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Dear Small Game Hunting Enthusiast:

Thank you for your participation in our 2008-09 Small Game Hunter Survey. This report summarizes your survey data, and data sent to us by other avid New Hampshire small game hunters. Hopefully, these annual reports will prompt you to continue to participate in our survey for many years to come. The information that you provide us through your participation in our survey provides us with valuable abundance and distribution data on small game species. We urge you to participate again this year.

For the second year, the Small Game Summary Report focuses on New Hampshire's two most sought after small game species, ruffed grouse and woodcock. Of the 200 surveys we received for the 2008-09 Small Game season, 69% of the hunter-hours resulted from ruffed grouse hunting while 14% resulted from woodcock hunting. While all the data provided from your surveys is highly valued and still used by the small game project, we feel it is best to focus on our premier species in this report. I have received many calls voicing approval for the new 2-species format.

This surveying effort has proven to be an efficient means of achieving a good understanding of the distribution, abundance and trends of our small game populations. YOUR participation is key to the success of our small game survey. With a better understanding of these populations, we hope to achieve improved management and to provide enhanced opportunities for public enjoyment of small game species.

Signing up to become a small game survey participant is easy. Simply call the New Hampshire Fish and Game Department Wildlife Division at (603) 271-2461 or e-mail your name and mailing address to wildlife@wildlife.nh.gov. Be sure to mention your interest in the small game survey. Then pass the word on by encouraging your friends to do the same.

For those small game hunters who participated in our 2008-09 survey efforts, you have our sincere thanks and deepest appreciation. We congratulate the winner of this year's Ruger 10/22 and wish him years of safe hunting enjoyment. Without survey participants and the dedicated Fish and Game staff who conduct grouse and woodcock surveys each spring, we would have little to report on.

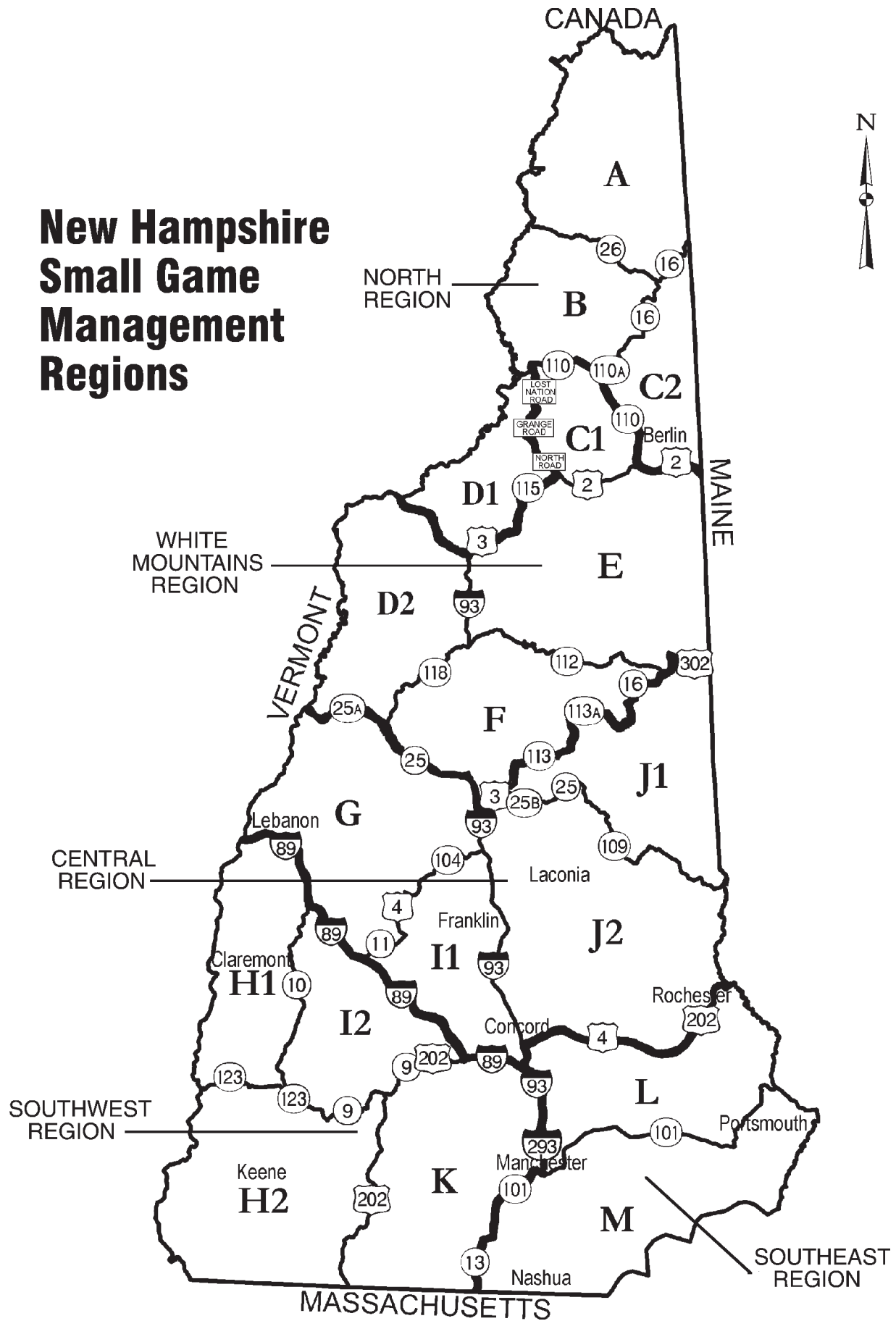
We want your feedback. If you have comments to share or ideas to offer, please feel free to contact me directly at (603) 868-1095. I look forward to hearing from you!

