

ANTHONY S. TAORMINA, Called as a witness in behalf of the plaintiffs, being duly sworn, testified as follows:

THE WITNESS: Anthony S. Taormina. * * * 108 Glenwood Lane, Port Jefferson, New York.

DIRECT EXAMINATION by MR. YANNACONE:

Q. Mr. Taormina, how are you employed at the present time? (377)
A. New York State Conservation Department.

Q. What is your job title?
A. Regional supervisor of fish and game for the region of Long Island, New York City.

Q. And how long have you been so employed?
A. I have been with the department since 1949. I was in my present job title since 1965.

Q. And what were you before this job title?
A. Senior wildlife biologist on Long Island and in the Syracuse area.

Q. How long have you lived on Long Island?
A. About five and a half years.

Q. And where did you live before that?
A. I have lived part of that in the Syracuse area, and then I had a farm in the Canadaigua area, and I grew up on a farm in Columbia County.

Q. Where did you go to college? (378)
A. New York College of Forestry at Syracuse University. * * * I got my bachelor of science in 1949 and my master of science in 19--pardon me. I received the bachelor of science in '48 and the masters in '49. * * * In wildlife management.

Q. And when did you start college?
A. 1940.

Q. What did you do between 1940 and 1949?
A. Well, I went to school for two and a half years, and then during World War II I was in the Army, where I served in Europe and the Pacific.

Q. And what did you do in the Pacific?
A. Well, I did a number of things. I was working primarily with a specialized quartermaster depot company, but I was also at one stage engaged in malaria control work because of my background in entomology.

Q. You have a background in entomology? (379)
A. Yes, I do.

Q. Now, you have heard all of the testimony. You were subpoenaed here yesterday morning, and you heard Mr. Williamson, Mr. Kellar, and you heard the various colloquys that went on, is that right?

A. Yes, I did.

Q. As a representative of the New York State Conservation Department, will you state for the record, just what it is that the Conservation Department considers conservation to be?

A. Well, I think we should first define conservation. As the professionals use the word, conservation has to do with the wise use of our resources. We have, of course, two basic kinds of resources. We have the renewable and the nonrenewable resources in fishing and game work. We are primarily concerned in our work with the renewable resources. It goes without saying that with respect to these resources,

Long Island has some of the finest anywhere in the world.

Now, one of the problems with conservation is the fact that we define it as a wise use. This gets to be the crux of the matter--what is wisdom? (380)

Wisdom or wise use is a very complex evolution of a person's philosophy, I suppose, which is based on his education, his experience, his overall intelligence, and probably his vested interest. I think that this whole basic problem we are discussing today is based on the wisdom. It is value judgments based on how any one person reacts to all the information that he perceives, based on his own background of educational experience to determine value judgment.

In our business of conservation, we are primarily concerned with preserving a healthful environment for fish and wildlife species. This is done not only because we believe this is the primary and the most reasonable way to perpetuate a species for the wildlife and fisheries population, but furthermore, because we feel that an environment which is healthful for fish and wildlife is also the best environment for men. So you might say that even though we are concerned basically with the fish and wildlife resources, we are nevertheless very concerned with man's status in this very same environment. (381)

I, as a professional, use both terms in trying to weigh in my decisions as to how any one practice or how any one particular aspect of our job should be judged, because a state of harmony between man and his environment indicates that what man is doing to the air, to the water, to the land, indicates what his future will be on this earth. If he pollutes the water, if he pollutes the air to a point where he can't use it, he is obviously not in harmony with the environment.

I thank you can define conservation in both these senses, and it helps to make it more meaningful when you try to reach a decision as to whether something like DDT is harmful or not.

* * *

Q. Now, can you tell us in the regular course of your business as a professional conservation department employee just what you tend to rely on to form judgments as a department member? (382)

A. Well, this is a very complicated world we are living in today. Even though we get trained in college, and even though we try to keep up with our changing society, it is almost impossible today to be aware of all the changes that are going on in our society. Therefore, one of the most important things that we do is to try to maintain contact with other professionals in the field either by personal contacts with meetings, but especially in reviewing the countless publications that are available to us. We try to screen through them, and we try to learn from them what other people are doing in other parts of the country which could be appropriately evaluated in terms of our own job here.

Today it is almost impossible to keep up with the changes that are going on technologically. Take pesticides for one example. Try to keep up with all the new chemicals are being produced not just to kill insects but to kill plants. This has become a science in itself. This is only one small aspect of our job of managing the environment. (383)

We are responsible under the Long Island Wetlands Act to work jointly with a number of towns who have asked us to help them in managing the estuarine environment. The Town of Hempstead has 10,000 acres, Oyster Bay 500, and Islip 550. All through this a knowledge of what is used in the way of mosquito control programs is very essential to our determining a pathological solution toward the overall management of these wetlands management, because overall our basic job is still the fish and wildlife population.

As one example, we have in New York State along the Atlantic Coast, a black duck. This is an animal which is indigenous. It is a wonderful wild creature present in our marine environment, in our upstate woodland environment. It is one that is still hunted, but it is an animal which is decreasing. It is an animal that we are very concerned about. In fact, so concerned are we, that we have monitoring stations throughout the Atlantic Coast just doing one thing-- measuring the amount of DDT (384)

present in the eggs of this duck. There is only one species, only one chemical. We could be measuring for a dozen other chemicals, but this is a very complex situation and in our surveillance we have to maintain and try to be aware of what the factors are affecting our population and, of course very few of them are stable.

MR. CORWIN: Judge, I move to strike out the answer on the ground that it was not responsive. It was a very articulate dissertation on something that is wholly irrelevant in this case. The question was how do you make your judgment, and I submit that none of it was responsive to the question, and it should be stricken.

THE COURT: I thought it was very enlightening as far as I was concerned.

MR. CORWIN: Yes, Your Honor, but it was irrelevant.

THE COURT: I think the information would be most helpful to the Court. As (385) I said before, I want every bit of information that I can get. I don't know any more about it than I suppose you fellows do, and I want to learn. I learn basically from the ground right up, and I want every bit of information I can get in order to make a determination in this case.

Now, I have no jury here, counsel, There is nobody we have to impress. So far as the Court is concerned, I want it, and I don't say I agree with it. But I certainly want both sides of this case.

MR. CORWIN: Judge, I am not arguing that question. I'm sure that you should have it, Your Honor, but only to the extent that it is relevant to the issues in this case.

THE COURT: Counsel, all I say to you is that this is a very important case. I had only one other case like it in my life. That was the microcephalic baby case that I had. This is a case like that one, and it challenges your imagination. It is new. I have nothing to work from. Both you gentlemen admit that there are no decisions on it. I have to come in here like an embryo, a baby, and learn from the bottom up in order to be able to decide this case. In my opinion, any decision that I make here, it is going to be extremely important.

MR. CORWIN: However important the case may be, if the Court pleases, there is no reason why the ordinary rules of court procedure should not be upheld here. If from your remarks I am to interpret that my objection is overruled, I respectfully except.

THE COURT: It is overruled, I will eliminate that part that I think does not belong, and I will take the part I think does belong. I am attempting to get to the bottom of all the facts in this case. I have been working under a terrific handicap here. I spent most of the night in the library, and I have got all of your briefs so far. I read them all. I have followed all the law already. I got through at two o'clock this morning. This isn't going to be an easy case for me, counsel, and I want the cooperation of both of you so that I can have everything. * * *

So bear with me, please. I enjoy this. A case like this, I say, challenges a judge.

* * *

Q. Mr. Taormina, have you had occasion to examine the literature with (388) respect to the biological effect of DDT?

A. I most certainly have and---

* * *

Q. Do you consider yourself familiar with the general literature on the biological questions of DDT?

A. Yes, I do.

Q. Do you examine this literature in the regular course of your business in your profession as a representative of the Conservation Department?

A. Yes, I do.

Q. Were you by virtue of your professional status compelled to make value judgments and decisions in your regular work on the strength of this literature?

A. Yes, especially here where so much activity on the marine environment (389) is that activity pertaining to mosquito control which sometimes is not in conflict with our objectives, but sometimes it may be.

Q. As a regular part of your work in wildlife management, are you compelled by the necessity to become familiar with the methods of mosquito control?

A. Absolutely

* * *

Q. Mr. Taormina, make your answers as short as possible, and then we (390) will have a foundation where you can elaborate on it.

THE COURT: Let me explain it to you. We have rules of evidence in this trial. That is what this gentleman is objecting to. We have certain rules of evidence, and this is within four walls of what a person can testify to. Some things they can say, and there are some things they can't say. They are ground rules. Now, try to follow the questioning of counsel and just give as short an answer as your possibly can. Do you follow that?

THE WITNESS: Yes.

Q. Did you answer the question as to whether or not mosquito suppression (391) and control was a subdivision or included discipline within the entire field?

A. Yes, they are very closely interrelated.

Q. And in your study of wildlife management, you have become familiar with the methods of mosquito suppression and control?

A. Yes, I have.

Q. And as a regular course of your work as an employee of the New York State Conservation Department, do you have occasion to examine and study methods of mosquito suppression and control?

A. Yes, I have.

Q. In this state and elsewhere?

A. I have in Florida and in New Jersey studied this. * * * As well as in New York.

Q. Are you familiar with the methods in Suffolk County?

A. I think so. I know pretty much what he is doing. (392)

Q. Are you familiar with the methods used in the State of New York?

A. Yes, sir, especially in Nassau County.

Q. Now, just answer this question yes or no. Can you form an opinion with a reasonable degree of scientific certainty--and by that I mean the scientific certainty that is peculiar or unique to your discipline of wildlife management--can you form an opinion with such certainty as to the potential effects of DDT on natural resources of the County of Suffolk?

A. Yes.

Q. Have you formed such an opinion?

A. Yes, I have.

Q. As briefly as possible, tell us what that opinion is?

MR. CORWIN: Objection.

THE COURT: Overruled.

* * *

A. All right. That opinion is simply that we feel very strongly that (393) DDT and some other hydrocarbons, but DDT is what we are talking about here today, are responsible for very serious harmful effects to certain fish and wildlife populations that are long-term, long-lasting, and that these effects are so serious that we are most anxious that DDT be eliminated as part of our control program for whatever purpose that it may be required.

THE COURT: Let me ask you this, sir. Do you feel that it would be better for your department to go to the Legislature for that purpose?

THE WITNESS: Well, sir, I would say any means to the end, if that were a better procedure legally. I don't know as I can decide that. At this point, we are most anxious, along with many other people, that DDT be banned from use, and this would be one way to do it.

