

Extensive Ground Foraging by Pileated Woodpeckers in
Recently Burned Pine Forests

Bette J. Schardien and Jerome A. Jackson

Department of Zoology, Mississippi State University
Mississippi State, Mississippi 39762

On 20 February 1977, while searching for Pileated Woodpeckers (Dryocopus pileatus) on Noxubee National Wildlife Refuge in east-central Mississippi, we visited five areas of pine forest which had been burned within the previous two weeks. The areas ranged from less than 1 km to more than 8 km apart. In each place, we were immediately impressed with the extensive evidence of Pileated Woodpeckers foraging on logs on the ground. Nearly every log had either been splintered, or at least explored by the birds (Fig. 1). We observed a male Pileated Woodpecker foraging on some fallen logs in one of these areas. He pecked vigorously, pausing to check his surroundings occasionally. The bird foraged on a single log for nearly 15 minutes before flying to a nearby pine.

On 26 February we visited another burned area and again noted the very extensive evidence of Pileated Woodpecker foraging. An examination of some of the logs showed they contained termites (Isoptera) and adult and larval beetles (Coleoptera), major components of the Pileated's winter diet (Beal 1895, 1911; Hoyt 1957; and Kilham 1976). By contrast, we found little evidence of similar Pileated Woodpecker foraging activity in adjacent unburned areas of similar habitat.

Pileated Woodpeckers have previously been observed feeding near the ground on fallen logs and stumps (Bent 1939, Hoyt 1950, and Kilham 1976). This method of feeding is common on the refuge, but we have never observed such extensive and intensive use of this technique in unburned areas. The reason for this unusual behavior is not readily evident, but five possibilities seem reasonable. First, the fire may have caused many insects to seek refuge in the fallen logs, thus increasing the amount of food available to the Pileateds in a single log. Second, at least some species of insects, including many woodboring beetles (Cerambycidae and Buprestidae), are known to be attracted to burned areas - often while the fire is still burning (Komareck 1969, Evans 1971). Third, most insect species are dormant during winter months and only renew activity during the warm days of spring. Perhaps, the heat from these late winter fires stimulated renewed insect activity in the logs, making them a more attractive foraging site for the Pileated. Hoyt (1950) reports that the Pileated uses the sound of disturbed insects moving about in the wood to assist them in locating their prey. Fourth, the lack of underbrush remaining after the fire may have made the food source more apparent to the Pileateds or, fifth, may have enabled the birds to forage on the ground with less danger from hidden predators.



Figure 1. Logs splintered on the ground in a recently burned pine forest by foraging Pileated Woodpeckers.

Literature Cited

- Beal, F. E. L. 1895. Preliminary report on the food of woodpeckers. U.S. Dept. of Agric., Div. of Ornithol. and Mammal., Bull, No. 7.
- Beal, F. E. L. 1911. Food of the woodpeckers of the United States. U.S. Dept. of Agric., Bull. 37:1-64.
- Bent, A. C. 1939. Life Histories of North American Woodpeckers. U.S. Natl. Mus. Bull. 174.
- Evans, W. G. 1971. The attraction of insects to forest fires. Proc. Tall Timbers Conf. on Ecological Animal Control by Habitat Management 3:115-127.
- Hoyt, J. S. Y. H. 1950. Feeding technique of the Pileated Woodpecker. Bull. Mass. Aud. Soc. 34:99-103.
- Hoyt, S. F. 1957. The ecology of the Pileated Woodpecker: Ecology 38:246-256.
- Kilham, L. 1976. Winter foraging and associated behavior of Pileated Woodpeckers in Georgia and Florida, Auk 93:15-24.
- Komarek, E. V. 1969. Fire and animal behavior. Annu. Proc. Tall Timbers Fire Ecology Conf. 9:161-207.

WANTED: SIGHTINGS OF COLOR-BANDED KILLDEER

I have been color-banding Killdeer near Starkville, Mississippi and would appreciate knowing of any sightings of these birds. Each Killdeer has an aluminum band and a color band above the "knee" on one leg and a color band on the other leg. Please note the location and colors of bands and details of your observations. These should be sent to Bette J. Schardien, Box Z, Mississippi State, Ms. 39762 and to Bird Banding Laboratory, U.S. Fish and Wildlife Service, Laurel, Maryland 20811.