We wish you a safe and enjoyable hunting season in our beautiful state.

Sincerely,

Julie Robinson
Small Game Project Leader

New Hampshire Small Game Management Regions



GENERAL SURVEY INFORMATION

Fig 1. New Hampshire small game hunter effort (2008-09).

Small game hunters who return their annual surveys provide information on small game hunting effort, hunter observation rates and species distribution. A total of 200 hunters responded to our 2008-09 survey, which spans the period 09/1/08-3/31/09. Sturm Ruger Company's generous donation of a firearm as an incentive for survey participation has helped increase survey participation rates. A total of 5,180 hunter-hours were reported on the 2008 small game survey. The graph below depicts the distribution of hunter effort over New Hampshire's 2008-09 small game season. Nearly 70% of the hunting occurred in October. The squirrel season is the only small game season open in September. During the remainder of the season, weekend hunting accounts for the majority of small game hunting in New Hampshire.

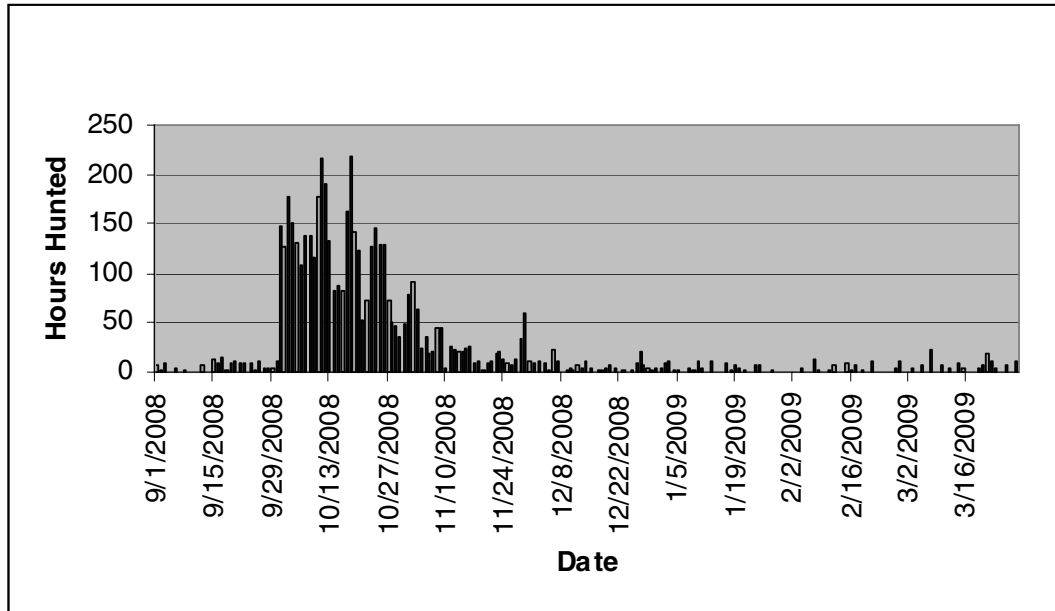
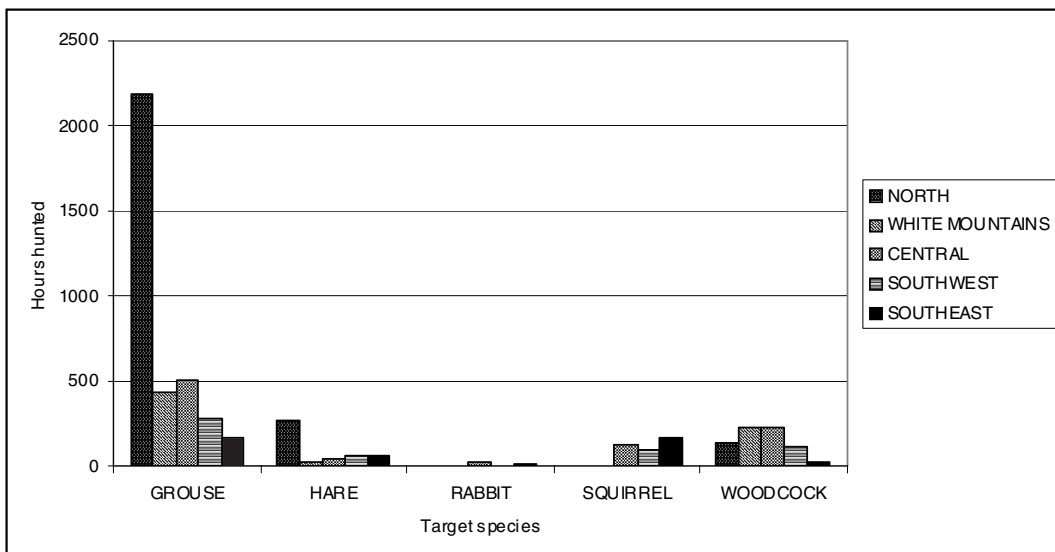


Fig 2. New Hampshire small game hunter effort by species and region (2008-09).

Ruffed grouse were the most sought after small game animal in NH, accounting for 69% of the hunter-hours, while woodcock accounted for 14% of hunter effort. Other species of interest included snowshoe hare, cottontail rabbit and gray squirrel.

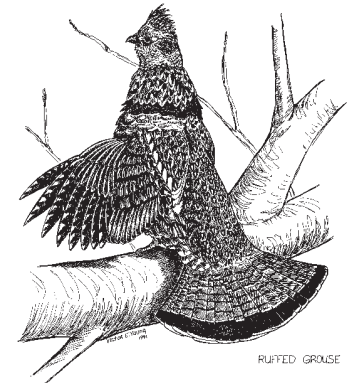


RUFFED GROUSE

(*Bonasa umbellus*)

The northern spring is drummed in by male grouse, proclaiming that winter is over!