* * *

Q. To continue on that line, do you feel that this litigation is further- (394)
ance of this opinion and objective of your department?

A. Well, I would say it is compatible with it, certainly.

* * *

THE COURT: . . . Let me ask you this, Mr. Witness: Are there not other sprays or pesticides that are used that are also dangerous?

THE WITNESS: Well, endrin, for example, even more so than DDT. Several years ago, this became such a tremendous public outrage, you might say, yet there were many decisions made as political decisions not to ban endrin (395)
in New York State.

THE COURT: Did they?

THE WITNESS: I think various pesticide users did ban it, but I am not aware that there was a state judicial order or executive order banning it.

THE COURT: Does Agway handle it today?

THE WITNESS: They may very well do it. I know the duck farms have used endrin to kill nuisance birds.

THE COURT: Let me ask you this: Don't you find that even if you stopped DDT, these inroads would continue?

THE WITNESS: This is one of the great problems we have in our society--to provide controls for reasonable use of these pesticides that may be harmful to the total society of fish and wildlife as well as man. It is a tough battle. It is a tough battle to document what happens when you use different pesticides in a (396)
certain environment. As a result of this battle, we now have established a fish and wildlife service in our department and other agencies. We have a pesticide laboratory whose sole objective is to try and measure and test what happens when you add a certain pesticide to the environment.

THE COURT: Here is what I am trying to bring home to you. You will go to Agway or any one of these companies--I'm not picking on them and I just mention Agway because I know them. You go there, and you see a whole shelf filled with pesticides. I understand that some of them are extremely dangerous, even when they get to the skin of your hand.

THE WITNESS: That is right.

THE COURT: They might make you deathly sick.

THE WITNESS: Yes.

THE COURT: Now, don't you feel that I am just gilding a lily when (397)
I pick on DDT as such when in fact there are other pesticides that are used that might cause these very ravages that you are talking about?

THE WITNESS: What you are saying is true. On the other hand, I think that----

THE COURT: As a matter of fact, I use them on my own farm.

THE WITNESS: But the fact remains that we have here in DDT some-
thing which has been long established, used worldwide, and the documentation has been building up. The case histories against DDT are building up so that now we have a tremendous evidence to indicate that the benefit ratios are now back in the other direction.

I was in the war when DDT first came out, and I think everybody thought, "Wonderful, great. This is the greatest thing that science ever evolved."

THE COURT: What I am trying to bring home, and I would like to know, is this: We have many pesticides. When you choose one off the shelf, are you accomplishing anything, in fact, except extracting a tear from the rose or any other corollary that you want to use? (398)

THE WITNESS: What you are saying is true. I am not sure what my role here should be in trying to judge this.

THE COURT: To give me an education, because I am the one they have to educate so that I can make a decision in this case. In other words, what I want to know is this, Mr. Witness: This is a case that is brought simply as an attack against the use of DDT. Will a decision of mine to the effect that DDT shall no longer be used mean anything insofar as the death and destruction of these very things that you are talking about?

THE WITNESS: I hope so. (399)

THE COURT: For example, if I use endrin in my pasture and turn my cow loose, I will kill her. Is there any doubt in your mind about that?

THE WITNESS: It could very well happen.

THE COURT: Yet, I buy this endrin right off a shelf.

THE WITNESS: I think what this proves, sir, is the slavish attitude that our society has toward technology. We almost accept it if somebody makes something. This is great. We almost accept technology over the natural evolution of----

THE COURT: The only trouble here is that we are involved in this particular point. I can't go beyond it. I have to stay here. I have to determine whether DDT shall be used. Another problem I have is do I have the right to make such a decision or does it belong in some other jurisdiction where they can take care of the overall difficulties that we have. That is my problem here.

THE WITNESS: Well, if I may take this statement now and enlarge upon it, Your Honor, without objection, I hope. We have tried to influence people, sir. Obviously, we all want to influence according to our point of view. We have tried to discuss with the county executive and others reasons why DDT should not be used in Suffolk County. In fact, I think two years ago, there was a conference which was very well attended. I'm not sure whether it was in Riverhead, but I think it was in Riverhead, and we all had an opportunity to express our opinions relative to DDT. I thought at that time there was a pretty well-agreed upon philosophy that perhaps the time had come to at least, in this one pesticide, no longer use it. (400)

* * *

But nothing ever happened. (401)

THE COURT: You are missing my point. As an example DDT is being used in this case.

THE WITNESS: And there is so much evidence that has been documented.

THE COURT: But by the same token, we have the secondary effect here that although DDT might be harmful, do I have the right as a Supreme Court Judge to say to Mr. X, "Look, You may not use DDT," when in fact they can go to the legislature who can take care of this whole field in one fell swoop, rather than have a multitude or hundreds or thousands of actions. (402)

* * *

Don't you think that the whole field bears the same blame as DDT, even though DDT may be a little more harmful?

THE WITNESS: I think this is a very good point. Certainly the Legislature should be concerned about it, and I think they are concerned about it. But no one is making the decision. That is the problem, I believe. No one said we must make the decision. I guess they are all waiting for somebody to be the first one.

THE COURT: And it looks like they picked on me.

THE WITNESS: You may be the best man for the job, Judge. Who knows?

* * *

Q. You heard the testimony of Mr. Williamson yesterday, didn't you? (404)

A. Yes.

Q. And you heard his description of 20 years of use of DDT, did you not?

A. Yes.

Q. Do you have an opinion with a reasonable degree of scientific certainty as to whether or not the DDT present in the environment as a result of that use over 20 years is significant with respect to wildlife menace?

A. I would say it is.

Q. Now, do you have an opinion with a reasonable degree of scientific certainty as to whether or not the continuance of the use of DDT by the defendant commission would have any potential harmful effect on wildlife in this county?

A. I believe it would.

THE COURT: Now, can I ask you one question? * * *

And I ask this again to get information. Hasn't it almost been (405) conceded by counsel and just about everybody, that DDT is harmful?

MR. YANNACONE: Your Honor, it has not only been conceded, but it has been admitted.

THE COURT: Well, if it has, then why do we have to have testimony from these gentlemen? Believe me when I tell you that I enjoyed his explanation of the points that he had, but what he is doing is only adding to what has already been conceded.

MR. YANNACONE: Your Honor, it has been conceded throughout the technical literature for six or seven years.

THE COURT: Then what is the point?

MR. YANNACONE: To be quite blunt, Your Honor, all this vast body of evidence doesn't seem to mean a darn thing to anybody who has the power to ban the use of DDT. We heard Mr. Williamson make the statement that he wants to be able (406) to continue to be able to use it. * * *

THE COURT: If in fact there is this concession that you are talking about--and that is what I seem to gather when I read what I did and heard what I did hear so far--the next question after that is this, and I don't know whether it is the only question at this point: Are you in the right forum?

MR. YANNACONE: Your Honor, if we are not in the right forum, we have no forum.

THE COURT: Well, here is what I am getting at. Does the judge of the Supreme Court have the right to act affirmatively in a matter such as this or is it the problem of the Legislature to have the matters presented to it and have overall legislation that says, "Look, You can't use this, this, this, and this, because it is (407) dangerous," in the same way as they say you can't use any of these drugs and he used as an example, if I remember correctly aspirin. * * *

MR. YANNACONE: Your Honor, when you talk about the Legislature, you are talking essentially of a political----

THE COURT: I am just asking you if that is not so?

MR. YANNACONE: Please let me answer the question, Your Honor. You are talking about a political decision that depends upon the majority or the representative of the majority of the people coming to an informed judgment on behalf of the community. We contend, and the basis of this whole lawsuit is, that the evidence against DDT takes it out of the political-majority-rule field and puts it in (408) the realm where judicial action lays. Ten years ago, or nine years ago, when the action was brought by those unfortunates who tried to eliminate the aerial spraying for the gypsy moth because it interfered with organic gardening, this action was brought with no real scientific foundation. Since 1960, ten times this (indicating Plaintiff's Exhibit C, technical appendix) in literature, scientific literature, has been produced anti-DDT, documenting harmful effects here and all over the world.

Now, your honor, we are saying that at this time there is a right in interested individuals to come into a court, not a political arena, but a court of law and have this tested not on television with a bunch of political hearings, but to have this testimony taken in the judicial environment necessary to establish the right that when scientific testimony reaches the degree of almost certainty or at least scientific (409) certainty, the court has the power to give injunctive relief.

THE COURT: Counsel, what I am trying to bring home to you is that I am not saying that DDT is not harmful. I am not saying that DDT is harmful. But I say to you, and that is what I tried to bring out--perhaps I didn't do it as I should have--that I know of my own knowledge of several sprays that I personally use with rubber gloves, rubber jackets, masks, and what have you, because I happen to be, as you know, a farmer at heart. * * *

And if the Court says that man is to stop using DDT, then what is to prevent a tremendous multitude of actions via all other persons who feel that this isn't a good thing to use or that isn't a good thing to use, and the like. The Court would be filled with such lawsuits. (410)

MR. YANNACONE: Judge, I think you remember the change in the negligence law with respect to death from fright without physical contact. I settled the first of those cases upstairs. The defense for 111 years, I think, was that it would produce a rash of lawsuits. To the best of my knowledge, there have been only three since that, and one of them was a compensation case.

THE COURT: Let me go a step further. Every one of these men know that we find deer dead and bloated out on the field. We also know that a lot of fruit farmers kill birds by the hundreds by poisoning them, at least so I am told. Now, while you have this particular action of DDT, I cannot see where my decision would have any effect concerning these poisons that they sell at any local hardware store, feed store or agricultural outlet. (411)

Now, we have racoons, They can really do a job on chickens. Mr. Raccoon gets in and really raises the devil with your corn field. How will that stop this injustice toward our natural resources? * * *

MR. CORWIN: Before we get on any more questioning, I would like to have not equal time, Your Honor, but a little time to clarify one point. * * * Your Honor made the observation that we were conceding that DDT was harmful. * * *

All right. We made the concession with certain limitations. The minute that is said, however, Mr. Yannacone, picks up his great big technical appendix which contains a lot of what he thinks is the best and most authoritative learned literature on the subject and starts waiving it around, and says, "These people concede it." (412)

I am not making that concession, Your Honor, and I want it to be very, very clear. * * *

MR. YANNACONE: I just want to make a little statement for the record, Your Honor.

THE COURT: And I want you to answer my question. Go ahead.

MR. YANNACONE: The concession has not been made that DDT is that harmful.

