

Aves incendiaria.—No serious ornithologist today questions the fact that birds ant. Anting with ants or other agents having aromatic or "thermogenic" properties has been demonstrated; or anting within sight of such substances; or within sight of objects which directly have nothing to do with the "heat" stimulus, per se, but which have been associated with the production of heat by conditioning (Lovie M. Whitaker, 1957. *Wilson Bull.*, 69:195-262; Maurice Burton, 1959. "Phoenix Re-born"; and others).

Novel, however, is the concept that anting birds may be instrumental in the spread of fire.

In his fascinating book, "Phoenix Re-born," Burton leaves no doubt as to the capabilities of birds as firebugs. At times his tame Rook (*Corvus frugilegus*), Niger, could not resist "disporting itself on a heap of burning straw"—much like the Phoenix of legendary fame—and, still more incredible, would take to casting burning straw about the aviary, ant on an isolated ember and *fan it into flames* with its wings, igniting combustible material near by! Neglected embers would die out.

Playing with fire is not confined to aviary birds alone. Burton cites several instances where wild birds have been suspect—by carrying glowing cigarette ends or other burning substances to their nests and setting them afire. An officer of the Guilford Fire Brigade actually saw a nest smouldering in a tree. Burton himself has observed birds anting on the wing over heath fires and states that it is common to see all kinds of birds flocking at the edge of bush-fires, ostensibly to harvest the fleeing insects.

The startling fact is that Old World corvids have been incriminated since ancient times. Says Burton (*op. cit.*, p. 89):

There are a number of stories in the ancient books from Roman times down to the seventeenth century, of birds seen carrying glowing embers in their bills and alighting on thatched roofs, setting them afire. There is nothing in these stories to tell us whether the birds anted with the embers once they landed on the roofs. It was, however, sufficiently commonplace for jackdaws, magpies, choughs and crows—all close relatives of the rook—to carry embers in this way for them to be spoken of as *aves incendiaria*.

Are New World corvids so very different from their overseas cousins? There is reason to believe that they are not, though this is conjectural and based upon the flimsiest evidence. At this point of unenlightenment, it would seem short-sighted to exclude *any* bird from the incendiary tag.

Whitaker (*op. cit.*, citing F. W. Miller, 1952. *Auk*, 69:87-88; and Anon., 1952. *Life*, Dec. 8, p. 186 [Photo]) mentions two instances, unrelated, of a captive Blue Jay (*Cyanocitta cristata*) being drawn to lighted cigarettes; one bird anted with them, the other merely held them in its bill. H. Roy Ivor (1958. *Wilson Bull.*, 70:288) discusses his tame Steller's Jay's (*C. stelleri*) predilection for anting with the "hot carbonized end" of a blown-out match and for snatching a lighted cigarette from the mouth of a visitor, subsequently tearing it to bits.

As for definite records of bird-caused fires, there are next to none for the United States. Burton cites (*op. cit.*, pp. 104-106) two reports from the American journal *Fire Engineering* in which birds are strongly implicated. One entry, for April 1954, is entitled "Squirrel smoking in bed?" and concerns a fire which took place in Central Park, New York City. Smoke was found issuing from a hole 25 feet up in a 50-foot sycamore and the flames were duly extinguished. No mention is made of anyone's having seen a squirrel, nor is a bird suggested as the culprit. As Burton explains, "It is one of the unfortunate features of these entries in fire-brigade journals that they are laconic in the extreme." In other words, it is not customary to associate birds with fire-spreading.

The other entry, dated June 1954, is about an owl—"Out Beloit, Kansas way"—who inadvertently set fire to some 700 acres of pasture. Wings aflame, it had been forced

to leave the burning tree in which it had been nesting; as it touched upon farmland, the blaze spread. Burton theorizes about the origin of the fire: perhaps some other bird had been performing like a Phoenix in the owl tree and raised a conflagration which caught the owl unawares as it dozed in a hollow.

Less speculative is Burton's reference (*op. cit.*, p. 107) to a newsclipping from the *Courier-Journal* of Louisville, Kentucky, for January 14, 1958. Fire Chief Kenneth Reeve of Franklin placed the blame directly on a bird. To quote from the account: "He said there simply was no other way the fire, which caused very little damage, could have started in a downtown building. He reported a sparrow must have picked up a lighted cigarette and carried it to a nest in the eave of the structure . . ."

Most convincing is this communication from Ann Arbor, Michigan. My father, A. D. Moore (letter, Dec. 27, 1959) wrote after an interview with Harold Gauss of the Ann Arbor Fire Department:

I stopped Harold and said I had a serious question. What about birds starting fires? The answer was immediate and positive. Of course they do. Incident: in 1925, the Old Methodist Church had a roof fire. Harold remembers it clearly, for water pressure was often low in those days. When he climbed the ladder with the hose, and got within a few feet of the fire, no water came. He held the hose vertical, looked down the hole, and saw the water, doing its best, but stopped a yard or so down from the nozzle. When the pumper was started, he got water. The ridge row of the roof had collected a lot of nests, sparrow and pigeon, as he remembers it. The nests were afire.

Harold says they have had to put out nest fires more than once on top of the Allene Hotel; and more than once on another downtown building he named.

It must be emphasized that two facts are inescapable: (1) some birds ant with or near smouldering substances or flames; (2) certain fires have been traced to birds. The implications are tremendous. To what degree are birds responsible for sprouting and spreading fires under tinder-dry conditions? Those crows and ravens along the road . . . could they be interested in cigarette butts as well as carrion? Those fires which start unaccountably on roof tops, in isolated trees or palms, on the side of a billboard . . . could an ember-carrying sparrow be to blame? Those jays hopping about the picnic tables . . . could a dying campfire, unattended, be far more irresistible than the tidbits?

It is obvious that a fund of information is needed to fill out the story of *aves incendiaria* and their kind in the Western Hemisphere. I would welcome any observations to this end.—JEANNE MOORE GOODMAN, *Cedar Crest Cabin, Fallsvale (east of Redlands), California, March 31, 1960.*

Marsh Hawk breeding in northwestern Arkansas.—Nesting records of the Marsh Hawk (*Circus cyaneus*) are sparse for the state of Arkansas. Baerg in his "Birds of Arkansas" (1951. *Univ. of Ark. Col. of Ag. Bull.* no. 258:52) states that the Marsh Hawk nests uncommonly in the northwestern section of the state. Bent (1937. *U.S. Nat. Mus. Bull.* no. 167:92) excludes Arkansas as a part of the breeding range for this species. The 5th edition of the A.O.U. Check-List (1957:115) does likewise.

On April 13, 1954, I discovered a solitary Marsh Hawk nest (no eggs) quite accidentally while on a field trip within the confines of Fort Chaffee Military Reservation, 8 miles south of Fort Smith, Arkansas. The nest site was located in a remote locality 2 miles west of the camp proper. This area was formerly a firing range for military training.

The nest was situated on dry ground at the base of a 5-foot persimmon tree about 500 yards from a well-traveled gravel road. The nest was surrounded by lush vegetation, which included pubescent paspulum (*Paspalum pubescens*), persimmon (*Diospyros*