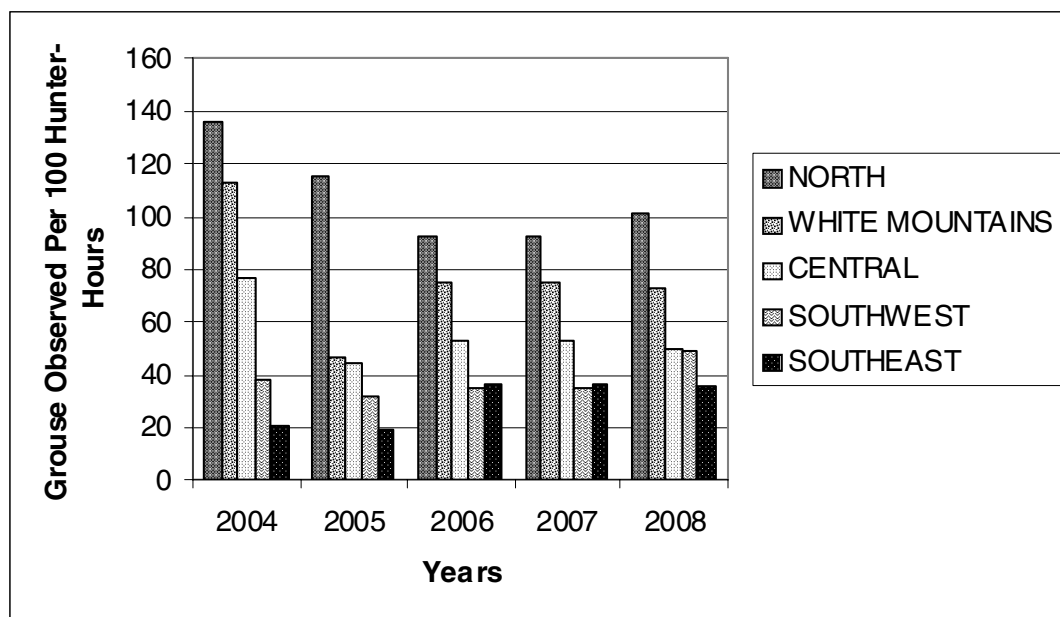
Nesting time is probably the most vulnerable for ruffed grouse. Nesting habitat is usually found in more mature stands of second-growth hardwoods. In the northeast, these woods are usually comprised of trees between 8" and 20" in diameter. The open cover allows the hen to see as she sits on her nest, a small depression made in the leaf litter, usually at the base of a tree or log. Between laying her eggs and incubating them, the female will spend nearly 5 weeks in this vulnerable spot. In late May and early June, the chicks will hatch. Second-growth hardwoods represents good nesting habitat, but is poor brood habitat for just-hatched chicks. The female promptly moves her brood to an area that provides more cover and available food. Forests that have been disturbed allow sunlight to reach the forest floor, producing an abundance of shoots, berries and insects for growing chicks. Moving the chicks from nesting cover to brooding cover is an energy drain; it also increases the rate of predation and exposure to the elements. The less the brood has to travel, the better.



This is why habitat management is so critical. Providing a mosaic of habitats for the different needs of grouse is key to their success. As forests mature, the availability of food becomes scarce; the continued creation of early successional habitat is the best way to grow a healthy grouse population.

Ruffed grouse are the most sought after species of small game in New Hampshire. The majority of ruffed grouse hunting hours during 2008-09 were accrued in the northern portion of the state (Fig 2). Observation rates are expressed in terms of grouse or woodcock seen per 100 hunter hours. This method is viewed as a reliable index to species abundance and allows us to compare species within and between years. Fig 3 shows the variability in grouse numbers from year to year and region to region.

Fig 3. New Hampshire grouse observation rates by region for dog hunters (2004-2008).



RESULTS FROM SPRING 2009 NH GROUSE SURVEY ROUTES

Wildlife biologists and volunteers conduct grouse drumming surveys from mid-April through mid-May to assess regional grouse breeding populations. This survey effort began in 1999 and continues today. Ruffed grouse populations are surveyed by counting the number of male ruffed grouse drumming “events” heard per stop on established routes throughout the state. The following two graphs depict the results from these surveys.

Fig 4. Grouse drumming events from randomly stratified drumming routes in New Hampshire, 2005-2009.

The number of drumming events heard per stop in 2009 increased in every region this year from 2008. Although this is great news, it is important to remember that the weather during the hatch and brooding time has a significant impact on nesting success and chick survival. The 2009 spring came early. At the beginning of the spring, the temperature was above average with very little rain. As the spring progressed, we received steadier rainfall and cooler temperatures. Early reports indicate that we should have average to above average grouse production.

