The REDHEAD

Red-headed Woodpecker Recovery

Winter 2010 A Special Committee of the Audubon Chapter of Minneapolis Vol. 4 No. 1

Note From the Editor

I again appeal to you to send me your RHWO observations for publication in this newsletter. Especially observations that deal with the next issues' *Feature Topic*.

I hope you find the *Feature Topic* - Does the interaction between RHWO's and "telephone" poles effect the future of RHWO's? informative and interesting. While researching this subject it was very apparent that there was little written on the subject. However I did find quite a bit of information about woodpecker damage to utility poles. I've included the most interesting information in this issue. The wood preservative industry continues to fight any more strict regulation of the industry. I found it interesting that industry technical bulletins contained little excepts like - *"...pressure treated wood utility poles pose no greater risk to the environment than growing the wheat used to bake your next loaf of bread, and present far less personal risk than driving to your local grocery store to purchase that bread."* [1] Yet it clearly kills RHWO and domestic chickens embryos and young and most treated poles are landfilled, not burned for firewood (although some are), after use.

One of our future research areas ought to be a study of utility poles and RHWO use, especially in SW Minnesota.

Jerry Bahls, *Editor*

1. Dr. Kenneth Brooks, North American Wood Pole Coalition Technical Bulletin, *Pressure-Treated Wooden Utility Poles and Our Environment*, 1998b.


Courtesy of Kelly Applegate

A Note from the Chair

Had enough winter? I don't usually get cranky about the weather but this winter is a real test. So to brighten my thoughts, I thought of all that is upcoming in our 4th year of the Red-headed Woodpecker Recovery project.

The Christmas Bird Count at Cedar Creek went very well, but only three RHWO were spotted. The number of birds that over-winter can vary quite a bit. In 2007, there were 29 RHWO present during the Christmas Bird Count. This December's low number is probably the result of cold temperatures and a poor acorn crop. The birds should be returning in May.

Be sure to mark Saturday, May 8th on your 2010 calendar. The entire day will be dedicated to training survey volunteers and then guiding the public on tours of Cedar Creek Ecosystems Science Reserve, near East Bethel. Folks should see (in addition to RHWO) lark sparrows, meadowlarks, sandhill cranes and whatever else is around. We expect the training to start about 9:00 a.m. and the tours to begin around noon. Stay tuned for more details. We will begin our regular surveys of nesting birds in June. This year we want to focus on finding clusters of RHWOs in other parts of Minnesota. We continue to receive tips from birders around the state and will follow-up as best we can. To date we have verified six viable clusters. See <www.redheadrecovery.org> for map and details.

This year we are directing special attention to golf courses which, perhaps surprisingly, have proved a great resource. With 99% of Minnesota's natural oak savanna gone, the birds are doing their best to adapt to savanna-like golf courses that have acorn-bearing oaks present. A number of grants have been submitted that (if they materialize) will enable us to greatly expand our resources. We hope to have an intern involved in color leg-banding birds this year. If so, we will be able to tell if the same couples are using the same nest trees year after year. Our present data suggests a lot of what ornithologists call "nest fidelity." But we won't be sure until we can clearly identify individual birds and their partners.

If you want to become more involved this year, please feel free to call me (612) 374-5581 or
e-mail me at <chetmeyers@visi.com>.

- Chet Meyers

Membership Dues

The Red-headed Woodpecker Recovery (RhWR) receives almost all of its revenue from its membership dues. The RhWR dues are $10/yr. New members will receive a packet, which will include the new RhWR button and sew-on patch as well as the latest *"The REDHEAD"*. Because we have decided to establish our membership year as July 1 - June 30 (all memberships will expire on June 30 of the year the membership was established). Renewals will remain at $5/year, but will expire on June 30 of the period of renewal. Look for future announcements regarding lifetime memberships and renewal dues.

New memberships and renewals can be made by sending your name, address and e-mail address or fill in the membership application form on the last page of this newsletter to the address below. Please make check payable to Audubon Chapter of Minneapolis RhWR.

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Thank you for your continued support.

The following article was abstracted from R.L. Rumsey, "Woodpecker nest failures in creosoted utility poles," *Auk,* vol. 87, no. 2, pp. 367–369, 1970.

RHWO Nest Failures in Creosoted Utility Poles

Red-headed woodpeckers excavate and nest in poles containing oily preservative when there are many suitable trees nearby. The attraction of the poles becomes difficult to understand in that the study reported here showed nests in relatively new poles to be unsuccessful.

During the spring and summer of 1965, 1966, and 1968, 37 nests of Red-headed (RHWO) and 6 of Pileated Woodpeckers (PIWO) in creosoted poles of southern pine were watched periodically in central Louisiana. Heights of nests ranged from 8 to 45 feet above the ground. The poles were from 30 to 55 feet

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(Continued from previous column **Creosote***)*

in length and 17 to 25 inches in circumference at the tops; they had been in service 3 to 4 years. Most were in utility lines along frequently traveled or major highways; some were in more remote areas where transmission lines transected stands of mixed hardwoods. The mats of wood chips on which the birds laid their eggs were rich in creosote.

