

# The Long and Short of It

by Dr. J. Gordon Edwards

**Our Stolen Future: Are We Threatening Our Fertility, Intelligence, and Survival?—A Scientific Detective Story**  
 Theo Colborn, Dianne Dumanoski, and John Peterson Myers  
 New York: Dutton (Penguin Books USA), 1996.  
 Hardcover, 306 pages, \$24.95

**T**he authors of *Our Stolen Future* imply that almost every man-made chemical threatens endocrine (hormonal) systems and functions, but they fail to provide any data that could corroborate their frightening hypotheses. They allege that "synthetic compounds found in pesticides and industrial chemicals may be wreaking havoc: with endocrine systems, decreasing fertility and compromising immune systems in humans, as well as in wildlife."

"If the cause is probably environmental," we are told on page 174. But the evidence consists only of anecdotes, questionable stories, and unsupported hypotheses, which the authors evidently hope will terrify the general public.

The book has gathered the predictable government support for such scare stories, such as that of Jessica Mathews of the Council on Foreign Relations. Mathews wrote in her *Washington Post* column March 11, 1996:

"We have been too obsessed with the obvious risks of toxic chemicals, cancer and birth defects. Immune suppression and hormone disruption, if proved, could be more dangerous. . . . Hormone disruptors can do their damage in infinitesimal doses, concentrations of one part per trillion. . . . There are many thousands of persistent organic pollutants on the market, of which 50 are so far known to be hormone disruptors."

Mathews contends that these charges "will make earlier struggles—over nitrates, saccharin, formaldehyde, Times Beach, Love Canal, cholesterol, asbestos, and even tobacco, look like kids' stuff."

Who are the authors of *Our Stolen Fu-*

ture? Dianne Dumanoski is the environmentalist center for the *Boston Globe*, and is notorious for her statement that "There is no such thing as objective reporting, and I've become even more crafty about finding the voices to say the things I think are true. That's my subjective mission."

Another author is Theo Colborn, a senior fellow with the World Wildlife Fund and W. Alton Jones Foundation, who attacks not only pesticides, but all other synthetic chemicals used in modern industry, transportation, recreation, food and drink containers, and equipment in normal offices and households.

The third author, John Peterson Myers, is director of the W. Alton Jones Foundation, one of the largest providers of environmental grants in the United States, with assets of \$173 million.

Vice President Al Gore added an enthusiastic introduction to the book, calling it a "segue" to Rachel Carson's *Silent Spring*. This may be so; Carson's book helped ban DDT, causing millions of human deaths to result from uncontrollable malaria.

## Shrinking Penises

The authors discuss the case of the alligators in Lake Apopka, Fla., where male alligators "have elevated levels of estrogen and greatly reduced levels of testosterone in their blood, one or two fourth the level found in males from the relatively uncontaminated Lake Woodruff." Relying upon the work of University of Florida reproductive biologist Louis Guillette, the authors report that the alligators' penises are "one-third to one-half normal size."

Guillette "knew" that these abnormalities had to be the result of a major spill of the pesticide dieldrin, on the shore in 1980, and he focused the blame on one or more of the DDE-like breakdown products of dieldrin. DDE is a breakdown product of DDT, and the authors report that DDE-like compounds, as a group, are the contaminant found in the highest



concentrations in the lake's alligator eggs.

(What they don't say, is that the concentrations are not much higher in Apopka than in other lakes.)

Lake Apopka was already a cesspool in the 1950s, "due to an overflow of citrus processing wastes and sewage effluents" (*Wilderness* magazine, Winter 1986). In September 1977, *Audubon* magazine reported the "first known die-off of alligators in Florida's badly polluted Lake Apopka," when thousands of turtles and fish also died. That great die-off was found to be caused by a bacterium, *Aeromonas hydrophila*, that dissolves the internal organs of aquatic animals.

The *National Observer* reported on June 21, 1971: "Today, Apopka is a flat, shallow body of water, nearly unfit for human use. Human waste is dumped into the lake from Winter Garden's sewage treatment plant. Effluent from a citrus processing plant still goes into the lake."

In the years of sewage treatment plant effluents being poured into the lake, it was inevitable that the birth control chemical, ethylnestradiol, which is excreted in urine into Winter Garden's sewage, was entering the lake. Ethylnestradiol is hormonally effective in humans at concentrations as low as 0.1 nanogram in megarin; in a billionth of a gram, it should be expected to have estrogenic effects on alligators as well as humans.