THE COURT: I said assuming that they did concede it was harmful. (413)

MR. YANNACONE: Assuming that was conceded and all the plaintiff's technical evidence would be conceded, you would be faced with a simple question of constitutional law, and we are in the right place.

THE COURT: What are my rights? * * *

MR. CORWIN: Judge, all along our position has been that we are conceding that DDT under certain circumstances is harmful, and if it builds up in the food chain before the birds show resistance and tolerance and the fish, some of them are killed. * * *

The point is this: while we concede that, Your Honor, the question here is whether or not those children yet unborn who shall live within the County of Suffolk will suffer serious, permanent and irreparable damage? That 's the question. Now, if he wants to ask some witness who thinks he is qualified. ---- (414)

THE COURT: Mr. Corwin, that would only touch on the degree of the seriousness. I say to you that that is not what I am worrying about one bit, because should I find that it is harmful in any respect where unsuspecting people can be hurt or people in other areas and, for example, you see these cabbage fields where they used to use DDT solely on the cabbage. They have some man cleaning these cabbages very nicely, crating them, and then sending them out to market. Then a lady in New York City gets that cabbage or cauliflower or head of lettuce, and if there is DDT on it she doesn't know it. She has a right in my opinion--and this is not unlike the detergent case that I tried, where I held in favor of the defendant Suffolk County Department of Health, which was a difference--but here the help that I want is my ability to give a decision that would in effect stop all of these things from happening to unsuspecting people or suspecting people who knew nothing about them. * * *

I am not ruling against you. I am inclined to think the way you are thinking.

MR. CORWIN: I would like to point out that he said, if I am not mistaken, that the effect of DDT on people was something that he was not going to prove or assert directly, and it was the indirect application that it was hurting a few fish or birds to which we made a concession. (416)

THE COURT: Well, it won't make any difference.

MR. CORWIN: So we are not concerned about this woman eating cabbage.

THE COURT: Well, I am. It might be me.

MR. CORWIN: That is not in the pleadings at this time.

THE COURT: I know it. Do you know what we have here? We can almost attribute this as a part of the sequelae. In other words, while we didn't pick an onion, it will be just as dangerous if we put it on a radish.

Q. You have heard the colloquy, Mr. Taormina. Can you tell the Court just what it is about DDT that makes it different in some ways than other poisons? (417)

A. Well, I think the key problem with DDT and some other poisons other than DDT is that it persists in the environment for a very long time in contrast to something like malathion and methoxychlor. When you apply malathion or methoxychlor, it is short lived. It does its job like a bullet almost. It attacks, and then within a very few days or weeks, it disappears from the environment, and it is gone. You find very little trace of it. Whereas with the chlorinated hydrocarbons, DDT in particular, the great problem is the pollution of the overall environment; its broad-brush aspect. The reason why it is a good insect killer is because it is a darn good killer--period. It does a very fine job of destroying a rather wide variety of insects, not only because it hits them immediately, but because it is available in the environment for a long time.

DDT does not stay in place, nor does it attack primarily the creature that you are after. This is the great problem with DDT. It is something which persists and which then expands into the atmosphere, into the waterways, and it remains as a relatively potential threat to other life long after it has been removed from the area of application. (418)

Now, Your Honor, in our role as fish and wildlife managers, I might add that not so many years ago our primary objective was law enforcement and raising animals on game farms as though this were the way to solve fish and wildlife problems. Today we recognize that the primary way to manage a fish and wildlife environment of species is to maintain a habitat or environment that will sustain that population of wildlife. I think it is important to understand that we are talking about populations of animals, not individuals which may die from a gun or a fish-hook or anything else. Our role and our objective is to maintain a productive seacoast or salt marsh or woodland or any particular environment so that the wild animals will live and prosper within that environment and not have to be insured by handouts from other people; that the environment will produce for that total population all of its requirements. (419)

Now, let me get back to pesticides. Pesticides tend to destroy the quality of the environment in one degree or another, but some to a very marked degree, as DDT in this case, because it then either destroys certain animals--and by animals I mean even insects who are animate here or microscopic creatures--by remaining in the food chain for many periods, well, for many weeks, many months, and continues to affect not only the well being of a broad group of animals but also all those who feed on it.

Now, even though it may not kill these animals, it does affect their ability to survive. It affects their ability to compete, which is a very difficult job without complete muscle response to every nerve. Every muscle must respond immediately. If in any way they are debilitated, they can no longer do their job of finding food and living in a very severe and constant struggle for survival. (420)

* * *

Q. In other words, you then feel that DDT is somewhat unique among the pesticides?

A. Well, not entirely unique, but within the very small group of pesticides it does persist for a long time. (421)

* * *

Q. All right. Are you familiar with the natural resources of Suffolk County?

A. Yes.

Q. Is there anything unique about the natural resources of the County of Suffolk?

A. Well, Suffolk is certainly one of the most wonderfully endowed counties from the point of view of its fresh water, woodland and marine environment. Needless to say, it is very distinctive. (422)

Q. And this distinction in our environment is of value to the operation of your department?

A. Most certainly.

Q. And is it the intent of your department to do as much as possible to preserve and maintain this environment?

A. We think it is to the best interest of all the people of the county and the state to do this.

THE COURT: Can you keep pace with the development and building up of our marshland that has been taking place in Suffolk County, that is the salt water?

THE WITNESS: Yes:

THE COURT: How about the land itself?

THE WITNESS: Well, we hope that we will develop enough awareness of the saturation potential of our environment. We know in wildlife biology that there is no such thing as an expansion of a population around us.

THE COURT: Let me ask you this: Isn't it a fact that with the development that we have in Suffolk at the present time, there are very few spots where you can find any natural resources, especially in the animal field; that they are few and far between? I can give you maybe the Nissequogue, maybe the Head of the Harbor, maybe some parts of the North Shore, period. For the rest, the dogs have taken care of those areas and other things have moved in and practically destroyed them. A few years ago, it was nothing to see a deer or a fox or several other types of animals. (423)

THE WITNESS: There are fewer every day.

THE COURT: That's right.

THE WITNESS: But we do believe that the marine edge is something that we must preserve, because in the future this will become the most important part of Suffolk County.

THE COURT: Well, does DDT affect the marine edge?

THE WITNESS: We think it does. (424)

THE COURT: Do you think or know?

THE WITNESS: Well, we know it does.

THE COURT: All right.

Q. Mr. Taormina, can you state with a reasonable degree of scientific certainty whether or not DDT affects the estuarine environment of this county?

A. Yes. As a matter of fact, we are monitoring, and we have at this moment 15 monitoring stations in ten different waters for this specific purpose of measuring the quantity of ten or twelve chlorinated hydrocarbons, which include DDT, DDD, and DDE. This is on a continuing basis just so we can have more documentation of our own to indicate what has happened in these environments. These are very expensive things to do, very difficult things to do. We are not equipped in our own labs to do this, and we must send our materials to Gulf Breeze, Florida, for our own analysis.

Q. Do you feel that in the regular course of your activities in the Conservation Department that you have had occasion to determine whether or not DDT is present in the estuarine environment of the county? (425)

A. Well, I just mentioned the one thing we are doing.

Q. How long has this program been going on?

A. Well, this specific program about a year.

Q. Have you had any results from it yet?

A. Oh, yes.

Q. Have you found DDT present in the environment?

A. Oh, yes.

Q. Now, do you feel that this DDT that is present in the environment is potentially inimical to the natural resources of the county?

A. I think we agreed on that.

Q. Now, with respect to the other chlorinated hydrocarbons, do you have any information or opinion as to whether or not they are utilized as much in the environment of this county as DDT? * * *

By anybody?

A. Well, things change rapidly every year. At this moment malathion may be used more. (426)

Q. Well, malathion is an organic phosphate, isn't it?

A. Right. Malathion is not a chlorinated hydrocarbon such as, well, dieldrin and endrin, which I think are probably the major ones.

Q. And in the past did your information lead you to believe that DDT was the primary chlorinated hydrocarbon used in this area?

A. From what we can observe, probably so.

THE COURT: Will you do something for me? Will you give me the chain of how that would work, and give me the final effect that you were describing--the use of DDT?

THE WITNESS: Two things happen. Let us assume in one case an application of DDT is made in a water area.

THE COURT: Be more specific about water area. Do you mean salt water?

THE WITNESS: Let us take an enclosed water area, let us say a pond.

THE COURT: Like a lake. (427)

THE WITNESS: Let us say a pond or a lake, yes. DDT is applied for one purpose or another. When it enters the water, there has been enough documentation made to date, Your Honor, to indicate that when it reaches a concentration of so many parts per million, we can be quite certain that certain fish that may be present in that water and other animals will die from direct contact with DDT. In the fish's case, it enters through the gills. They breath through their gills, and it affects the nervous system. Exactly how it does that, I don't know.

THE COURT: I don't care about that.

THE WITNESS: Well, we aren't just sure. The fact remains that it affects their nervous system, and for the most part many of them will die in a very short time. This is the immediate result.

Now, in the meantime, DDT affects in other ways. As it enters the water, it also kills the smaller insects in the water, the aquatic insects, such as the stone fly larvae or the plankton, which are microscopic waterborne plants and animals, they also absorb DDT and concentrate it. These very small food particles are eaten by larger insects and other larger animals and fish. Each time it is eaten, the fatty tissues of the animal higher above in the food chain keeps some of that material in its own body chemistry. There are reports here. * * *

. . . which indicate how rapidly an oyster can concentrate DDT in a matter of 30 or 40 days, many thousands of times the concentrations found in the water.

Now, for example, this is concentrated in something like the ospreys which eats fish and which concentrates DDT which they may have gotten from eating other fish or other insects or other plankton, the microscopic plants and animals that make up the first part of the food chain.

Now, DDT enters into the brain. It actually ends up in the brain. This is true of eels, and it is also true of humans.

THE COURT: Doesn't that dissipate when it reaches the coastline?

THE WITNESS: Of course it dissipates. It absolutely dissipates. It becomes less and less and more and more dilute, but you have to keep in mind that when it is always present, or if it is present throughout your vast environment, you have this continuous recircling. In other words, it is picked out of the environment, and it is recirculated in what we call the food chain. So that when it gets into the brain, it reeks this havoc with the central nervous system of the osprey or other living creatures. We don't know, and we may never find out how many parts per million in the brain tissue of an animal it takes not to kill the animal but before it can respond and determine: "There is a fish down there. I'm going to catch it and dive for it. I'll grab it." We don't know this, and we may never know this.

We do know that there are more and more animals in the environment that show DDT. We know that we have it in our fatty tissues.

THE COURT: All right. I have it now. Go ahead.