In conjunction with the field observations, the lethality of creosote on embryos was tested. Six dozen eggs of Domestic Fowl (Gallus domesticus) were incubated in three groups, each of which contained 12 eggs on wood chips and 12 eggs not resting on chips but exposed to fumes from them. Chips in each group represented one of three levels of creosote--0, 6.5, and 10 lbs/ft^3 of wood. Normal treatments of poles are 8 to 12 lbs.

The author recorded a total of 61 clutches in the 43 nests. Each pair of PIWO's made only one nesting attempt, but 41% of the pairs of RHWO laid two clutches and 8% had three. No young hatched in 54% of the clutches, and only 23% of all eggs hatched. Clutches in which no eggs hatched averaged about the same size as those producing some young---4.2 and 4.1 eggs, respectively. Hatching success was slightly greater for RHWO than for PIWO, but nests of PIWO's were too few to allow firm conclusions to be drawn from this difference. Renesting attempts were no more successful than initial attempts. All young of both species succumbed by the 3rd day after hatching. Significantly, nests in nearby dead trees were successful, as many juveniles of both species were seen after each nesting season. No attempt was made to observe a large number of nests in trees, but eight nests in trees near the poles were watched closely in an attempt to take young for an aviary and all produced fledglings. Toxic effects of creosote are probably responsible for the low hatching success and mortality of young birds. Oils similar to those extractable from creosote are known to reduce hatchability of eggs, and toxic emulsions have been sprayed on nests to control "pest" species.[1,2]

The incubator tests clearly showed that creosote is lethal to Domestic Fowl eggs. All 24 eggs in contact with creosoted chips and 22 of the eggs exposed only to fumes from creosote failed to hatch. In contrast 15 of the 24

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Speciman for Mounting

The Red-headed Woodpecker Recovery is still looking for a RHWO specimen that it can mount to use at displays and events. If you should happen upon such a specimen that is in good condition, please place it in a freezer and immediately contact someone who is authorized to have migratory birds in their procession. Then contact us and let us know who has it so we can contact them and arrange to have it mounted.

Red-headed Woodpeckers (RHWO) and Utility Poles

Red-headed woodpeckers (RHWO) like utility poles. Dennis[1] gave a very lengthy discussion as to why they like and use (attack) them, including they may be the only suitable nesting "tree" in the area. Harkness and Walters[2] stated "Most researchers conclude the primary reason for a woodpecker's attraction to a utility pole is that it provides a broad view of the surrounding area, making the pole an excellent vantage point for announcing and defending territories." The RHWO[2] is listed as one of the seven most likely species to cause damage to utility poles. Stemmerman[3] states "In 1981 and 1982, the Central Missouri Electric Cooperative replaced 2,114 poles within their system at an approximate cost of $560,000. Company officials estimated that woodpecker damage was responsible for 50% of their replacement needs." He stated that the RHWO was the most likely one doing the damage. It is estimated that there were about 120 million poles in service in 2005[4]. However, "Woodpecker damage is not uniformly distributed across North America, rather, it is localized and relates to the species and numbers of woodpeckers present in a given location."[2]

In the early years, shooting the offending woodpeckers was the chief recourse. The Migratory Bird Treaty Act (MBTA) stopped the practice. However, in 1983, a permit was obtained to kill 250 RHWO by an electrical cooperative in conjunction with a study on woodpecker damage to poles[3]. After 96 were killed, it was determined by the employees that it was an inappropriate response to their problem and stopped the operation.

In the 1980's an electrical cooperative did a study[3] in two townships in Missouri on woodpecker damage to utility poles. Segments of poles were arbitrarily selected to be observed for damage. Stemmerman's definition[3] for a cavity hole was any woodpecker excavation with a horizontal penetration of more than 3". All other woodpecker activity was regarded as minor and not recorded. In 1983, 1985 and 1987, the number of cavity holes was recorded. Poles that were replaced were examined for cavities, which were measured and recorded. The observations confirm that damage increases over time. Once a pole was attacked, it was subjected to more attacks. The number of poles (Type I, largest pole) damaged increased by 28% and the number of holes increased by 64% over the 4 years. The Type II (next class down in size) poles damage increased by 77% and 126%, respectively, over 2 years. Of interest to the RhWR is the observation that "Thirty-six woodpecker cavities were examined in detail. The average horizontal penetration was 4.2". Horizontal penetrations of more than 5" were frequently encountered. The average pole diameter at the point of penetration was 6.6"[3]". The average depth was 5", although three cavities had a depth of one foot or greater. Also of note was only 16% of the damaged poles were in the lower portion (defined to be below the lowest wire). Cavity holes in the lower portion of the poles were usually associated with extensive damage to the pole. Only four of the 36 damaged poles that were examined had damage only on the lower portion.

In an extension[3] of the previous study in Missouri, five township's poles were surveyed for damage and removed. Of the 150 that were found to have damage, 100 were damaged by woodpeckers. The distance from the top of the poles was determined. Of the 354 holes, 39% were within 6" of the top, 16% were 6 - 12" from the top and 15% were 12 - 18" from the top. Only 18% were below the second wire (distance undefined, probably > 42"). The pole heights were not given.