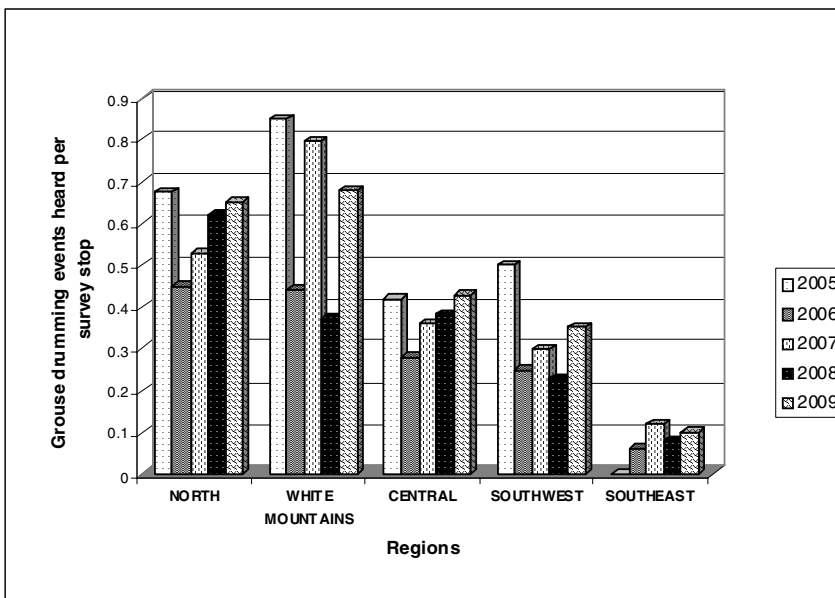
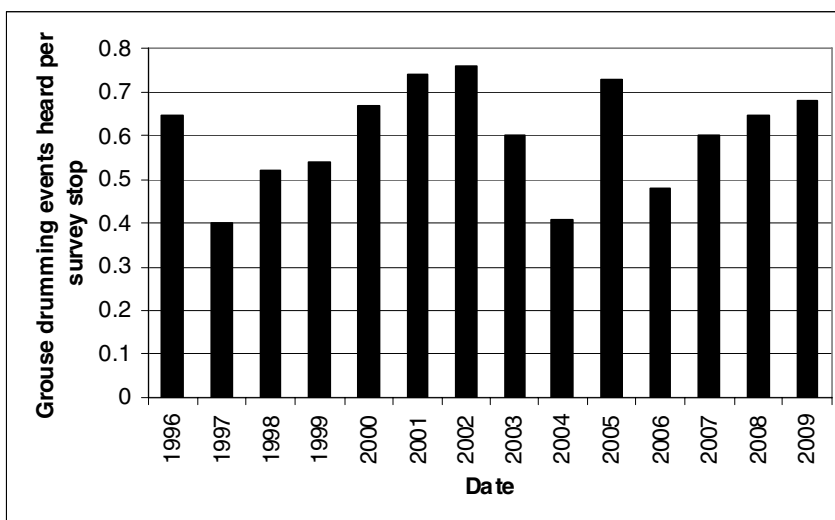


Fig 5. Grouse drumming events from select drumming routes in New Hampshire’s North Country, 1996-2009.

For the past 14 years, we have run 6-8 select drumming survey routes in the North Country. These routes track changes in grouse abundance on our premier grouse range. In 2009, the survey results show an average of 0.68 drumming events per stop compared to 0.65 heard in 2008. The North Country continues to have the best habitat for grouse in the state.



RUFFED GROUSE WING AND TAIL SURVEY IN NORTHERN NEW HAMPSHIRE

New Hampshire Fish and Game and the Ruffed Grouse Society are working together to increase our knowledge of ruffed grouse age and sex composition in our premiere grouse range. A pilot study to collect grouse wings (for aging) and tails (for sexing) was initiated in 2005 and expanded in 2006 to include all towns north of Route 112 (Kancamagus Highway). We intend to continue the study for the next several years in order to generate grouse age and sex data over a multiple-year period.

