is essentially our strategic plan – it may be time to revise that. Is a small working group needed to review the priorities and set a course forward? We should articulate resource needs, and develop a communication strategy. Identify key operational programs and integrate harvest and habitat components. Develop supporting document of successes, and what could we do with more resources.

Perhaps we need to have a 1- or 2- page list of research priorities that can be used by others to help direct funds towards that.

AM loop of our group at the workshop would be useful.



Decision tree framework: what have we learned, what we do we currently think, what hypothesis is current. This provides a structure for us to do that. We may be able to start this process at the workshop meeting.

Need to communicate better with Flyways and JV's. Need to have someone go to each meeting and convey our message. New strategic plan – with new priority list. Could also ask for formal approval from Flyway – Goal is to have draft at Feb and final in July.

- **Action:** *A workshop to revisit the priorities is likely needed (small group). This does not preclude communication with the flyways – here is what we have done and here is where we are going.*
- **Action:** *Joe will contact first person on the short term items to write a short summary of the issue, what has been accomplished, what is needed and up to 10 PPT slides. Deadline changed to 15 November to submit to Joe, Karla, JohnE., Bob, Mike Runge. They will review items with deadline for final versions on 1 December. (Write it for inclusion into the strategic document and put it on website. **ALSO NEEDED AS BASIS FOR PRESENTATION CHAIR AT NSST MEETING ON 11 DECEMBER**). 20 minute presentation.*
- **Action:** *DonK will request time at Pacific & DaveH at Central flyway meetings.*
- **Action:** *Identify key JV's not covered by PAG members. Circulate list – get people to fill it in to hit key people on tech committees.*
- **Next Meeting: Function**

Possibilities include:

TWS: Tucson, Arizona - September 22-26, 2007

NAWNRC: Portland, Oregon, March 20-24, 2007

Phoenix, Arizona, March 25-29, 2008

NAWMP: To be determined, 2007

- **Action:** *Proposed workshop next spring in Calgary. If we decide against this we will have our next meeting in Tucson.*