This hawk is dead and so is her breed. The film you're watching was made in southern Ontario more than ten years ago when peregrin falcons still hunted and nested over most of the northern hemisphere. Now south of the tree line in Europe and America the peregrin falcon is extinct, a brave bird that died by a vicious coincidence. DDT strangled the peregrins one by one before they hatched. The biologists who discovered this fact aren't really sure they found thecause but they believe that DDT in the hawks' food changed their hormone systems. It's the female sex hormone that controls the development of egg shell. When the shell is too thin the chicks die. The peregrin chicks died before they were properly born, victims of a casual race murder. With the peregrins dead and a lot of other wild animals dying the law makers have finally decided to make

an outlaw of DDT. A few American states have passed bans, partial bans on using DDT and this week Ontario finally did the same thing. This looked like a victory I think to almost anybody who gives a damn about any form of life that's not his own and in a way it was. It was a legitimate victory. It's more than a year now since scientists have finally got the goods on DDT. They've proved that in nature it'sa criminal, the substance that goes into the life systems of the world and can damage all of them. That includes ours but in another way the Ontario ban is just the exclamation point that underlines a grave failure of science. It has taken 20 years to convict DDT, 20 years in which the falcons have died, a lot of other animals have begun to die and new strains of bugs have evolved that make DDT obsolete. DDT can't kill them so the only way to get them is to develop new chemicals. At this stage banning DDT is a little like passing a stiff sentence against peddling opium. It's a good move but it's a little late and that's why because the evidence against DDT came after the damage was done. One Canadian biologist recently wrote that his kind of research has failed. The writer is Tony Keith a specialist in fish populations who works for the federal wildlife service in Ottawa.

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Tony Keith

Certainly the first thing we're going to do now is to look at at not only other insecticides that might have the same characteristics as some of them do we know but entirely different

classes of materials and one that we're interested in now are industrial pollutants that nobody felt were pollutants and one of them is uh a material called polychlorinated biphenile and these things abbreviated PCB's have now been shown to be quite widely distributed in wild life. They are very similar chemically and physically to DDT and we now have a great push ..... as to how these things are put into the environment and what is the biological effect and this now suggests to us that there may be a lot of other materials in the industrial arena that we don't know anything about.

COMPARED THEN TO THE LEVELS OF DDT THAT SCIENTISTS HAVE BEEN MEASURING HOW MUCH PCB IS THERE AROUND ALREADY.

Tony Keith

Well we're only just beginning to look at some work done in California. The levels seemto be very roughly speaking, comparable.

MY GOD SO YOU GET RID OF DDT AND THERE'S JUST AS MUCH OF THIS OTHER PRACTICALLY EQUIVALENT STUFF LEFT.

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Tony Keith

It may be, we, you know, we hope that's not true. At the moment we have to look at this very seriously and we are right now. We're looking at a whole number of Canadian animals to see where the PCB's are.

environment already as there is DDT, maybe more. Together they're the leading industrial pollutant of the globe. How do PCB's get from the industrial systems to the natural one. Most of them are probably dumped there. Plants that use PCB's often flush them straight into the sewers and from there it's a short trip to the rivers and lakes. Other PCB's are pumped into the air by incinerators burning off the solid garbage of the cities, discards that include most of the products that keep the affluent society happy. Pure PCB's come from the factory in three more or less handy varieties, a liquid clear and white as gin, a crystal yellowish hard and dry and a sort of gummy type that hardly moves in the bottle, very much like some of the glues and varnishes it's used in. But although it first showed up as an industrial product in the 1930's scientists know almost nothing about it. In the natural world PCB's have been found in most of the animals that have been damaged by DDT and there's some evidence that it does the same kind of damage. One biologist has reported that coho salmon in Lake Michigan have been killed by PCB. Another has reported damaging amounts of PCB's in terns and possibly even in seals. PCB's have been found in herring gulls, eagles and gannits, all birds with declining populations. And when a biologist experimented with the effect of PCB on birds' eggs he reported that PCB was five times more potent than DDT in degrading the eggs. Now that's really about all anybody knows about PCB. Very few life scientists have

investigated it and they only within the last year or so. But next month there's an important conference of bio-chemists in Washington, D.C. and it's my guess that you'll read about PCB's for the first time in the papers when some of those men get up to speak. Because there's a touch of outrage among the life scientists I know. They failed to find out the truth in time about DDT, mainly because the governments and the rest of us gave them almost no backing, compared to astro-physicists who are professional football players, they're the paupers of the technological society. But they don't want to fail this time.

Tony Keith

We are very ill equipped at the moment to assess a new compound coming into the environment. We can, all we can say in a kind of naive way is well is it going to behave like DDT and this obviously isn't a sophisticated approach. We don't know how to set up environmental tests that would screen new materials for us and a great deal of basic research has to go into this business of getting an environmental test. The longer the series of years in which one does research the lower the threshold level at which effects take place. That is the more you do research the more pointed your questions get and the more you see effects occuring at levels that are lower than those years ago and this is terribly true of the DDT bird situation. We used to think that we were safe at quite high levels with DDE for example. Now we know that

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this was eye wash, not at all. Now by extrapolation this may turn out to be true of human beings. I don't think anybody could really challenge that, that is that levels that now seem to be safe may in a decade prove to have not been so safe.

Ten years from now. It's just about ten years ago that Rachel Carson was writing Silent Spring and peregrin falcons were still flying across the forests of Canada. It may take another ten years to prove whether PCB's are innocent plastics or biological assassins or it may not. We may turn out to be as angry and have as much good sense as the Swedes who have just done something new. They have formed citizens committees, vigilante groups of a thousand ordinary men and women who will go out and patrol the industries that are poisoning the water, the soil and the air of Sweden and press for new laws that will make environmental poisoning a crime punishable by sentences in jail. Crimes like this will always be hard to prove but we convict careless drivers of criminal negligence for God's sake while corporations and bureaucraci are conspiring to poison the living systems that we're all part of, all of us, you and I that is, the Shell Oil Company that sells us most of our DDT and the Monsanto Corporation, they're the guys who sell us nearly all our PCB's and they don't know much more about them than we do.

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