

Public Service Announcement

USDA Study Evaluates Woodpecker Deterrent for Utility Pole Crossarms

Researchers from the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) and Colorado State University have shown the addition of a polyurea elastomer coating material to utility pole crossarms reduced damage by captive pileated woodpeckers (*Dryocopus pileatus*). These findings could save the utility industry several hundred thousand dollars annually by aiding in the development of woodpecker deterrents that reduce the number of visits and costs for wooden utility pole maintenance. The research was recently published in an article titled, "Polyurea Elastomer Protects Utility Pole Crossarms from Damage by Pileated Woodpeckers" (*Journal of Wildlife Management* 74(3):605-608).

Woodpeckers cause millions of dollars in damage to wooden utility pole structures around the world by pecking or drumming at them when searching for insects, announcing their territory or excavating nesting or roosting cavities. Their damage presents a safety hazard to utility workers, may promote decay fostered by water entrapped in the holes, necessitates premature replacement and may lead to collapse under adverse conditions. In the United States, pileated woodpeckers cause some of the most severe damage to poles, especially when the birds excavate nesting and roosting cavities.

In captive studies at the APHIS National Wildlife Research Center, researchers evaluated the effectiveness of a polyurea elastomer coating material applied in a process developed by Brooks Manufacturing

Company (Bellingham, Wash.) to eliminate or reduce damage to crossarms by pileated woodpeckers. Brooks Manufacturing Company supplied 8.5-by-11-cm Douglas fir coated crossarms, measuring 243 cm in length.

For the study, 18 pileated woodpeckers, which were captured and later returned to national forests in Missouri and Arkansas, were presented with coated and uncoated crossarms for a 10-day testing period. Researchers recorded daily the dried weight of wood chips removed; the length, depth, and area of damage; and the condition of the coating on the crossarms. While the fully coated crossarms received no measurable damage, woodpeckers removed an average of 29.5 g of wood chips from non-coated crossarms.

The cost of an uncoated wood crossarm is approximately \$22-35 USD and a fiberglass composite crossarm is approximately \$65-120 USD. A coating of the polyurea elastomer product (1.78-mm thick) for a standard 9.53-by-12.07-cm crossarm that is 2.4 m long costs approximately \$30-45 USD. Thus, the cost of wood crossarms with protective polyurea elastomer should remain less or comparable to crossarms of other materials on the market. More studies are needed to determine whether coated wood crossarms are more cost effective than other materials over the lifetime of the utility structure.

The NWRC is the research arm of USDA/APHIS' wildlife services program. It is the federal institution devoted to resolving problems caused by the interaction of wild animals and society. The center applies scientific expertise to the development of practical methods to resolve these problems and to maintain the quality of the environments shared with wildlife. To learn more about NWRC, visit its website at www.aphis.usda.gov/wildlife_damage/nwrc.

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Pileated woodpeckers excavating a hole.