The 2008 effort was very successful as we received 164 grouse samples. This was a 50% increase over 2007. Of the 164 grouse samples submitted, 162 provided usable data. A brief summary follows:

- 164 samples were submitted; only 2 were not usable.
- 63 hunters participated in 2008 compared to 52 in 2007 (some hunters provided more than one sample).
- Samples were taken from 20 towns; Pittsburg accounted for 41% of the samples.
- Hunters came from 7 other states besides NH, including CT, MA, RI, PA, VT, NY, WV.
- 61 males and 38 females made up the sample.
- 99 adult birds were harvested compared to 63 juveniles.
- Juvenile to adult female ratio was 1.71, lower than desired but a 3-fold improvement over the 2007 ratio of 0.5 juveniles per adult female.
- 125 (77%) of the samples were taken during October.
- 65 (40%) of hunters used a dog, 97 (60%) did not.
- Participants in the wing and tail survey reported an average 7.7 flushes per grouse harvested. The same hunters reported an average of 2.2 woodcock flushes per outing.
- Crops of sampled grouse contained the following foods:
 - Apples and apple leaves
 - Beechnuts
 - Birch catkins and leaves
 - Clover
 - Ferns
 - Berries, including partridge berries and mountain ash
 - Green leaves
 - Raspberry leaves
 - Mushroom caps



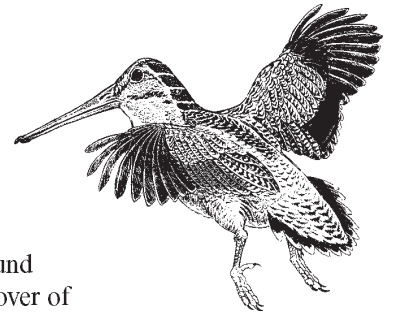
If you hunt ruffed grouse north of Route 112 (Kancamagus Highway), we would appreciate your participation in our Ruffed Grouse Wing and Tail Survey. Watch our website as the 2009 season approaches at www.HuntNH.com for more information on where you can pick up sample packets in the North Country. You can also call Julie Robinson at 603-868-1095 for more details.

As an incentive for hunters to participate in this wing/tail study, the Merrimack Chapter of the Ruffed Grouse Society has generously donated a quality upland game bird gun to be given to a randomly selected participant. The drawing will take place after the close of the 2009 ruffed grouse season.

AMERICAN WOODCOCK

(*Scolopax minor*)

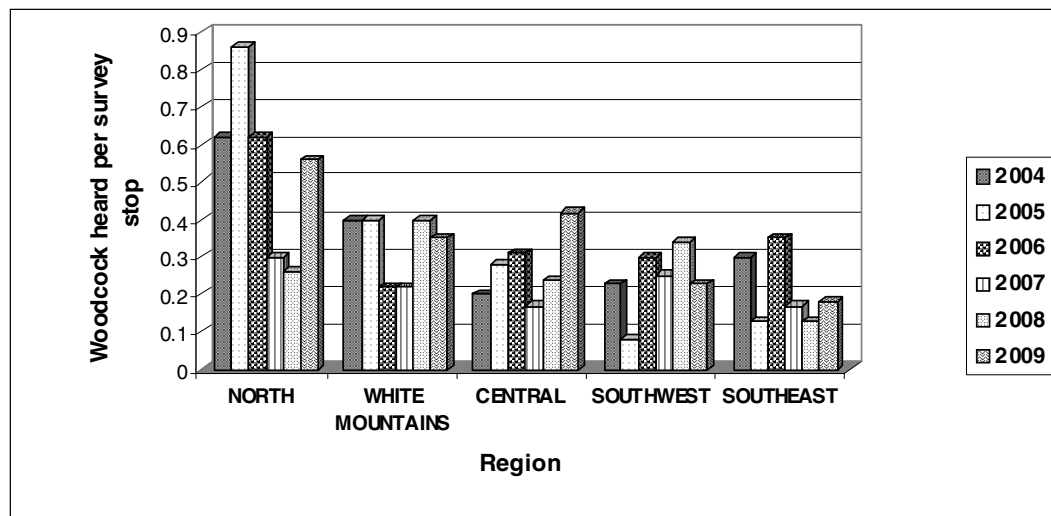
Woodcock coverts are personal treasures to the woodcock hunter. Alder runs are important in certain places and at specific seasons, but woodcock also use a variety of cover types including birch and popple (poplar). Often canopy cover will be more important than a thicket of alders. So don't be afraid to try an area with alder, birch and popple with low brush mixed in. The soil needs to be soft and moist. Woodcock don't mind landing in a thick tangle, but they do prefer sparse vegetation at ground level. They will move about probing for earthworms under the overhead cover of the brush or a thick canopy. Woodcock are one with the forest floor. Except for the white ring around their eyes and on the tip of the underside of their tail feathers, they blend into the leaf litter. The US Fish and Wildlife Service has established singing ground surveys that determine population trends and provide data for setting season regulations. New Hampshire is part of the Eastern Woodcock Management Region, which consists of 13 states and 4 Canadian provinces. New Hampshire's population continues to be stronger than that of many eastern jurisdictions. The graph below depicts data collected from 2009 singing ground surveys.



