

“Silent Spring,” Rachel Carson excerpts, 1962

Over increasingly large areas of the United States, spring now comes unheralded by the return of the birds, and the early mornings are strangely silent where once they were filled with the beauty of bird song. This sudden silencing of the song of birds, this obliteration of the color and beauty and interest they lend to our world have come about swiftly, insidiously, and unnoticed by those whose communities are as yet unaffected....

One story might serve as the tragic symbol of the fate of the birds....It is the story of the robin, the bird known to everyone. To millions of Americans, the season's first robin means that the grip of winter is broken....

The survival of the robin, and indeed of many other species as well, seems fatefully linked with the American elm, a tree that is part of the history of thousands of towns from the Atlantic to the Rockies....Now the elms are stricken with a disease so serious that many experts believe all efforts to save [them] will in the end be futile. It would be tragic to lose the elms, but it would be doubly tragic if, in vain efforts to save them, we plunge vast segments of our bird population into the night of extinction....

In community after community, especially throughout the strongholds of the American elm, the Midwest and New England, intensive spraying has become a routine procedure.

What this spraying could mean to bird life, an especially to the robin, was first made clear by the work of two ornithologists at Michigan State University, Professor George Wallace and...John Mehner....

During 1954, the year of first light spraying, all seemed well. The following spring, the migrating robins returned to campus as usual....But soon it became apparent that something was wrong. Dead and dying robins began to appear on campus....Few nests were built; few young appeared. The pattern was repeated with monotonous regularity in succeeding springs....

...soon it became evident that “in spite of the assurances of the insecticide people that their sprays were ‘harmless to birds’ the robins were really dying of insecticidal poisoning....”

Several facts suggested that the robins were being poisoned, not so much by direct contact with the insecticides as indirectly, by eating earthworms....

...trees are sprayed in the spring...and often again in July....Powerful sprayers direct a stream of poison to all parts of the tallest trees, killing not only the target organisms, the bark beetle, but other insects, including pollinating species and predatory spiders and beetles. The poison forms a tenacious film over the leaves and bark. Rains do not wash it away. In the autumn the leaves fall to the ground, accumulate in sodden layers and begin the slow process of becoming one with the soil. In this they are aided by the toil of the earthworms....In feeding on the leaves the worms also swallow the insecticide, accumulating and concentrating it in their bodies....Undoubtedly some of the earthworms themselves succumb, but others survive to become “biological magnifiers” of the poison. In the spring the robins return to provide another link in the cycle. As few as 11 large earthworms can transfer a lethal dose of DDT to a robin....a bird...eats 10 to 12 earthworms in as many minutes.

Not all robins receive a lethal dose, but another consequence may lead to the extinction....The shadow of sterility lies over all the bird studies...