* * *

Q. Mr. Taormina, . . . Have you had occasion to study the methods of mosquito suppression and control in the course of your work? (431)

A. Yes.

Q. Do you have an opinion with respect to the necessity of the continued use of DDT for mosquito suppression and control? * * *

A. Yes, I do.

Q. Tell us what that opinion is.

A. Well, we believe that mosquito control is a very important part of our way of life. We are not arguing against mosquito control, but we do believe that this can be done by other pesticides, and not just by other pesticides but by other techniques as well, including a more determined effort to work within the environment management.

Yesterday, Mr. Corwin unfortunately took something out of context, the statement about 5% of the budget. If we could get 5% of that budget--not that we would want it--but if the commission would use just a small amount of money, to try and improve some of its wetlands area. Take this sump in Yaphank. If it is made deeper so that it would hold more water, we could improve the overall fish and wildlife point of view from a storage point of view, and we could probably control the mosquito within reasonable limits. (432)

So we have these two techniques: Other pesticides which have to be made a little differently, and it will take better management or more control to use them to the best advantage of environment management. This, of course, is being done in other states and in other counties.

Q. Do you feel that should encephalitis warnings come, that DDT would be necessary to control mosquitos in this county?

A. I could be done with other pesticides.

Q. Do you have an opinion as to whether or not it is initially the toxicity of the pesticides that is important with respect to wildlife effect or its long-life persistence that is important with respect to wildlife effect?

A. The long-life persistence, that is most important. (433)

Q. So, in other words, a very toxic substance that breaks down very quickly is not going to do the damage to wildlife that a less toxic but more persistent substance would?

A. Well, I wouldn't quite put it that way. You can have a very toxic substance which in the area where it is applied might do tremendous damage in the animals that are there but in the long run it would dissipate very quickly and not become part of the environment.

Q. In other words, it wouldn't be an environmental contaminant if it broke down quickly?

A. There are some which we believe this is true about.

Q. But DDT would persist for a long time and would become an environmental contaminant?

A. Yes.

Q. And it is the presence of these contaminants in the environment which makes them potentially harmful?

A. From our point of view, yes.

Q. Do you feel that there is sufficient DDT present at this time in the Suffolk County environment or ecosystem that any further application by the defendant mosquito control commission would cause potentially serious harm and irreparable injury? (434)

A. Well, you must understand that everybody contributes to it. It all contributes to it. We still have a vast amount of knowledge to gather.

However, we can only say this: By the looks of things today, we must use extreme caution and good judgment and that it would appear to be not in the best interest of man to continue using this material.

MR. CORWIN: What was the end of your statement?

THE WITNESS: It would appear not to be in the best interest of our society to continue to use it.

MR. CORWIN: I move to strike that out as not responsive to the question.

THE COURT: I will allow it.

MR. CORWIN: Exception. * * *

MR. YANNACONE: I have no further questions. (435)

CROSS EXAMINATION by MR. CORWIN:

Q. Now, with respect to this prospective encephalitis outbreak and the use of some chemicals other than DDT to control mosquitos. In order for it to be effective, the use of these other chemicals will have to be more widespread than if you were to use DDT, isn't that so?

A. What do you mean by widespread--in a broad base of application or in the length of time that it stays active?

Q. In the length of time that it stays active.

A. This is a desirable trait from the point of view of killing an insect. This is a good feature if you can say, "I am only going to apply the spray once in three weeks rather than once every five days."

Q. In order to do that, it would take more equipment and everything else, isn't that so? (436)

A. Yes, and the municipal cost might be greater.

Q. Do you know whether or not the Suffolk County Mosquito Commission has got the manpower to apply----

MR. YANNACONE: I'm going to object, Your Honor, in the case of an encephalitis epidemic, I know I would be working on it, and I think you and everybody else would.

THE COURT: None of us have got encephalitis as yet, thank God.
So let us stay away from that. * * *

Counsel, I have ruled. Now, let us go ahead.

(437)

Q. Mr. Taormina, will you tell us some of the other factors that affect the estuarine marine edge?

A. Well, the estuarine is part of the marine environment. It is the brackish part of our marine edge.

Q. What are the factors that affect it other than DDT?

A. Well, there are many. * * *

There are many things that affect the marine environment. Certainly detergents are one. One-half part per million of detergents are actually lethal in certain parts of our animal food chain and plant food chain. We have the filling of our marine edge as a factor. * * *

. . . the filling in of our salt marshes and shallow bay bottoms.
This is a very obvious factor. The change in brackishness is a factor. It is a very complex environment.

(438)

Q. What about the waste from the duck farms in Suffolk County? Is that one of them? How about pollution from our own cesspools, these are factors, are they not? * * *

A. Well, these are all factors. * * *

We agree that these are all factors which influence what happens to marine environment.

Q. The duck waste that has been found could be very significant and serious, isn't that so?

A. In some parts of the environment, yes.

Q. And it could be serious with respect to the oyster population?

(439)

A. Well, shellfish in general.

Q. Oysters in particular?

A. Yes.

Q. Now, about the water management that you spoke of in this affidavit that you say we took out of context, does that also have some effect on estuary?

A. We believe that it could have a positive effect.

Q. Who is making that judgment, and what do you mean when you say we?

A. * * * . . . our unit, our conservation unit here on Long Island.

Q. Do you speak for the department in the testimony that you are giving this morning?

(440)

A. I speak for my regional office, certainly.

Q. Do you have any authority to indicate what you are saying is department policy?

A. I would think so.

Q. You do?

A. Certainly.

Q. Do you have written authority to that effect?

A. I don't need written authority.

Q. Do you have any oral authority to that effect? * * *

A. Do you mean do I ask permission from the commission?

MR. YANNACONE: I will object. He is the boss.

A. I report to two different people. One is the local director, Dave Wallace. He is the local director of marine fishery, and he knows that I am here and knows why I am here.

(441)

Q. I hand you a written paper, and I ask you to read it? Can you identify it?

A. I know of it.

Q. What are you looking at?

A. A letter. I am looking at a letter from Deputy Commissioner Heacox to Dr. J. Henry Wills.

THE COURT: Counsel, what do you want to know about the letter?

MR. CORWIN: I want to know if it states the policy of the Conservation Department with respect to this case. * * *

THE WITNESS: I have never seen it before, and may I take ten (442) minutes to read it?

THE COURT: No, Just listen to the questions of counsel. * * *

MR. CORWIN: I should like to offer in evidence a copy of the letter over the signature of Deputy Commissioner Cecil E. Heacox, which letter is addressed to Dr. J. Henry Wills, the Executive Secretary of the Pesticide Control Board of the State Health Department, dated June 1, 1966, as representing the policy of the Conservation Department.

MR. YANNACONE: I am going to object. He managed to produce one, two, three state employees, and he can produce this man. * * *

I am going to object on the ground that if he wants to say this is (443) the policy of the State of New York, and there is a deputy commissioner's name on here who I cannot read the signature of. It is not a typed name.

MR. CORWIN: Cecil E. Heacox is printed on the letterhead.

MR. YANNACONE: Well, this man can be produced in rebuttal, Your Honor, and I submit this is not the best evidence of what it contains. It is addressed to a third party who also isn't here, Mr. Henry J. Wills. * * *

THE COURT: What is it you want to know from this witness?

MR. CORWIN: I am trying to find out just exactly what he means when he says we, and whether he is talking for the department or not.

THE COURT: What he means is exactly what all the other witnesses meant when they said we. He is talking for his department, I assume, or whoever (444) he is talking for. I don't know.

MR. CORWIN: That is what I am trying to find out. I think it is important.

THE COURT: Counsel, whether he is talking for his department or not, I am taking each one of these witnesses on the individual merit. I want what they can contribute to this case, and I don't give two hoots where they come from so long as they will give us information that will help us decide this case realistically. Now, whether he is from the department or not, that is something I will give weight to. I don't think we need waste time with a three-page letter being read.

MR. CORWIN: I will save it.

THE COURT: Put it in evidence. * * *

(The letter was received in evidence and marked as (445) DEFENDANT'S EXHIBIT A.)

Q. Now, you said that you took this marine analysis and sent it to Gulf Breeze, is that right?

A. Not an analysis that I made. I sent the samples to Gulf Breeze, and they made the analysis there.

Q. Why wasn't it sent to the agricultural and markets laboratory in the State of New York?

A. Well, for one reason, this is a federally-coordinated program. * * * . . . This particular set of samples is being treated by them.

Q. Is it the responsibility of the Department of Conservation to control and suppress mosquitos? (446)

A. Our department of fish and game certainly does not. I am not aware of that. There is a Bureau of Pesticide Control which is properly concerned with certain insects, but I am not aware if it would ever involve mosquito control.

Q. Let me ask you whether or not these DDT residues found in the estuary marine environment were ever made available to other responsible state agencies?

A. * * * The data is available.

Q. I'm not asking you if it is available. I'm asking if it has been forwarded or not? We are talking about cooperation, cooperativeness, and I'm asking you if it has been forwarded to the other agencies who are concerned with this problem?

A. This I can't tell you, because this is not under my direct jurisdiction.

Q. Specifically, you are not on the pesticide control bureau?

A. This is under the jurisdiction of the chief of the Bureau of Marine Fishery, Dave Wallace, and what he has done with that data I really can't tell you. (447)

Q. Now, you spoke a lot about the effects of DDT in estuary and marine environment. Can you cite one publication among this literature that you refer to on the effects of DDT as you have described them?

A. Here is a publication called "Fish, Wildlife and Pesticides". If you want a citation, I will give you one which I think is rather significant. This is page 8:

"Where the concentration of DDT is as low as ten parts in a trillion parts of water, the oyster collects and stores the pesticides."

There is something here on eagles that I want to read:

". . . The brains of eagles that succumbed after being fed various levels of DDT contained very similar quantities of DDT despite differences in dosage levels and the length of time the birds lived."

Q. That is the one authoritative publication which you are referring to? (448)

A. Yes.

MR. CORWIN: The title of this is "Fish, Wildlife and Pesticides". It is the publication of the Fish and Wildlife Service, Washington, D. C., 1966, for sale by the Superintendent of Documents, U. S. Government Printing Office.

* * *

Q. Now, doesn't this document also contain the statement on page 2 that the Federal Government uses less than 5% of all pesticides used in the United States? (450)

A. I see it, but I don't know what difference that makes.

Q. Do you believe it?

A. Do I believe it? Well, it's there.

Q. Do you believe it because it is there?

A. Let's say that I have no better evidence to go by.

Q. You believe what you want to believe, is that right?

A. That's true as a matter of fact. You have to always evaluate what you read and determine from your own knowledge whether or not it makes sense to you.

