

**Review: Leonard A. Cole, *Clouds of Secrecy: The Army's Germ Warfare Tests Over Populated Areas*, Rowman & Littlefield, Lanham, MD, 1988**

Pages: 188

**Outstanding Exposé of Criminal U.S. Government Actions**

This is a well-documented and exhaustive survey of the U.S. army's nefarious spraying of biological warfare toxins on the public, from 1943-1971 [and beyond?].

Leonard Cole shows the amorality and hubris of the people in charge, also, the legal injustice of victims, including Edward Nevin's grandfather who was killed from a *Serratia marcescens* release in San Francisco.

He also exposes the faulty justification for such tests, that 'recommendations' are essentially impractical and useless, and could have been gained via spraying over unpopulated areas.

The importance of this book is to show what governments are capable of doing, and since a leopard cannot change his spots, what is occurring today in the form of geoengineering is an horrific up-scaling of such experiments.

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**Foreword (pp. vii-viii)**

The 1925 Geneva Protocol condemns biological and chemical weapons. The most recent agreement is the 1972 Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological and Toxin Weapons and on their Destruction.

The author covers 1950-1960s U.S. army biological agent experiments.

**Preface (p. ix-xi)**

Fort Detrick, Maryland is the U.S. headquarters of the country's biological warfare (BW) program.

Interviews reveal a powerful "us" versus "them" mentality.

### **I) Clouds of Secrecy: Introduction (pp. 3-10)**

For at least two decades, the army secretly exposed millions of Americans to huge clouds of bacteria and chemical particles.

Under existing law, they could still be spraying heavily populated areas.

BW agents are more potent weight-for-weight than chemicals as they can reproduce. They are also cheaper, more insidious, widespread, longer lasting, and less controllable.

The army acknowledges that from 1949-69, 239 populated areas across the country have been blanketed with bacteria [p. 6], especially *Serratia marcescens*.

### **II) Infecting the Enemy: Biological Warfare in the Past, and the Road to Testing (pp. 11-)**

"The value to U.S. of Japanese BW data is of such importance to national security as to far outweigh the value accruing from war crimes prosecutions." [p. 13]

No Japanese were ever indicted or tried for crimes related to BW activities.

In January 1964, George W. Merck, of the Merck Pharmaceutical Company. [p. 15]

Open air programs were to: "test ventilating systems, subways, and water supply with innocuous [sic] organisms".

A 1948 list of pathogens includes *tularaemia*, *anthrax* and *brucellosis*.  
In 1979, the CIA obtained *Hemophilus pertussis*.

During the 1960s the army release gases and hallucinogenic drugs in open air tests in Maryland and Utah [p. 19].

### **III) Living Near Gruinard Island (pp. 23-31)**

GI is off the NW coast of Scotland. Since WWII, British and U.S. scientists conducted BW experiments there till 1943, and it remains contaminated with anthrax spores.

#### **IV) Fort Detrick's Mysteries (pp. 32-43)**

Field mask for gas protection were one million times less efficient than necessary to filter out biological particles.

Fort Detrick's contribution to civilian life is the herbicide and leaf defoliant 2,4,5-Trichlorophenoxyacetic Acid, an indestructible dioxin.

In 1971, Detrick became home to the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID). It is more underground than above. The town philosophy is, "you don't bite the hand that feeds you, and Detrick is such a large employer".

USAMRIID is involved in recombinant DNA experiments that involve cloning toxigenic genes into *Escherichia coli*.

"The public is being duped by labelling Detrick a cancer research centre".

#### **V) The Army's Germ Warfare Simulants: How Dangerous Are They? (pp. 44-58)**

*Aspergillus fumigatus* [AF] is a fungus used in the 1950s on the public. It causes aspergillosis: infection of the lungs; bronchi; paranasal sinuses; orbit; bones; meninges. It can be fatal

ZnCdS was used 34 times in tests, including Iowa, Nebraska, South Dakota, and Virginia [pp. 46-7]. It is toxic to all physiological systems and is used as fluorescent particles.

*Bacillus subtilis variant niger* was commonly used. It is 10,000X as resistant to heat as the vegetative cell and can perhaps survive centuries without nutrients. Also, it can incorporate infective viral DNA into its own genome.

The army sprayed San Francisco Bay area with *S. marcescens* in September 1950, and then for twenty years across the country. [pp. 52-3]

"There is no such thing as a microorganism that cannot cause trouble". [p. 54]

## **VI) Airborne in the U.S.A: Open Air Vulnerability Tests in Minneapolis, St. Louis, and the New York City Subway System (pp. 59-71)**

St Louis slums in Minneapolis were sprayed 81 times over three months between 2000 and 0000, and 1330-1700. The army is only concerned with "penetration", "distribution", and "dosage". Continuous blowers from trucks and roof tops released 3.5g of fluorescent particles per minute for ten minutes at a time. [pp. 61-64]

In 1996, the army attacked the NYC subway with *B. subtilis* from June 6-10. Scientists and technicians dropped light bulbs of 30g charcoal and 175g bacteria [87T bacilli] into the subway. The charcoal made the deposit inconspicuous.

