The Birds, where had they gone? – Argued by Rachel Carson

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Abstract:
The article analyses about birdlife, in the novel Silent spring, it is an ecological work by Rachel Carson and it describe about the dangers of the Pesticides on the environment, and mainly focused on bird life. Rachel Carson voice out the dangerous of pesticides and researched about it and found that pesticides such as DDT (dichloro-diphenyl-trichloro-ethane) could have widespread effects in a large amount and tending to a vast number of species, not only plants. Rachel Carson want that everybody must know the correct reason and the precaution. she decided to write all the ideas, effects and precaution in her book. Rachel Carson started to report about the pesticides, that was the result of a “fire ant eradication program” in 1957, where the DDT mixed with fuel oil and it was sprayed on private and public land, after the publication of silent spring a grassroots political movement that lead to the creation of the environmental protection agency in 1970 and ban on DDT in 1972.

Keywords: Birds life, Plant life, Pesticides.

Rachel Louise Carson was an American marine biologist, author and conservationist, later she began her career as an aquatic biologist and became a full-time writer in 1950. “The Sea Around Us” became a best seller and received some prices like the John medal and Henry G. Bryant Medal from the Philadelphia geographical society as a first woman to receive them. “Under the Sea Wind” are also best sellers, late in the 1950, Carson turned her attention to conservation, especially some problems she believed where caused by synthetic pesticides, and that resulted the book silent spring that brought environmental concerns to an unprecedented share of the American people.

Birds plays an important role in the functioning of world ecosystem, watching birds is often gives pleasure in our daily life. Many people enjoy watching birds and that enrich our lives with their presence and birds are the ecologist’s favourite tool. The Environmental problems begins when there is a change in the population of birds, and this tells us that we are damaging the environment through habitat fragmentation and destruction, pollution and pesticides, and many other impacts, Birds provides insect and rodent control, plant pollination and also the seed dispersal that result in tangible benefits to people.

Many farmers know the role of birds play in helping them to control the agricultural pests. Birds eat up to 98% of budworms and up to 40% of all non- outbreak insect species in eastern forests. Many fruit eating birds helps disperse seeds, that is, after eating fruits they carry the seeds and deposit them in new places.
And nowadays we find that, the population of birds are going down, hunting and Habitat loss are the two main reasons behind the decline. according to the study, “collision” with electricity lines, is a “prime current thread” to birds. human activities, including cutting down trees are also harmful to bird life. people watching this, many never care about the situation of bird life, but some people wish to stop, Rachel Carson also taken this as a first sign and to save the birds life as well as the plant life and she suggest people to be aware of our environment.

Rachal Carson describes the place where the bird life began to destroy, a town in the heart of America situated at the midst of a checkerboard of prosperous, farms with fields of grains, and they were many travellers to visit, but after spraying DDT the changes happened. This tells about the use of toxic chemicals in the countryside and of the widespread destruction of wildlife in America.

During 1950, pesticides containing DDT were sprayed on tall elm trees. The chemicals stuck on the leaves and the bark, and rain did not wash the coating away. In autumn, the leaves fell to the ground. Earthworms fed from the litter of leaves, and the DDT entered their bodies.

But at the same time during spring, robins returned and ate the earthworms. Sadly, the poison was so concentrated in the earthworms that as few as eleven earthworms could kill a robin. A robin can eat a worm every minute, so the effect of the pesticides was severe.

“No Birds Sing” is the eight chapter of this novel silent spring, here Rachel Carson denotes the symbol of silence, that birds function as an Emblem of the loss of wildlife, so Carson wants to give the public a voice by citing local accounts all over the country of dwindling bird populations after spraying against elm disease or fire ants.

Before six years, it was the wealth of bird life and had a good stream of cardinals, chickadees, nuthatches during all winters, cardinals and chickadees brought their young ones, but after the DDT to destroy the fire ants, the town devoid of Robins and starlings, chickadees not seen for two years, so no Birds where that to sing and welcome spring season, it was very silent, Carson says that this regularity is threatened in the new World created by man.

When the birds ate earthworms that had ingested the poison they put into debt and when the DDT was sprayed on the leaves, it fell in the autumn and decayed into a mulch. Similar studies show that 86% - 88% of Robbins had died because the reproductive organs of birds were found to contain dangerous levels of DDT, and this reached other species as well and affecting a whole chain of animals for which earthworms are the major elements of their diet, and the insects ends up thriving while birds are destroyed.

Focusing on the Robin, “a bird known to everyone” that sing & welcome Spring, is dead because of DDT, denoting this to readers will make a serious discussion towards DDT and it will turn the readers to care enough to act. Here Rachel Carson recalls the emotional appeals for protecting the nation and also the future generations. The case of robin is a good example, the survival of the robin is linked to the American elm tree, which is a popular tree in cities for landscaping. During 1930 Dutch elm disease was inadvertently imported into the U.S. from Europe. It was a fungus disease which invades the tree and spreads by spores. It is spread among trees by elm bark beetles.

Then people concentrated efforts on killing the carrier insect in order to stop the spread of the disease, in the Midwest and New England where the elm is so abundantly used in cities, intensive insecticide spraying has reduced. Two ornithologists (bird scientists) from Michigan State University found evidence of the link between the deaths of robins and the spraying of elm with insecticide. One of them had been doing his doctoral studies in robin population just as the spraying campaign began on his campus. He found the robin population had plummeted drastically just after the spraying and began experimenting the cause. The elms were spray
during the spring season where robins returned to the campus and the city on their migratory path. Suddenly, however, people began finding them dead all around.