Q. So that when I asked you if you could cite one publication, you cited from one merely just that you wanted to believe in, is that a fact?

A. Well, I happened to have it handy.

Q. You spoke in your direct examination about the managing of wildlife population. How do you do that? (451)

A. We manage it through a number of means. One of the direct means of management is controlling hunting opportunity.

Now our primary responsibility is to that part of the wildlife population, the fish population, which is directly hunted or fished for. In the case of deer, we have a very carefully oriented project toward a seasonal limit based on that time of the year after the bucks have bred the does, so that there will be a fawn crop the following year when the deer population is at its best vigor and when the hunting will be least incompatible with other activity.

We try to have a season that is as long as possible to provide maximum recreation hours, and yet not so long as to destroy through hunting, to kill more animals than we want removed that year from the environment.

We also then, in the case of deer actually determine how many animals that are not bucks should be removed from the population to maintain a healthy balance between the animals that are present and the food plants that they must live from. (452)

Q. Well, that is kind of interfering with nature, isn't it?

A. No, it is not interfering with nature, because-- Well, in a way it is interfering. It is compensating for nature. You must realize that before the white man came here, we had nature in the form of Indians. There were only about 15,000 in New York who hunted with arrows. We also had bears and cougars and wolves who all preyed on the deer population.

Now, we have pretty much gotten rid of the Indian, and we have put them where they can't give us much competition. We have gotten rid of the cougars and the mountain lions, and we have gotten rid of the wolves. We have a few bears left.

Now, we happen to have more deer in New York State today than we had in the days of the Indians, and this is because we are without the the other predators.

Now, the hunter, because he is so efficient, he has to be controlled. (453)
This is one way to do it and not interfere with nature, but to try and balance the number of animals with what they think the environment can support.

Q. The man has to be controlled?

A. Yes, absolutely.

Q. Who is going to do that?

A. We are going to do that.

Q. Who is we?

A. The Conservation Department.

* * *

Q. Mr. Witness, you made the statement on direct examination that there was a lot of DDT in the waters around here, and that it was seriously damaging to certain forms of fish and wildlife, is that right? (454)

A. Yes.

* * *

Q. How much DDT are you talking about when you make that statement?

A. When it comes to DDT----

Q. Didn't you just tell me so many parts per million in the water in answer to that question, sir?

MR. YANNACONE: Specifically what body of water?

MR. CORWIN: I am talking about all the water in Suffolk County that he is talking about.

Q. Will you please answer that question?

MR. YANNACONE: I'm going to object. He answered that question.

THE COURT: Gentlemen, gentlemen. I can see this kind of acting (455) going on in negligence cases, where I have twelve jurors to impress, but we don't have to do this here.

MR. CORWIN: I am trying to get the answer. I am not trying to impress anybody, Your Honor.

THE COURT: Well, ask your question nice and easy. He is one of the nicest persons I have had on a witness stand in a long time. You don't have to argue and yell at him. He doesn't give two hoots what you do. He is here to testify.

MR. CORWIN: I just want him to answer the question.

THE COURT: I don't think he has an axe to grind, Mr. Corwin.

MR. CORWIN: I do. I think he has an axe to grind.

A. May I quote from page 8 of this document? * * *
This is "Fish, Wildlife and Pesticides". * * *

(456)

(The document was marked as
DEFENDANT'S EXHIBIT B for identification)

Q. Can you answer my question without referring to that particular exhibit B for identification?

A. Yes, I can. * * *

We have documented the fact that there is DDT in the water of Suffolk County. There has been at times as high as 15 parts per million, which is very high. We know that there are many areas where it varies to very small parts of 0.1 parts per million within this broad range of variances. (457)

Q. Can you tell me whether you ever found 15 parts per million? I am naturally talking about the samples you take from time to time. Have you ever found at any place, other than in the laboratory where you put the DDT in a test tube, but have you ever found that naturally other than at station 3 at Upper Yaphank Lake around April 29, 1964? Have you ever found that in any other place other than that?

A. Not that I know of.

Q. Is there any other place where you found it more than one point something?

A. Well, one point is quite high.

Q. But if you are making an average now and saying 15 based on that one day in Yaphank----

A. I didn't say that. I said we had this range.

Q. I'm not talking about the range. I am talking about the average, because when we are talking about all of Suffolk County and all of the wildlife in it, we are talking about a long-range average, aren't we. Can you join me in that? (458)

A. That's why I wanted to read page 8.

Q. All right. Read it.

A. And page 9. "Where the concentration of DDT is as low as 10 parts in a trillion parts of water, the oyster collects and stores the pesticides. Oysters have stored DDT during a 40-day exposure period to levels 70,000 times greater than a 0.1 parts per billion concentration in surrounding water."

To refresh our memory, one part per billion is about the relationship one ounce of chocolate syrup would bear to 1000 tank cars of milk. It is a very tiny amount.

Q. Is it on the basis of that statement that you say that the DDT that you found in Suffolk County is causing serious damage?

A. We are only saying that even at these tiny amounts, it is accumulative. It can be causing damage, yes, of course.

Q. Now, sir, you know how much DDT that is in these waters about which you are talking is there as a result of the activity of the defendant Suffolk County Mosquito Control Commission? (459)

A. We do not.

* * *

Q. Do you know how any of it got there and who put it there?

A. We know how most of it gets there.

Q. How?

A. Some is sprayed into the water shed and into the marshes by the Mosquito Control Commission. * * *

We don't know the percentage. We have tried to get that data from Mr. Williamson, but it is unavailable. It is just not available. Only he has it. We know that other material enters into the water shed from the farm activity.

Q. Mr. Witness, are you saying that Mr. Williamson has some figures in his control and in his capacity as a public official which he refuses to make public?

A. No, I didn't say that. I am saying that the only person who has it or could have this type of information is Mr. Williamson, and most of the data, as you know, burned up last year, and we tried to get some of that in the spring. (460)

* * *

Q. There was something about the control of the black duck on direct examination. You made some observation about that. * * *

A. Right.

Q. You have a monitoring program measuring the DDT? (461)

A. In the case of the black duck, I think this is the primary pesticide being measured. It is also a federal program by the way.

Q. Do you have any reason to believe that no other chemicals, disease, organisms, or anything like that might be a factor in the decreasing population?

A. Well, needless to say, there are many factors, but the unfortunate part of the matter is that DDT is present today in almost every part of the environment. From what I understand, every river system has DDT in it. You can't find an animal or body of water anywhere without finding DDT present somewhere in that environment. So it has become a very important, shall we say, searchlight.

Q. I think that you are DDT intoxicated. Come away from it. Isn't there anything else that causes the decline of the black duck and all these animals that you are talking about besides DDT?

A. There are probably many, many things that take individuals out of the population, and all wild animal individuals are constantly dying. Our concern is never with individuals. (462)

Now, we recognize individuals die from 1000 causes as individuals. Our concern is with total populations as to what may affect the reproductive potential and the well being of the population from something in the environment.

A gun kills one duck. All the other ducks are fine. But if DDT is present in every body of water and in all the embryo ducks, even before they are hatched, this could become very important.

Q. Is that the only pesticide that is present in the water generally?

A. This is the only one that I think is present universally, yes. The only one present universally over all our country.

Q. I'm not talking about over our country. I am talking about Suffolk County.

A. Well, Suffolk County. I am sure we have other goodies in the water.

Q. Goodies? You are being facetious, are you not? (463)

A. Well, aren't we extolling the virtues of these pesticides sometimes?

Q. Yes, yes. Don't you find that there has been any benefit in the use of DDT since it was discovered?

A. Of course there has been.

Q. Tremendous?

A. Right.

Q. And if you are concerned with natural life, and if you are concerned with man, and having sufficient food, there is a good change that if we didn't have DDT and use it to the extent that we did world-wide, there would be a lot of people hungry, isn't that so.

A. Well, we still have a lot of very hungry people. We will never solve that problem.

Q. Who is we--the Conservation Department?

A. We, as a society. All of us. We as a very general term is used in many ways.

Q. But you have to admit that there are a few of us who may not agree with you when you say, "We will never solve it." Will you make that qualification? (464)

A. I qualify wisdom. Wisdom is a very individual concept which we all have.

Q. I am talking about judgment.

A. This is wisdom. This is value judgment.

Q. Now, how much DDT did you find in the water down by Amityville?

A. I would have to refer to our chemist, Mr. Fehrenbach, who would have that analysis. I don't have it in my head.

Q. How much did you find in Bay Shore?

A. I would not want to quote any of that. It is documented, and it is available if you would like to see it. * * *

Q. If we went around the island, would your statement be the same-- you just don't know? * * *

THE COURT: He does not just know. He said he can get it. It is documented, and we can have the documents right here in the courtroom. I don't want you to leave the impression that he is a numbskull or anything else. He just doesn't know this at the moment. * * * (465)

THE WITNESS: Well, I feel this way, Judge. I have to learn a lot of things. There is no point in trying to memorize things which are always easily available in documentation form.

Q. All right. Now, sir, is it your judgment that DDT is present in the waters to such an extent that it has a serious, permanent, irreparable, deleterious and damaging effect on the wildlife of Suffolk County, based upon the statistics that you say come from some man whose name you just mentioned? (466)

A. No, he is the person who has the data. The analysis came from Gulf Breeze, Florida.

Q. Do you know how many samples were taken and sent to Gulf Breeze?

A. Again, there were many hundreds. I don't know exactly how many. This again is all documented, and the information is all available.

Q. And the testimony that you are giving is based just on this particular survey?

A. That is our best information. * * *
This is our most current information.

Q. Do you know who collected the samples of the water?

A. I think Mr. Fehrenbach collected most of them. I'm not sure if he collected all of them.

Q. Did you see any of it done? * * *

A. No, I did not. (467)

Q. Do you know anything about the methods that he used? Are you sure that there wasn't any DDT in the bottles before he took the water samples? * * *

A. May I say this: Most of us here are all public servants. We are out to do as good a job for the public that we are serving as is possible. We have what we feel is a very important responsibility, and maintaining a healthy environment is part of our responsibility. While there are sloppy individuals in all of our society, we do have trained chemists who know their techniques. (468)

Now, on the question of whether or not our people are capable of taking a fair sample----

Q. When you say our people, are you talking about society as a whole?

A. I hope you are not implying that we go out to doctor up data, and that we are sticking DDT in our bottles only to fake a sample, because this is certainly not so.