1. DENNIS, J.V. 1964. Woodpecker damage to utility poles with special reference to the role of territory and resonance. Bird Banding 35(4):225.
2. RICHARD E. HARNESS & ERIC L. WALTERS, "Woodpeckers and utility pole damage", IEEE INDUSTRY APPLICATIONS MAGAZINE • MAR|APR 2005 • WWW.IEEE.ORG/IAS
3. L.A. Stemmerman, "Observation of woodpecker damage to electrical distribution line poles in Missouri," in *Proc. Vertebrate Pest Conference*, 1988, vol. 13, pp. 260–265.4
4. The Environmental Literacy Council, "Wood Utility Pole Life Cycle", www.enviroliteracy.org/article.php/1311.html

Pressure-Treated Wood Utility Poles

There are an estimated 100 million[1] pressure-treated utility poles in North America. These poles were treated with one of the following chemicals[1] – pentachlorophenol (Penta), creosote, copper naphthenate, Chromated Copper Arsenate (CCA), Alkaline Copper Quaternary (ACQ) or Ammoniacal Copper Zinc Arsenate (ACZA). These poles last about 40 years and longer with proper maintenance.[2]

Creosote, CCA and Penta are the most common preservatives used in the USA for wood preservation.[3] Coal-tar creosote has been used as a wood preservative in the U.S. for over 100 years.[3] Preservatives such as Penta and Creosote have been banned in some European countries and are restricted in the U.S. Currently the U.S. EPA limits the use of Penta, Creosote, and CCA to utility poles, pilings, and the like (ATSDR, 2001) in order to lessen public contact with the treated wood.[3] Coal tar creosote is the most widely used [2006] wood preservative in the United States, and is used as a wood preservative and water-proofing agent for log homes, railroad ties, telephone poles, marine pilings, and fence posts.[4] It is also a restricted-use pesticide, and is used as an animal and bird repellant, insecticide, animal dip, fungicide, and a pharmaceutical agent for the treatment of psoriasis. Creosote is no longer commercially produced (but used) in the United States. Most end of use utility poles are currently disposed of in landfills.[3]

1. Dr. Kenneth Brooks, North American Wood Pole Coalition Technical Bulletin, *Pressure-Treated Wooden Utility Poles and Our Environment,* 1998b.
2. Jeffery J. Morrell, North American Wood Pole Council Technical Bulletin, *Estimated Service Life of Wood Poles,* 2008.
3. The Environmental Literacy Council, "Wood Utility Pole Life Cycle", www.enviroliteracy.org/article.php/1311.html
4. *Environment Writer,* www.environmentwriter.org/resources/backissues/chemicals/creosote.htm, April 2006

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eggs used as controls hatched, 6 of the others were infertile and 3 embryos died. All addled eggs were opened to determine the age of embryos at death. Embryos in eggs on creosoted chips usually died within the first week; those in eggs exposed only to vapors lived longer. The shell membranes of eggs touching treated chips had black spots approximately 2 mm in diameter where creosote had collected. When opened, those eggs had a strong odor of creosote rather than the characteristic odor of hydrogen sulfide.

It is not known how long poles must be in service before the preservative is no longer lethal, but two successful nests were noted in a pole that was 15 to 20 years old. It appears, then, that creosoted poles become satisfactory nest sites for woodpeckers only after a period of weathering reduces the creosote concentration level.

1. **GROSS, A. O. 1952. The herring gull-cormorant control project, 1952. U.S. Fish and Wildl. Serv., July 1952. [Reviewed by W. H. Stickel in Wildl. Rev., 71: 35, 1953].**
2. **Dow, R.L. 1956. The herring gull-cormorant control program state of Maine, 1953. State of Maine, Dept. Sea and Shore Fisheries, Gen. Bull. No. 1, August 1953 (Rev.). [Reviewed by W. H. Stickel in Wildl. Rev., 86: 64, 1956].**

Spring Issue Feature Topic

The Spring issue's topic will be "Do Starlings effect the future of RHWO's?" Send your observations and references to scientific papers to Jerry Bahls (rhwracm@comcast.net) by April 15th. Please send observations only - no opinions! Also send any future topics to be featured in the newsletter. Thank you.

Next RhWR Meetings

The RhWR usually meets on a Wednesday each month at 7:00 pm at the Lund's Store 1 block west of 50th & France in Edina. The next meetings will be on Feb. 17 and Mar. 17. All are welcome and encouraged to attend. Please encourage your friends and neighbors to attend also. Check our website (www.RedheadRecovery.org) for current information.

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Save that Snag!

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Red-headed Woodpecker Recovery Program Membership Application

☐ *I'd like to join!* Please add me as a member of the Red-headed Woodpecker Recovery (RhWR) at the rate of $10/year! Please send my membership information to the address below.

☐ *I'd like to renew!* Renew my RhWR membership for $5/year.

☐ *Yes, I'd like to join Audubon Chapter of Minneapolis also!* Please add me as a member of the Red-headed Woodpecker Recovery ($10) and the Audubon Chapter of Minneapolis ($12) at the rate of $22/year. Please send my membership information and *Kingfisher* to the address below.

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