SPRING 2009 NH WOODCOCK SINGING GROUND SURVEY

Fig 6. Regional results from randomly stratified woodcock singing ground surveys in New Hampshire, 2004-2009.

Singing ground survey routes provide an index to the overall abundance of resident singing males, which is used to make inferences about the breeding population. The number of woodcock heard on routes increased this year in the North, Central and Southeast Regions and decreased slightly in the White Mountains and Southwest Regions. During the nesting and rearing period, weather is the key to chick survival. In 2009, biologists and woodcock enthusiasts alike reported seeing increased broods over years past. NH Fish and Game is working with public and private landowners to increase small game habitat as a means to safeguard the future well-being of this invaluable species.



CONCLUSION

This small game summary helps to create awareness of New Hampshire's small game species. With your help by reporting what you see afield, we are obtaining a better understanding on these valuable resources. The most critical need right now is for more early successional habitat. Currently there is less regenerating habitat across New England than at any time in recorded history. You can help change that! The N.H. Fish and Game Department has a Small Grants Program to help landowners with a minimum of 25 acres restore or enhance habitat for wildlife. Funding of up to \$2,000 per year (no more than \$6,000 over a ten-year period) is available for the pre-approved creation and/or maintenance of wildlife habitat within the property. Examples of projects that may qualify for funding include: brush clearing or mowing to maintain grasslands and shrub-lands; release of old apple trees; and maintenance of woodland openings. In exchange for the grant, landowners agree that their land will remain open for non-motorized public access activities, including hunting. For more information, contact the Wildlife Division at (603) 271-2461, or e-mail wildlife@wildlife.nh.gov.

New Hampshire's small game species are a valuable resource to the citizens of this state and to those that visit here. Survey results, compiled by the Fish and Game Department, are the most efficient means of achieving a good understanding of the distribution, abundance and trends of our small game populations. With greater understanding of these populations, we hope to achieve improved management and to provide enhanced opportunities for public enjoyment of small game species.

YOUR participation in our efforts is key to the success of our small game surveys. Without participation from hunters in the field, our project's success would not be possible. The more surveys we get back, the more meaningful our data will be, so please take the time to participate in our small game survey.

You can sign up to participate in the 2009-2010 survey by contacting us at NH Fish and Game Department, Wildlife Division Small Game Project, 11 Hazen Drive, Concord, NH 03301, or e-mail your name, address and small game interest to wildlife@wildlife.nh.gov, or call us at (603) 271-2462. We will send you a survey card in September. And remember, we will be giving away a gun from Sturm Ruger to a randomly selected participant in the small game survey. In addition, the Merrimack Chapter of the Ruffed Grouse Society has generously donated a quality firearm to be awarded to a randomly selected participant in the wing and tail survey.

Our thanks go out to Sturm Ruger and the Merrimack Chapter of the Ruffed Grouse Society for their generosity in supporting our small game program. We also thank you for your continued participation in our survey efforts and for your interest in our small game project and in our state's invaluable wildlife resources.