Q. Let me ask you this question: Are you familiar with this technical literature? Did you read this? * * *

. . . we are now talking about the technical appendix that is part of the file in this case, is that right? These are excerpts from a lot of the professional and so-called learned literature, is that right? (469)

A. Now, mind you, I'm not aware of what is part of this case, but I read through the papers there. I know that I have seen a few of those papers.

* * *

MR. YANNACONE: This is the technical appendix submitted on the motion for a temporary injunction to Judge Ritchie. * * *

. . . It was submitted in support of the affidavit of George M. Woodwell and Charles F. Wurster, and it was identified and referred to by each of them.

(The appendix was marked as DEFENDANT'S EXHIBIT C for identification) (470)

Q. Are you familiar with some of the tests that were made to which those papers relate? (471)

A. I know that one of the basic tests used today in determining DDT is the gas chromatograph.

Q. All right, the gas chromatograph test. You made an observation, and you said, "I hope you don't think that our people are putting DDT in a bottle."

A. Deliberately.

Q. Whether they are putting it in deliberately or negligently----

A. Well, it is in the water.

Q. Let me say this to you, and I may be a little more cynical than you are about all of us public servants, and I am not going to characterize all of them as angels, as you probably do. I think there is a lot of sloppy scientific work that is evidenced in that technical appendix, and we will go into that later.

Now sir, are you familiar with the studies that have been made of the chlorinated hydrocarbon pesticides in the major U. S. river basins?

A. Are you referring now to that particular paper or just the fact in general? * * * I don't recognize that paper. I am familiar with the fact of what is being done, but that paper, no. (472)

Q. As a matter of fact, there are many papers?

A. There are thousands of them.

Q. And these papers are what you base your opinion, that is, that DDT is all over, is that right.

A. Well, it is pretty wide spread.

Q. I show you a table from public health reports, table 1, which is called, "A Synoptic Survey of Chlorinated Hydrocarbon Pesticides, U. S. Rivers, September, 1964", and I'm going to call your attention to the northeast basin. We are talking about the Connecticut River, the Hudson River, Lake Erie, the St. Lawrence River, the Delaware River in Trenton, the Potomac River, and the third column, DDT. Now, I ask you if it doesn't indicate no detectible amounts? * * * (473)

A. It indicates that for some rivers, yes. * * *

I will have to admit that I don't know what synoptic means. This qualifies a survey.

* * *

MR. YANNACONE: This is Volume 80, number 6, June 1965, Public Health Report, Publication of the Public Health Service of the Federal Government. The title is "Chlorinated Hydrocarbon Pesticides in Major U. S. River Basins, A Synoptic View." It is by Leo Weaver, B. C. C., Charles G. Gunnerson, A. B., Andrew W. Breidengach, M. D., and James J. Lichtenberg, M. S. * * * (474)

Your Honor, I would like to have this marked in evidence.

(The document was received in evidence and marked as DEFENDANT'S EXHIBIT D.) (475)

Q. Now, do you consider that to be an authoritative publication?

A. Unfortunately, I don't know what synoptic means. I wish somebody would define it for me.

Q. A collection, It is sort of like a technical appendix. It is a collection of learned papers, and it is a collection of reports. It forms the basis from which (475) they draw some conclusions.

MR. YANNAcone: Your Honor, can we take the definition that was just given me by Dr. Dewey? It is a collection of the available data available to the United States Public Health Service on the presence of pesticides in the river basins, and as such it is a United States Public Health Service publication.

MR. CORWIN: Thank you, Mr. Yannacone. I accept that definition. (476)

Q. Did you ever make any studies relative to DDT--and when I say you, I am now talking about the Conservation Department--as it affects the marine life, duck life, drills, starfish, soil, or anything? Did you ever make any tests to determine how those things are affected, such as, the oysters in a given place as against the control area where there was no DDT? * * *

A. I'm not sure if we could find a control area where there is no DDT today.

Q. What about that paper where you just said, "Yes, that indicates there are many rivers where there is not any DDT"?

A. I'm not sure that says that.

MR. YANNAcone: He didn't indicate that. He was asked to indicate a line in that paper, and he read the line. The paper speaks for itself. The paper is its own best evidence, and it is now in evidence. (477)

MR. CORWIN: I agree with that.

* * *

Q. Isn't it the finding and the feeling of your department that the presence of DDT in the water in Suffolk County, where it adversely affects the marine life, is more present near the salt-marsh area of the northern side of the Great South Bay than anywhere else? Isn't that a fair statement?

A. This might be true.

Q. Have you made any tests in an attempt to find out how much DDT there is in the water in the oyster grounds of the Peconic Bay?

A. You mean the privately owned grounds?

Q. Yes.

A. I would have to have two test samples. One would show the sample at the stations where they are, and then an overlay which shows the private lands. I just can't pinpoint that exactly to tell you that I know this. I don't know this. (478)

Q. Can you pinpoint any of the stations? Can you refer to some landmarks which we would understand? * * *

A. Just where the station is in Moriches Bay, exactly which inlet, I can't tell you this, or at Shinnecock.

Q. I'm not talking about Moriches Bay. I am talking about Peconic Bay.

A. Or Peconic Bay or Shelter Island Sound. One is in Shelter Island Sound, but I can't tell you exactly where that is. (479)

Q. Is there one in Gardiner's Bay?

A. I don't think there is one in Gardiner's Bay.

Q. Well, there are privately-owned oyster bed lands in Gardiner's Bay, aren't there?

A. Well, they may still be under private control. A lot of them are moving very privately out of private control. They certainly aren't being used for oysters any more.

Q. Do you think that is due to the DDT content of the water?

A. I didn't say that.

Q. Do you think it is? * * *

Do you think the fact that there aren't any oysters to cultivate is due

solely to the presence of DDT in the waters of Suffolk County?

A. Due solely, no. * * *

To answer your question, there would be no way to prove that DDT (481) was solely responsible for the plight of the oyster.

Q. Then you don't know what is responsible for the decline of the oyster, do you? You don't even know percentage-wise why DDT is responsible for the decline, do you?

A. But this has happened over a period of many years, and there was no documentation made to even start it. We don't have the background information to even correlate it.

Q. Do you know anything about the resistance to drugs and chemicals, how it builds up in animal life?

A. A little bit.

Q. Do you know anything about the life span of the fruit fly?

A. Very short.

Q. Nine days maybe, something like that?

A. It could mature in that span.

Q. How long does it take for a chemical to build up a resistance? How many generations of the species? (482)

A. You mean that the other way around.

Q. Yes.

A. How long does it take for a species to develop a resistance to a chemical?

Q. Right.

A. In the case of mosquitos, to be specific, some mosquito control commissioners believe that has happened in the span of not many generations, within the last twenty years, maybe ten years.

Q. What is the life span of the oyster?

A. Well, I suppose an oyster can live to be twenty years old.

Q. How about a lobster?

A. Approximately longer.

Q. Fifty?

A. Those old-timers could very well be that old.

Q. Does it bother you that we took 70,000,000 lobsters off the continental shelf for animal food in the last year? (483)

A. Only that I didn't eat any of them.

THE COURT: May I say this to you: Fellows, from here on out I am going to find out the age of the lobster that I eat.

MR. CORWIN: The age of the lobster that you ate, Judge, was about eight years, because it weighed somewhere between one and two and a half pounds, and it is probable that Perry Duryea, the assemblyman, handled them.

THE COURT: Yes, he is the lobster man out here.

THE WITNESS: And they probably came from Maine.

THE COURT: However, gentlemen, let us stick to mosquitos and DDT.

Q. Do you have any evidence as to the percentage of DDT in the waters of Suffolk County as related to other parts of the water? (484)

A. I am sure this evidence is available.

Q. Have you, sir?

A. Have I personally at my fingertips?

Q. Yes.

A. No.

Q. Do you know of any studies made to determine this in the literature?

A. Well, we know what we have. From what we are monitoring now, we know what is present in our waters. I am sure there are hundreds of studies being made elsewhere which could be correlated if someone were to do it.

Q. Now, you said that you made some studies yourself down in New Jersey-- down in Florida, didn't you?

A. I went there to observe how they were handling the mosquito control techniques, yes.

Q. And you didn't make any studies?

A. Well, that was the primary objective--to see how they were coordinating game or wildlife matter with mosquito control. They worked very closely together.

Q. Do you have any idea or do you know anything about the production figures of technical DDT? Do you know how many millions of pounds are manufactured in the United States, sold, distributed, and used in the United States? (485)

A. Last year?

Q. Yes, last year.

A. Well, I have seen it published somewhere, but I can't tell you exactly how much.

Q. 1, 500, 000, 000 pounds of technical DDT in 1960? Does that sound right?

A. It could very well be.

Q. Do you know how much of that was used in the United States?

A. No.

Q. Do you know how many pounds that the Suffolk County Mosquito Control Commission uses?

A. Well, relative to that portion, I think Chris mentioned yesterday how many pounds he used.

Q. 5040 gallons of 25% emulsion, two pounds to a gallon?

A. Yes.

Q. 10, 000 pounds?

A. Yes.

Q. Do you have any reason to think that the DDT used in Suffolk County varies greatly from average use country-wide? (486)

A. Well, I am sure it does.

Q. In what respect?

A. In some parts of Upstate New York where they don't practice mosquito control, you immediately do not have that use, and where farming might be primarily dairy, then in the counties that are primarily dairy counties, you would have little of it used. So I am sure there are many counties upstate where there is very little DDT used. There might be some by home gardeners and things like that.

Q. Most of the counties that are agricultural use it, don't they?

A. If they are agricultural crops, they use more than if they are dairy. Adirondack County produces hardly any agriculture, it is dairy.

Q. Doesn't the Conservation Department use DDT to kill trash fish? * * *
A. Do you mean on purpose? (487)

Q. Doesn't the Conservation Department of the State of New York use DDT to kill trash fish? Do you know whether they do or not?

A. I have never heard of it.

Q. You don't know?

A. I mean to say I would be most surprised. I can't believe it.

Q. They do kill trash fish, don't they?

A. On occasion we poison ponds, right, but not with DDT.

Q. When you say you poison ponds, why do you poison a pond?

A. Well, you are making the trash fish.

Q. What do you consider a trash fish?

A. Well, that's a good question. One man's meat is another man's poison.

Q. I am glad to hear you say that in view of some of your other answers.

A. Again, we are back to this old wisdom quotient. There are some people who believe the only fish to catch is a trout--and perhaps the Judge feels this way about trout fishing. (488)

THE COURT: I do.