Since *Our Stolen Future* was published, John Sempster, studying English

## Behind the DDT Ban: Population Control

Alexander King, founder of the Mathiasian Club of Rome, wrote frankly about DDT in a 1990 biographical essay: "My chief quarrel with DDT is in hindsight is that it has greatly added to the population problem."

The fact that DDT saved millions of lives, and that it was banned in 1972 not on the basis of the scientific evidence, but for political reasons, highlights the ideological agenda of Our Stolen Future and other campaigns to ban life-prolonging chemicals on the basis of bad science—or no science at all.

Environmental Protection Agency (EPA) administrator Williamuckelshaus chose to ban DDT, despite the fact that after the EPA had held seven months of hearings on DDT, the EPA hearing examiner had ruled on the basis of the scientific evidence presented that DDT should not be banned.

Hearing Examiner Edmund Swenney stated: "DDT is not carcinogenic, mutagenic, or teratogenic to man [and] thus uses of DDT do not have a deleterious effect on fish, birds, wildlife, or estuarine organisms." The major scientific organizations testified on behalf of continuing the use of DDT.

But EPA head Wuckelshaus never

read the 9,000 pages of testimony, and he admitted later that he made the decision to ban DDT for political reasons.

### A Life-saving Record

Speaking at a press conference on the 20th anniversary of the ban on DDT, May 21, 1992, in Washington, D.C., Gordon Edwards summarized DDT's life-saving record:

"DDT saved millions of human lives during the past 25 years, by controlling the insects that transmit disease to people—the mosquitoes that give us malaria, yellow fever, encephalitis and elephantiasis, the lice that transmit typhus, the flea vectors of plague, and the tsetse flies that spread African sleeping sickness and nagana. . . .

"DDT has eliminated much of the illness that formerly plagued millions of inhabitants of tropical lands from performing a good day's work. DDT permitted people to occupy and produce food in large areas of Africa, India, and Asia that were formerly uninhabitable. . . .

"DDT and other pesticides contributed heavily to the spectacular agricultural success in the United States and abroad, boosting farm productivity, raising farm income and keeping food costs low. . . .



David Lewis

Gordon Edwards addressing a May 21, 1992 press conference on DDT in Washington D.C.

". . . [T]he so-called environmental groups devoted millions of dollars to the campaign against DDT. Their activities doomed . . . hundreds of millions of people to death from insect-borne disease, malnutrition, and starvation.

"Their lack of concern for human life was exemplified by the Sierra Club president in 1971 when he told reporters: 'The Sierra Club wants a ban on DDT, even in tropical countries where it has kept malaria under control.' Similar statements have been made by leaders of most other so-called environmental organizations. . . . The major goals of these groups [include] the decimation of humans in the Third World countries by any means possible."

Wuckelshaus has come close to identifying chlorinated dioxin as an environmental estrogen affecting the fish there.)

It is remarkable that the authors of Our Stolen Future seek to blame traces of DDT-like compounds for "sterilizing" alligators in the lake, while ignoring more likely causes.

### Chlorine a Villain

A major faultline of the authors appears to be that chlorine is a villainous chemical. To the contrary, Dr. Gordon W. Cobble points out that chlorine is as natural to our world as carbon, hydrogen, or oxygen. Writing in the *American Journal of Public Health* (1994), Cobble explained that nearly 2,000 chlorinated compounds were already shown to be produced in natural environments. That includes 3 million tons of chloromethane produced annually by sources

such as decaying wood, and 400,000 tons of chlorinated phenols arising from Swedish peat bogs. Such "pollution" obviously exceeds the 26,000 tons emitted by human activities!

Cobble comments that "to conclude [as the book does] that a chemical will be toxic, just because it contains chlorine, is equivalent to believing that milk will be as toxic as nerve gas, since both contain phosphorus."

### A Preference for Anecdotes

The main argument of the book rests on a stringing together of anecdotal materials, like the case of super-polluted Lake Apopka. Extrapolating to the nation and the planet, the authors suggest that humanity is facing the prospect of major reproductive disruptions, as witnessed by decades of "plummeting human sperm counts" and an epidemic of unde-

scended testicles and shrinking penises.

