

# Memorandum

*To:* Jennifer Vashon  
*From:* Randy Cross  
*cc:*  
*Date:* March 23, 2010  
*Subject:* 2010 Bear Den Summary

The 2010 den crew included myself, contractors David Pert, Kelly Young and volunteer, Brandon Coones. We began working dens on Jan 6, finishing on March 18.

Snow conditions were poor through most of the winter. Noisy crusts and low snow depths were an issue during most of the season. We had a January thaw on the 24th with rain. The rest of the winter was remarkably mild with very little significant precipitation after that date for the remaining 8 weeks of our work. The final 2 1/2 weeks of cub work included daily highs in the 40's and 50's each day with 2 days near 60 in Spec Pd (16th and 17th).

## Bradford Study Area

In the BSA, we visited 26 dens (7 solo, 10 yearling, and 9 cub dens). We handled 21 yearlings (7F, 14M; avg. wt. = 52.8 lbs) and 23 cubs (10F, 13M) in 9 litters. Last year's cub survival was 81% (17/21). ID 2177 appeared to be pregnant on Jan 6 – we didn't revisit her den later in the year.

Two 3yr-olds (sisters, 2360 and 2361) produced cubs this winter. These are the 4th and 5th litters born to 3 year old mothers in the history of the study (all in Bradford) – the last occurrence was in 07.

In our continuing effort to limit the number of collared bears for budgetary concerns, we withheld collars from 4 yearlings. We placed GPS collars on 3 yearlings and 7 adults. We were unsuccessful in our attempts to capture 2265 and 2712 (both GPS targets). A third GPS target (2281) slipped her collar. Four other adults (1881, 1943, 2225 and 2361) and 2 yearlings (one each from 1881 and 2225) escaped capture.

ID 1237 had 4 yearlings in her den which was a surprise since she had 3 female cubs in her den last winter. It turned out that she had only one of her cubs from last winter and had somehow adopted 3 from some unknown bear (2 males and a female). We finished the season here on ATV's.

## Downeast Study Area

In the DESA, we visited 26 dens (8 solo, 11 yearling, and 7 cub dens). We handled 17 yearlings (5F, 12M) and 13 cubs (5F, 8M). The preponderance of male cubs continues. The average yearling weight of 37.3 lbs is down significantly from last year's average of 56.9 lbs and is lower than each of the other study areas indicating a poor natural food year in this part of the state. Many of the older bears also showed poor weights in this study area including 2578 who weighed 94 lbs last winter as a 3 year old, and

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only 90 lbs this winter, at 4 years old. Cub survival was 62% (16/26), estimated from 13 litters, 6 of which were born to first time mothers.

We captured all 5 bears with working GPS collars in this study area. A total of 8 GPS collars were not transmitting a signal in this study area this winter. We found one (2580) of 2 that stopped transmitting after denning. We were fortunate to find one bear (2205) with a nonfunctioning GPS collar in the den she had used each of the previous 2 years. We will try to recover the remaining 6 GPS collars this spring in a trapping effort.

Two adults (2201 and 2589) and one male yearling (2114's) escaped capture. We chose not to collar 3 female yearlings and collared 2 yearlings in the GPS area. ID 2580 showed evidence of losing her entire litter of cubs in an exposed den.

#### Spectacle Pond Study Area

In the SPSA, we visited 25 dens (11 solo, 6 yearling, and 8 cub dens). We handled 10 yearlings (5F, 5M; avg. wt. = 44.5 lbs.) and 17 cubs (9F, 8M). Cub survival was 63% (10/16). We collared 5 female yearlings including our first 6th generation bear. Her great great great grandmother (ID225) wore a radiocollar here 30 years ago.

We removed the collar from ID 2704 and ID 2400 slipped her collar sometime in the fall. ID 912 had one male cub at 25 years old (oldest female to give birth recorded in Maine).

#### Summary

We visited 78 dens this winter handling a total of 174 bears. Eight adults and 3 yearlings escaped capture. We handled 48 yearlings (17F, 31M) and 55 cubs (26F, 29M; 2.29 cubs/litter). Among just 24 cub litters, we had 2 litters of 4. Prior to last year (3 quads out of 41 litters) we only had 2 litters of 4 out of the previous 103 litters. There were only 3 single cub litters this year – one in each study area.

Last year's cub survival was 68.3% (43/63). Yearling weights averaged 45.6 lbs. in all 3 study areas combined. Last year, a relatively high percentage (42%) of litters were born to mothers who had never had cubs before (6/10 in Spec, 5/13 in Brad and 7/20 in DE). These younger mothers range from 4-6 years old. Their "first litters" tend to be smaller in number and their cubs have a lower chance of survival compared to those born to older, more experienced mothers.

As with the last couple years, we deployed some collars with minimal battery life (less than 12 months left): 14 at Spec and 4 DE. These were deployed with magnets attached loosely in hopes of saving a month or more of battery life while the bears were still in their dens. We visited one cub den outside the study areas in Greenfield with 2 cubs in it that was found by a local rabbit hunter. This prime age mother was handled to assess her potential as a surrogate mother should any orphan cubs need new homes during the den season. No orphans were acquired.

We removed one collar from an adult (in SPSA) and chose not to collar 7 yearlings. During the last 3 winters, we have removed collars from 15 adults and chose not to collar 19 yearlings in an effort to downsize and focus our efforts on a smaller portion of each of the original study areas. We now have 86 active collars (29 Spec Pond, 29 Bradford, and 28 Downeast) including 10 yearlings.

We hosted 238 guests on 29 days including groups from colleges (UM-20, Unity-30), the Kicking Bear youth program – 22, and legislators and guests of the commissioner (3 groups - 91). Media included The Outfitter TV show, a writer from the weekly paper "The Edge", and a freelance photographer (web).