Army reports show pride in having deceived fellow citizens. [p. 67]

None of the six proposals from this experiment were actioned.

An effort to vaccinate citizens during the 1970s swine flu scare is instructive: many refused, and those who were suffered severe side effects. In the end the pandemic never happened.

## **VII) Edward Nevin and the Spraying of San Francisco (pp. 75-84)**

Nevin's grandfather died of bacterial endocarditis caused by bacteria.

Nevin V the U.S. was filed 1977. The U.S. attorney's office in San Francisco asked the claim be dismissed on grounds the government was immune from suits by citizens, derived from English law when monarchs could not be sued by subjects.

Special Report No. 142: The San Francisco Test, or, "Biological Warfare Trials at SF, CA, 20-27 September 1950. Nothing is mentioned about monitoring human health.

A BW seaport attack from 2+ mi offshore is entirely feasible.

In October 1951, Richard Wheat published "Infection Due to Chromobacteria" which described an extraordinary epidemic of infections in SD caused by *S. marcescens*. Eleven were infected during six months beginning 29/9/1950.

In civil claim trials V the government, there is no jury, only a federal judge.

### **VIII) The Trial (pp. 85-103)**

The Nevin's family case was: the bacteria caused Nevin's death; the army had ample reason in 1950 to suspect the bacteria could be pathogenic; the spraying was negligent.

*S. marcescens* is a rarely seen bacteria.

U.S. Weather Service meteorologist William Haggard: "the same information about dispersion...could have been developed by spraying in uninhabited areas". [p. 91]

Retired General Major General William M. Creasy in charge of Fort Detrick and the spraying: "if you want to test the BW agent, the BW agent is designed to work against people, and you have to test them in the kind of place where people live and work...I could only conduct such a test without informing the citizens it was being conducted." [p. 95]

*Voir dire* is inquiring into a witness' competence to testify.

On 20/5/1981, Judge Conti denied all the plaintiff's claims. SCOTUS also refused to consider their subsequent appeal.

### **IX) Terror or Error: The Yellow Rain Puzzle (pp. 107-119)**

Trichothecene toxins "may be diluted by adverse weather".

The U.S. claimed Soviets had been using "lethal chemical and toxic weapons since the mid-1970s", and were doing so in Afghanistan and SW Asia. They collected 100 environmental samples in Laos and Kampuchea and found 5 containing trichothecenes.

## **X) Engineering Genes for Defense: Recombinant DNA Technology and Biological Warfare (pp. 121-135)**

Plasmids are small, circular DNA segments inside bacteria

A 1980 army *Science* advertisement: "on the introduction by recombinant DNA [rDNA] methods of the human nervous system gene of acetylcholinesterase from human neuroblastoma cells into a bacterium".

Their goal is to introduce a *pneumococcus* genetic toxin into *E. coli*.

## **XI) Return to Testing: Field Experiments, the Dugway Issue, and Ethical Questions (pp. 136-151)**

August 1984 *Assessment of Chemical and Biological Sensor Technologies*: "Realistic, nontoxic simulants" are used to describe ZnCdS, *S. marcescens* and *B. subtilis*.

Immunologist Dr F. James Primus: "we can develop mass spectrometers, but in the biological area we just don't know what to do".

At near freezing temperatures, *Pseudomonas syringue* form particles around which ice crystalizes. These bacteria induce frost damage in agricultural crops. [p. 141]

rDNA organism consequences include: survival possibility; growth; displacement of natural organisms; ecosystem disruption; direct harm.

1977, Dr Richard Goldstein: "You give me any normally nonpathogenic microbe and under certain conditions it can be pathogenic." [p. 147]

## **XII) Worries and Ambiguities (pp. 152-159)**

December 1984, Washington Post, *Army Sprayed Germs on Unsuspecting Travellers*. Bacteria was sprayed from Washington National Airport from specially constructed suitcases.

## **Appendix I (pp. 163-166)**

Urinary passages are fertile soil for bacteria multiplication that are not commonly the cause of disease elsewhere.

Simulants must be as close as possible to the BW agents under study.

**Appendix 2 (pp. 167-168)**

AF is ubiquitous in nature.

**Appendix 3 (pp. 169-174)**

*S. marcescens* can cause pneumonia, emphysema and lung abscesses.

**Appendix 4 (pp. 175-180)**

Biological defence equipment and systems may: detect and identify; protect; decontaminate.

A detector which responds too easily to simulants is not useful due to a high false alarm rate [Type II error].