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## THE ROLE OF BIRD MANAGEMENT IN FIRE PROTECTION

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Two years ago, Mike Fall and I showed you some ideas we had regarding modern architecture and bird problems. This year we've switched to considering bird hazards in older frame dwellings and on buildings where a fire hazard may be apparent.

During a class project some time ago, I was examining a nest of house sparrows and discovered that these birds incorporated cellulose cigarette filters into their nests. Filters were stripped of their paper wrapping and were apparently used by the sparrows as a substitute for or a supplement to fluffy air-borne seeds and seed materials. The incidence of the cigarette filters varied. In the nests that I sampled the numbers varied anywhere from six up to two dozen filter remnants. We feel that the incidence will probably vary with the relative availability of discarded cigarette filter butts.

I was surprised to find filters in some nests in areas that I would call para-agricultural, such as in open storage sheds for machines as are found around the Penn State campus. Tractor storage areas that don't have doors allow the birds to build nests in them, and apparently there were enough workers nearby so that sufficient filters were available to the birds.

One nest was located above an umbrella-type pavilion roof on the campus theater where the outside patio is used between acts as a smoking area. This is where I found two dozen filters in one nest.

I plan to sample many more nests in the downtown, off-campus, business establishments very soon. House sparrows, as many of you know, are very ambitious nest builders. They often build a nest which consists of much more material than they appear to need. The cigarette filters in the nests which I have examined were found both in the rough exterior portion of the nest and in and around the cup. I have not found filters in sufficient abundance to completely line the cup, however. We have pondered a point that needs elaboration in the form of investigation. Are the birds picking up filters or smoldering cigarette butts simply because of the novelty of these items, or are they actually learning to seek out these potentially fluffy materials to incorporate in their nests? These questions I hope to look into over the next several months, especially next spring.

We are concerned with the incidence of filters as an index to the possibility that the birds are picking up live cigarette butts, and this leads us to investigate some records of fires over the past three quarters of a century that were claimed to have been caused by birds. As a matter of historical perspective we might mention some of the records we came across. A historical news item in the Port Clinton News

Herald of May, 1970 recounts the fate of the Pittsburgh House, a 22-bedroom lake front hotel, which burned to the ground in 1909 as the result of fire believed to have been caused by a bird carrying smoldering debris from a stone quarry to its nest in the eaves of the hotel.

Some of the more recent reports, such as one we got from the Paulding, Ohio fire department and from the Milesburg, Pennsylvania fire company, typify the problems that fire inspectors have in order to pin the blame on the bird definitely. In Milesburg, the front porch of an old log house was badly burned, and starlings had nested in the eaves of the porch. The house was near a heavily traveled roadway. There were no electrical fixtures in that portion of the porch. The possibility of sparks from the chimney was ruled out by the inspectors because of the nature of the heating unit in the dwelling. Even though the official cause is listed as unknown, the starlings were strongly suspected.

The courthouse in Paulding, Ohio suffered a thousand dollars damage when a fire occurred in the attic area. Dead birds and bird manure were found in the attic. There was no wiring within thirty-five feet of the focus of the fire, so the inspectors concluded that the birds had probably been responsible. In the 14 reports we have compiled we can summarize that pigeons are mentioned four times, starlings three times, house sparrows twice, robins once. In four reports the birds were not identified. Identification at present must be taken for granted, but we all know the difficulty in correct bird identification by non-experts.

We searched out information dealing with birds as fire hazards and we found that the National Safety Council does not list a category of bird-associated fires in their records. In the 1970 edition of "Accident Facts," they list 974,000 fires which accounted for over one and one half billion dollars in damage (for 1968). Birds are not listed specifically; therefore we have to guess where they probably are. Under the category of miscellaneous fires of some "known" cause there were 78,000. Under the category of fires of "unknown or undetermined" cause there were 140,000. These two categories account for nearly nine hundred million dollars in damages.

If we would guess conservatively that one percent of these unknown or undetermined fires may be caused by birds, it would appear that birds may be responsible for an estimated eight and one half million dollars in damages annually. Now this is a figure you can't sneeze at. But we found that insuring companies apparently do not consider birds nesting in buildings. This indicates that maybe our figure of one per cent may still be too high. We hope to look into this further and find out for sure.

The insurance managers for the Pennsylvania State University told us that birds on buildings are a minor problem from the dollar volume loss aspect and are not accounted for in figuring premiums. Fire marshals for the city of State College and for the Penn State campus agree that nesting debris on a building would be a fire hazard. It is dry, straw or paper material, and the presence of the nest would indicate a certain lack of repair or certain structural faults; this gives an index for the building condition which indirectly determines its insurance premium. The fire marshals were surprised, however, that the birds themselves could be instrumental in starting the fire. One marshal said that he remembered a case where a bird's nest was involved, but thought of this as an accidental kind of thing. It just happened. With cigarettes

and cigarette butts found in the nest construction, we are beginning to encounter problems with pest birds as possibly more direct causers of fires.

We do need to study the behavior of urban sparrows. In the same context, feral pigeons in parks where they are fed get used to picking up and carrying back to their nests things that are thrown toward them. All you need is for a pigeon to pick up one lighted cigarette butt and carry it back to the nest for a fire to get started.

We feel that the utility of this information is rather great for the pest control operator engaged in bird management. He will be able to develop better rapport with fire inspectors, fire marshals, and housing authorities, who would certainly appreciate learning of this potential problem. A pest control operator is also able to offer nest removal service to customers and can use the idea of nesting debris as an indicator of the general building condition.

Certainly there are problems with a greater amount of littering in the older, more densely populated urban areas. Such areas are more susceptible to fire hazards caused by birds.

One of the fire marshals did mention farm buildings as an area that should be investigated from this point of view. Here again the evidence is consumed with the fire, so it is difficult to determine the cause of the fire.

But we do want to emphasize the point that pest control operators should not use scare tactics. Certainly this one percent or less that we are talking about at this time should not be used to imply the threat of fire to anyone who has a bird's nest on a building. This is certainly wrong. This interaction that you may be seeing here is just another of many problems that can result from man's careless mismanagement of the environment. So bird management does seem indeed to have a different role in the job of fire prevention.

We would like to acknowledge the help of the National Pest Control Association for providing some of the records of past years from their library files. We would appreciate being kept in mind as you go back to your businesses and maybe see a report on your local television that we do not get in Pennsylvania. Drop us a line. We can then write the local fire department for details. Our address will be in the *Proceedings* and we will appreciate hearing from you. Also, if you are tearing down nests and see cigarette filters in them, we would appreciate knowing this. We would like to know if this is a behavior which is nationwide, widespread, or maybe it is just local in Pennsylvania. This is one of the things we have yet to find out.