American Robins are industrious birds that bound across lawns or stand erect, beak tilted upward, to survey their environs. They are fairly large songbirds with a large, round body, long legs, and fairly long tail. It looks Gray-brown with warm orange underparts and dark heads and in flight, a white patch on the lower belly. Compared with males, females have paler heads that contrast less with the Gray back. When alighting they habitually flick their tails downward several times. In Fall and Winter season they form large flocks and gather in trees to roost or eat berries. They are common across the continent in gardens, parks, yards, golf courses, fields, pastures, tundra, as well as deciduous woodlands, pine forests, shrublands, and forests regenerating after fires or logging.

The Eagle, beloved symbol of American Patriotism is also in danger of extinction, researches started reporting that decrease in young Eagles and failures in egg laying data from Hawk Mountain, Rachel Carson also reported that birds ingesting DDT tended to lay thin shelled eggs which would in turn break prematurely in the nest, yet another tragedy resulting from irresponsible use of pesticide. Pesticides will continue to kill birds, reduce their food resources, and disrupt their normal behaviour as long as pesticides continue to be used.

The Bald Eagle, the national emblem of the United States since 1782 and a spiritual symbol for American people. It is one of the largest raptors in the world. They are not really bald, but their white-feathered heads gleam in contrast to their chocolate-brown body and wings. Bald eagles can reach speeds of up to 160 km/hr (100 mph) when diving and it can climb up to 3000 m (10,000 ft.) in the air. They can soar for hours using these currents. Bald eagles build enormous nests, called eyries, out of sticks. These nests weight up to 900 kg (1 ton).

After the effect of DDT in bird life, every spring, this pattern was repeated, new birds would fly in and soon they would be found dead. And two scientists discovered that the birds were dying of insecticide poisoning. They died with all the symptoms of poisoning: loss of balance, tremors, convulsions and then death. The scientists found that the birds were dying of insecticide poisoning because they were eating earthworms contaminated by the poison. The only way to eliminate the effects that pesticides have on birds is to use nonchemical resource management techniques. On farms, in forests, on lawns, and elsewhere that pesticides are used, managers are finding that these techniques work well and make economic sense.

Other countries have also experienced shocking numbers of bird deaths. In England, the problem occurs with insecticide treated seed. Huge numbers of birds eat these poisoned seeds and die. Contamination due to excess of pesticides led to an aquatic disaster. In the Atlantic Ocean, there are paths taken by fish. People could not see them, not only birds, but foxes have also died from the insecticides. Since foxes are necessary for keeping the numbers of rabbits down, people have begun to call for a ban on these insecticides.

DDT, is one of the most effective and best known of all of the synthetic insecticides used in the 1940s and 1950s. Paul Hermann Muller, discovered its insecticidal properties and he was awarded the Nobel Prize in Medicine in 1948. DDT was used in the second half of World War II to limit the spread of the insect diseases malaria and typhus among civilians and troops. It is colourless, tasteless, and almost crystalline chemical compound, an organochloride. Originally developed as an insecticide, it became infamous for its environmental impact.
There is a sorceress in Greek mythology named “Medea”. When her husband betrayed her and decided to marry another woman for political gain, she sent his bride a poisoned gown. When the bride put it on, she suffered a horrible death. There are chemicals now being produced that act like this robe. They convert plants and animals into a sort of Medea's robe so that they will kill the insects that come to eat them. These are called systemic insecticides. Which is also used it on wheat, so that the wheat is poisonous to aphids.

A systemic insecticide permeates all the tissues of a plant or animal and makes them toxic. Farmers also use systemic by applying them directly to seeds so that they will produce seedlings that are poisonous to insects. This has proven extremely dangerous for farm workers who have to handle these seeds and the plants that grow from them, there are also problems with the war against weeds. Herbicides are the chemicals that are used to kill weeds.

It is not true that herbicides are only toxic to plants, not animals. These chemicals also act on animal tissue and also this weed killer is arsenic. Arsenic has been sprayed on roadsides and has killed cattle. They have made water unsuitable for swimming or fishing, another kind of herbicide is a group of chemicals called "Dinitro" compounds, they are some of the most dangerous which is a strong metabolic stimulant.

Rachel Carson articulates the truth of pesticides, her book still inspires activists all around the world today and she argues, the choice is not simply whether to save birds or trees, because the pesticides do not produce the intended results of permanently eradicating particular pests, and the long terms effects are largely unknown, whereas she gives alternative solution, that is to removal of diseased trees, this makes the readers consider the loss and evoke the public to open their eyes to ever-growing environmental problems, that are already a reality in some parts of the United States.

After publishing the novel Silent Spring, Rachel Carson was attacked by the chemical industries and those people disagree to ban DDT because that would harm their prosperity. President John F Kennedy’s Science Advisory Committee recommended an immediate reduction of DDT to be examine. Although public was supportive to Rachel Carson by understanding the effects of wildlife, and it was resulted favourable to ban DDT. And in order to protect they started to follow the solutions given by her, then environmentalism was born.

Therefore, people must be aware of environmental resources and that should evoke the next generation to give attention and save bird life as well as the plant life.

**Reference:**
Silent Spring – Rachel Carson – penguin publication.