What ever happened to the so-called "population explosion"? Which way is the environmental exterminator to turn? Are human beings too ritually fertile, or is their fertility in danger because of traces of synthetic chemicals in the environment?

The allegation of "plummeting sperm counts" is refuted by the experts:

- Mackelod and Wang (1979), wrote that there was "no evidence for a decline in sperm count or semen quality in U. S. between 1938 and 1977."
- R.J. Sherins (1995), after a 10-year study, concluded "the available data show no decline in male fertility."
- Olson et al. (1995) detected "no decline in sperm counts or semen quality over the period 1970 through 1994."
- Fisch et al. (1996) found that

"sperm counts have actually increased in the last 25 years."

- Heindel et al. (1994) reported that "mixtures of fertilizers and pesticides that have been suggested to be hormone disrupting" were administered in drinking water to rats, and "sperm at doses up to 100 times the average level in contaminated ground water, there were no adverse reproductive or developmental effects including no reduction in the sperm counts or male offspring."

- Dr. Alice Ottoboni, California State Toxicologist, carried out feeding experiments on rats and dogs for years and reported that "DDT makes animals much more fertile than those without DDT" (*California Health*, May 1972).

#### Selective Reporting

An article by Nick Skakkebaek is gleefully reported in the book as showing that "human sperm counts declined by almost 50 percent between 1938 and 1990." Three years later, Olsson et al. revealed that Skakkebaek's treatment of statistical data had been in error, and that the data for 1970 to 1990, when re-analyzed, indicated that "sperm counts have not declined, and may have increased slightly."

Sinking lower, the authors say that "British researchers report a doubling in the numbers of cases of undescended testicles in England and Wales between 1962 and 1981, and similar increases have been reported in Sweden and Hungary," but they fail to mention the finding of Berkowitz et al. (1991), that "Hospital records indicate there has been no increase in the prevalence of this disorder in the United States."

The book proposes that "As human exposure to synthetic estrogens has increased over the past half century, so has the incidence of prostate cancer," but Heilbroner et al. (1995) reported that their results "contradicted the hypothesis that exposure to DDT or PCBs causes prostate cancer." Potensky et al. pointed out in 1995 that "The data indicate the recent dramatic increase in prostate cancer is the result of increased screening," and Miller et al. concluded in 1995 that "The increase in prostate cancer death rates seems to be due to greater survival to old age, where the disease is more prevalent."

Colborn and her associates seem eager to believe that all organochlorine compounds can mimic environmental

hormones, but they present no proof to support such beliefs. Dr. Stephen Safe (1995) tested the effects of organochlorine compounds in the average human diet, and concluded that "the total estrogenic activity of these compounds is 40-million-fold lower than that from the natural components of vegetables and other foods consumed daily."

An excellent review by Dr. Robert Golden of Environmental Risk Sciences in Washington, D.C., (1995) summed up research by numerous toxicologists and physiologists, showing that DDT, DDE, heptachlor, chlordane, and many types of PCBs have no significant estrogenic activity. He included data on natural environmental substances that do mimic normal hormones or affect natural hormones in animals.

Golden evaluated the accuracy of claims made by environmental activists such as Theo Colborn and her colleagues. He points out that estrogens exert their effects via interactions with specific receptors, and that "only a small fraction of organochlorine compounds have the necessary chemical structure to bind them even weakly with the estrogen receptors."

Golden reported that more than 300 plants, in 16 common families, contain estrogens that may bind with the receptors of humans or wildlife. Naturally occurring estrogens abound in many cereals, legumes, fruits, and tubers. The 1996 National Academy of Sciences report on *Endocrine Disruptors in the Natural Environment* lists 36 categories of natural foodstuffs that contain endocrine disruptors. The authors of *Our Stolen Future* could probably have developed more enlightening endocrine disruption scenarios based on healthy human diets containing cereals, fruits, and vegetables!

How do the authors respond to these professional studies and reports? They say, "Some skeptics dismiss such concerns, arguing that the hormone effects of synthetic chemicals are far weaker than those of natural hormones and that humans are not being exposed to enough to pose a hazard." They admit to note that "Often the needed information simply does not exist or it is unavailable." They cite no evidence that does not support their agenda, regardless of the potential terrible cost to society of pursuing that agenda.

The real "stolen future" is more likely

to be represented by the millions of human lives that will be blighted as a result of foods like this that rely on bad science and novel in vitro engineering techniques.

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