A. And we have some people who think the finest kind of fishing is to go to a remote Adirondack pond to which you must hike and where nobody will be near you, and there you fish for trout. So one of our departmental programs is to remove fish such as the small yellow perch and perhaps bullheads or small sunfish in some of these ponds and make that pond then primarily a trout pond. This is what we call a trash-fish-removal program.

Q. Is it a fair statement to say that in somebody's judgment a bird may be a trash bird or a pest bird----- * * *

A. But the fact remains that DDT is not what is used to kill these fish. Some other chemical is used, and it is not DDT. (489)

THE COURT: Gentlemen, I know about these ponds. I have been on these ponds, and I have walked through the woods of these ponds. I know that there are times when they kill everything in a pond, and they start de novo because the fish is so abundant that perhaps they never get bigger than like that. Some are native trout.

Now, gentlemen, let us go on from there. I know they do it.

Now, he said they don't do it with DDT. If you say they do do it with DDT---

MR. CORWIN: I didn't say that they did.

THE WITNESS: Well, you implied they did.

THE COURT: Gentlemen, I am familiar, perhaps more so than most people in this room, with fishing for trout in all of the lakes and places you may want to go to. (490)

* * *

THE COURT: Counsel, will you please confine the record of this case to those things pertaining to this case. I will take judicial notice, as you yourself indicated, that this case might some day end up in a higher court. Now, I know about these lakes, but if you want to get it in, I will not stop you. However, we already have a tremendously voluminous record. I just want to assure you that I know about them personally.

Q. What is the state of harmony in the natural life? It is a judgment that you make, isn't that so?

A. It is everybody's individual judgment, yes.

Q. And they can vary in different people? (491)

A. Absolutely.

Q. Now, there are many species of blackbirds, aren't there?

A. A number of them. There are a number of them that are called blackbirds in general.

Q. The farmer might consider a blackbird to be a pest, and somebody might think it is a beautiful song bird, and that nobody should ever destroy it, isn't that true?

A. Absolutely.

Q. And it is the same thing with different kinds of fish, snakes?

A. Well, no, the fish are not considered pests, unless you consider a shark.

Q. What did you say--a trash fish?

A. That's not considered a pest.

Q. Why?

A. Well, again it is a relative value. You are a person who enjoys catching trout above all else. We then cater in some cases to this as a very highly refined outdoor sport. It is value judgment, entirely so. (492)

Q. So that whether or not DDT affects this ecological balance, and whether it is serious or not depends upon almost each individual's value judgment, isn't that so?

A. I made that clear earlier, yes. There are some who are very much aware and concerned with this, and there are others who are not concerned about it. After all, if ignorance is bliss, it is foolish to be wise.

Q. You are concerned about some particular species?

A. No, all species. We are not sure at this moment how selective these things are or how non-selective they are.

Q. It would be possible for you to create a laboratory, would it not, which you could use as an environmental control to make tests on the population, the numbers, the increase and decline of some of these animals that you say are adversely affected by DDT? It could be done, couldn't it?

A. I'm not sure. You meant a population in an aquarium, like where you use DDT? (493)

Q. We are talking about quantities of fish and oysters, and the effects of DDT on the quantities in Suffolk County. I asked you if you ever made any studies, where you were making this count? Was it in an area where DDT had been sprayed as against an area where it had none? Your observation was that you didn't think you could find any such place in Suffolk County. Is that right?

A. At this time, yes. DDT has been introduced, right.

Q. You say you could create a control environment in a laboratory, couldn't you?

A. Well, not for things like black ducks, striped bass, and fiddler crabs; you could hardly do this. But for little things like daphnia, you could do this.

Q. Do you think DDT is having any adverse affect on the population of the black duck in Suffolk County?

A. We think it could very well be, yes. (494)

Q. Can you tell me how significant, if any, the amount used by the Suffolk County Mosquito Control Commission is in relation to the total DDT that is killing these black ducks?

A. I think we must all go back to that old adage which was probably stated thousands of years ago: The straw that broke the camel's back. Nobody knows this. Every little bit helps. We are the first to admit that there is a lot we don't know.

Q. How many animals are you concerned about so far as the Suffolk County Mosquito Control Commission use of DDT is involved?

A. Do you mean in species or in total numbers?

Q. Total numbers?

A. I am not quite sure I know what you want here.

Q. A million, billion? * * *

THE WITNESS: I would be very happy to answer the question.

THE COURT: All right. Answer it.

A. This doesn't mean much when you deal with a marine environment (495) where one parent like an oyster can produce a million offspring or a blue crab. We

know for instance that blue crabs are tremendously susceptible to DDT--one-half part per million in the environment. Now, if you want to talk about millions, billions upon billions of animals are born every year in Suffolk County. Very few of them reach maturity. The factors that prevent them from reaching maturity are very numerous. To what degree DDT is a part of this, no one knows yet. (496)

Q. How many dead animals did you ever count in the course of your business and your work in the Conservation Department, the death of which is directly attributable in whole or in part to DDT as used by the Suffolk County Mosquito Control Commission?

A. Well, I think the only case----

Q. How many?

A. Well, the only case we really have documented very well is the one in Yaphank Lake. Over and above that, it is very difficult to show cause and effect. We are continuously called upon to determine how this animal died or how these birds died or how these fish died. We are often called after the fact by two or three days. We get there, and in some cases the animals aren't even present any longer. They have been eaten by something else or washed away. The environment has changed, and so we take water samples. We have no real proof. (497)

Now, you must understand that in making an analysis, which we can't do, and we are not qualified to test for these pesticides, we have to give our chemists a clue, a hint. We just can't say, "Here are ten dead fish. Here are ten dead birds. Please tell us what killed them."

This is impossible, because there are so many causative acts that you can't do this. We have to have a clue. We could say that we have good reason to believe that this and thus killed these animals and test for these items. When they conduct these tests, they find out enough about this in the tissues or in the environment so that we can say, "Well, then probably this killed it."

Q. Let me stop you right there, and I want to ask you a question.

A. But the most times you can't do this.

Q. Unless you knew what caused this dead fish to die, the judgment you make because you found DDT in his brain, the DDT caldron might not be a good one, isn't that so? (498)

A. This is not what I said, unless we have some hint.

Q. Well, it has to be more than a hint, doesn't it?

A. You have to have a clue. We have to have a clue that someone did something unusual. We can't just present our dead animal to the chemist and ask him to tell us what killed him. It is impossible today, without telling him some additional facts. It is almost impossible today, because there are too many chemicals available, and they all require specialized techniques. It would be hopeless, and that is the reason why we did have a lot of documentation.

MR. CORWIN: Judge, I am becoming as fond of this witness as you are.

THE COURT: Pardon?

MR. CORWIN: I say I am becoming as fond of this witness as you are.

THE COURT: I will say this much. He presents himself well, and he presents his case well.

MR. CORWIN: I agree. (499)

Q. Now, becoming specific for a minute, with relation to this so-called Yaphank Lake fish kill of April 29, May 1, 1964, do you know anything about it which would be enlightening to us here in this courtroom with respect to who put the DDT there?

A. Beyond what has been said?

Q. Were you here yesterday when Mr. Kellar testified?

A. Right.

Q. Beyond this Court's Exhibit 1, with which you are familiar?

A. Yes.

Q. Can you add anything to this?

A. I can say this: As far as I am concerned, I am as sure as I could be about anything that has caused mortality, that DDT was the cause of that mortality and the commission was responsible for the DDT. (500)

Q. When you say the DDT, do you mean all of it?

A. I mean that there was DDT found in the water. We have good reason to believe the commission sprayed there. They did not deny this. Yesterday it was mentioned that there are farmers in the area. Well, April 29th is hardly the time of the year when there was much farm activity in that water shed of the Carmans River above that area.

Q. But you said that this chemical was a persistent one and stayed around for years, didn't you?

A. Yes, this is in the food chain aspect.

Q. And it went into the water table?

A. I think I defined two ways in which it could affect the environment: Initially with tremendous volume, and then insidiously over a long period of time with the food chain. I know a great number of these farmers in the area, Bobinski, Shuster-- well, I won't mention any more names. I know these fellows raise cabbage, cauliflower, and potatoes. None of these crops would have been, so far as I guess at this (501) moment, in the stage of their growth that DDT would have been required to control a pest. But I think farming was not a contributing factor. It might have been in July, but I don't think it was the last of April.

Q. Well, are you willing to have the Court understand that you are making your judgment that the commission caused the Upper Yaphank Lake fish kill on the basis of the testimony that you heard from Mr. Kellar?

A. Well, on the basis--

Q. And this report?

A. And that report, yes.

Q. Do you think that is a scientific evaluation of a fact? * * *

A. In our business we have to make a lot of judgment based on very (502) little information sometimes, and sometimes it is a lot of information. The fact remains we try to satisfy our curiosity. You try to come up with a conclusion. This is part of our job. People say, "Look at these fish die. What killed them?" Ninety-nine times out of one hundred we can't tell them.

Q. Sometimes you base it on misinformation too, don't you?

A. I say 99 times out of 100 we can't tell them. We have very few good documentations. We think this one is as good as we will ever get. I might add that looking at this recent Warren Commission Report on President Kennedy's death, there has probably never been a more detailed investigation.

Q. Let us not go into that.

A. But even here, where we have 1000 witnesses and one gun---- (503)

THE COURT: Counsel, let us put an end to this. We can argue this all day. Will you please hold it. Now, as I see it, they were told there was a mosquito commission truck in the area of that pond at a time when there was no upland spraying, because there was nothing to spray at that particular time that I know of anyhow. Nobody has proven to me that there was anything to spray upland. Now, they were told about this truck, and while they admit they do not know what was in the truck, they have taken these circumstances with the fact that there was a spraying, together with the fact that they did find DDT in the pond. They then come up with the conclusion that it came from there. Now, be they right or be they wrong, it will be for me to determine the weight of their testimony. Now let us go on to something else, please. (504)

Q. Most of our bird population is affected with malaria, isn't it?

A. Will you please repeat that?

Q. Isn't it a fact that most of our bird population are carriers or are affected with malaria?

A. Gee, I never heard this.

Q. Do you know what percentage of the deer population of New York State is encephalitis vector reactors? Just yes or no.

A. I don't think we know that. I don't think anybody ever made any studies of that.

* * *

THE COURT: I see. You mean carriers.

MR. CORWIN: Yes, Your Honor.

A. I don't remember any tying-in of deer to encephalitis.

Q. Now, you said yourself, Mr. Witness, that the professional literature on this subject was countless. You used that expression, didn't you? (505)

A. Yes.

MR. YANNACONE: On what subject?

THE COURT: He was talking about DDT.

THE WITNESS: Pesticides.

MR. YANNACONE: Now, Your Honor, if we are talking about encephalitis, I don't think this particular witness is an expert. He doesn't know.

Q. You used the word countless when you were talking about the literature on which you base the opinion which you gave on your direct examination, isn't that so? You said it was hard to keep up with?

A. That's how I used that context. Yes. It's more than hard. It's impossible.

Q. As a matter of fact, with all these activities that you have, you don't even begin to start reading at all, do you?

A. It's impossible.

Q. So you are not familiar with all of the studies that are made? (506)

A. Nobody in the world is, not just me. No one is.

Q. And the fact that you are not familiar with one study, that doesn't mean that one study wasn't made that somebody knows about, does it?

A. Of course not.

Q. In connection with the study that you have been making of DDT and its deleterious effects in the county, have you ever asked or ever tried to get any information about how much DDT was used in Suffolk County by everybody, farmers included? Did you ever ask Agway or any of the big distributors as to how much they sold in the course of the year?

A. As far as I was concerned, the total volume isn't important, whether it is 10,000,000 pounds or 10,000 pounds.

Q. It doesn't make any difference?

A. When it is bad, it is bad, whether it is twice as much or half as much.

Q. If all of it was sold in Suffolk County by the pound, would it make any difference?

A. To a matter of degree. (507)

THE COURT: I think what the witness is trying to say is that if you buy 5,000,000 pounds of DDT and then lock it in a vault where it can't be used, and it is put away perfectly so that nobody can get near it; then it's harmless. But if you take 5000 pounds and throw it in the river or a lake, it is going to do damage. Is that what you are talking about?

THE WITNESS: Exactly.

THE COURT: It is how you use it. I heard one of you use the expression wisely and something else. I don't know, and that is exactly where it pertains. It all depends not on how much you buy or how much there is, but how you use it and where you use it, together with the effect thereof.

Q. With respect to DDT, are you now saying if it is used, it is bad? Is that your statement? (508)

A. It is bad from the point of affecting the environment, yes.

Q. Now, why is it bad--because it kills some animals?

THE COURT: No. I think he has already made the Court understand that it has a food chain reaction where it remains in the food chain and through the food chain is picked up by this bird--and I forget the name of the bird he used.

THE WITNESS: The osprey.

THE COURT: The osprey. I am familiar with that or I am as familiar as I'm going to get with it.

MR. CORWIN: I think we are going to have to get a little bit more familiar, Your Honor.

Q. Now, it is a fact, isn't it, that when this DDT ends up in the brain, it may affect the nervous system of the brain and kill? That is what bothers you, isn't that so? (509)

A. Well, certainly.

Q. The mere presence of DDT in the animal doesn't offend you, does it, if it didn't have that effect?

A. I don't know how you separate one from the other.

Q. Why, I can't.

A. A bullet doesn't bother me; it is only when it is in me that it bothers me.

Q. You have any DDT in your body?

A. I am sure I do.

Q. Does it bother you?

A. I don't know.

THE COURT: All right. Please go on. The witness has stated, to the best of my recollection, that even though it doesn't bother man, it might bother something small and be effective in that small thing which in turn will be eaten by man; then man will get it.

MR. CORWIN: These questions are going to be connected, Your Honor.

THE COURT: All right. I am only reviewing what I have heard. (510)

Q. Do you know Walter Dykstra?

A. You mentioned the name yesterday, and I honestly don't think I know the man. I have met him, but I can't place him.

Q. Do you know anything about the studies that have been made of the declining osprey population?

A. There have been various studies on this, yes.

Q. Are you familiar with some of them?

A. How many there are, I have no idea. I know some people locally are working on this, and there are some reports probably in some various magazines on it.

Q. Now, what I am driving at, and the question that I want to ask you, and I want to put it in the proper perspective: You understand this, and many times you have come up with answers that I couldn't ask you the question to, and I appreciate them. Now, you are making a judgment that because some thing has the effect eventually of killing some animals, and you wouldn't tell me how many, but you tell me that it is bad. (511)

A. I said millions.

Q. Millions.

A. We consider this tiny animal that just happens to be in millions and billions.

Q. It doesn't bother you that the DDT kills millions of mosquitos, does it? You are happy with that result, aren't you?

A. If it be confined to that.

MR. YANNACONE: I object. The fact that DDT kills millions of mosquitos has never been shown by anybody so far in this case. If he can prove it, fine.

MR. CORWIN: Your witness Mr. Williamson has had some tests of that, and I thought you proved it fairly well with him.

THE COURT: Gentlemen, all I know is that we are using DDT to kill mosquitos. I challenge anybody to deny it doesn't kill a mosquito. And also from what I gathered so far, you told me that DDT is a bad thing to use. (512)

Q. And DDT is bad because it kills, right?

THE COURT: Kills or maims. He also said it paralyzes to a certain extent.

A. It interferes with the normal nervous system of an animal, and we don't know enough about how much interference can endanger the potential existance of that animal. It is unknown. This is a vast unknown area.

Q. Would you make that same judgment with respect to other substances which we commonly use?

A. Well, yes.

Q. Do you believe that they should be banned if they are bad and because they have bad effects? Just answer yes or no. Do you believe it?

A. If a substance were shown to have the effects of DDT, I would say yes.

Q. Just DDT? And if it didn't have the same effects, then you wouldn't be interested in banning its use, is that right?

A. I hope I understand you. (513)

Q. I hope I understand you, and I am not trying to put words in your mouth.

A. Well, then you better repeat the question.

THE COURT: Let me put it to you this way: Notwithstanding the remark of counsel, I have the highest regard for the departments of this state, especially the Conservation Department and the Health Department. They are doing a terrific job. Now, let us go on from there. I am sure if anyone of these people connected with these departments knew of something that was hurting people or was deleterious or bad for their health, they would not hesitate one moment to step forward.

MR. CORWIN: I don't believe that, Your Honor. I want to ask some questions of this witness to show that it isn't so.

THE COURT: Well, I am the person who has to believe it, and I do.

MR. CORWIN: All right, Your Honor. May I ask him some questions so that perhaps you will change your mind? (514)

THE COURT: I am talking about this witness as such, Mr. Corwin. I am talking generally about this thing and the implications that go with it--that we have a bunch of nincompoops up there. Actually, most of them are of the highest grade and college graduates.

MR. CORWIN: I have much respect for the scientist as anybody.

THE COURT: All right. Let us go on.

Q. Are we talking about the results of the use of DDT? Is that what is bad?

A. I am pretty sure that is so, yes.

Q. That is what you think is bad?

A. Yes.

Q. Are you talking about the results of ordinary use or misuse?

A. I don't think it makes any difference. (515)

Q. Because it is a matter of degree, right?

A. Yes.

Q. It is a matter of degree also with respect to whether or not we use aspirin if it kills one child, isn't that so? * * *

A. Aspirin is not something we pour into our environment. Aspirin takes one individual out of the environment, and that's it--period. If a child gets a hold of a bottle of aspirin and has more than 25, which is what it may take to kill that child, unfortunately for that child, all the other children in the neighborhood are not affected by it, nor are their parents, nor their progeny.

Q. Are you going to ban it just because it bothers one child out of 25 a year?

A. Absolutely not. It is a very different problem.

Q. You really think it is different?

A. Absolutely different.

Q. Do you think that if I asked you questions about carbon tetrachloride, the wood alcohol, and all of the other things that we can buy from the drug store (516) without prescription or the hardware store or Agway, that you answer would be the same?

A. You would have to be specific with each one.

Q. All right, carbon tetrachloride. There are a lot of deaths from that every year in the United States, is that right? * * *

A. But we don't pour this in our environment. We don't distribute this in vast quantities throughout our environment.

Q. Now, Mr. Taormina, isn't it a fact that you can buy aspirin in any drug store, A&P, and supermarkets in the United States?

A. But we don't take it and fill our ponds with it.

Q. It is misuse if 25 tablets get into a child, isn't that so? That's misuse, isn't it?

A. No, that is an accident. (517)

THE COURT: Counsel, if somebody took plain salt tablets and took enough of them, it would kill them deader than a mackerel. Let us go on with DDT. That is what the issue is in this particular case that was brought into this court. Stay with it please. Now, I want to know two things. I want to know whether it is dangerous as such. I just wonder when you are going to come to that conclusion. Then if it is, has the Court the power to rule it out or leave it in or must it be by legislative action.

MR. CORWIN: I have conceded that it is dangerous to a de minimis effect. When he says billions of fish, I still say de minimis. I have no further questions.

THE COURT: Those are the only two things I want to know: One will be a question of fact, and the other will be a question of law. We can go around and around and around, and we will come right back to where we started. I am not the least (518) impressed by 10,000 witnesses.

* * *

THE COURT: All right. You fellows know exactly what is on my (519) mind. I have got a question of law, and I have got a question of fact. The law is going to be a lot harder than the fact.

* * *

REDIRECT EXAMINATION by MR. YANNACONE:

Q. Mr. Taormina, I am going to refer to exhibit D, Chlorinated Hydrocarbon Pesticides in Major U. S. River Basins. Now, this is an authoritative publication of the Water Quality Section of the Division of Water Supply and Pollution Control of the Public Health Service located at the Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, is that right?

MR. CORWIN: I accept counsel's characterization.

MR. YANNACONE: You do? Are you going to be bound by it?

MR. CORWIN: Are you going to take the witness stand?

THE COURT: All right, gentlemen.

Q. I ask you please to read the last paragraph of the summary of this document for the record.

* * *

MR. CORWIN: Your Honor, these records are already in evidence, and there is no necessity for him to read it. It speaks for itself.

MR. YANNACONE: Your Honor, I would like to read it, and then we can go to lunch.

THE COURT: It looks like we are going to have a cold, cold winter, and I should have plenty of time to read all this material. Why don't you just put it in evidence and make me read it, like I have to read the rest of these volumes.

MR. YANNACONE: Judge, you don't have to read anything except the last paragraph, just to settle this little bit here.

Q. "In order of frequency of occurrence, dieldrin, endrin, DDT, and DDE were found in all major river basins." Now, is that the source of your information and belief on that statement you made on direct examination? (521)

A. Yes.

Q. And on cross-examination?

A. Yes.

Q. And it comes from Defendant's Exhibit D which we all agree is an authoritative publication, right?

A. Yes.

Q. Did you say that was the source of the information which you gave on your direct examination, sir?

A. My source, sir, was from a professional who, incidentally, I believe was quoting that paper. I had never read that paper before.

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