

The Global Health CHRONICLES

MALARIA CONTROL: CDC BEGINNINGS

Name: Schultz, Myron “Mike”G., DVM, MD, DCMG, FACP (EIS 1963) and Selma Schultz

Date of Interview: May 20, 2012

Link to Interview:

Summary of Interview:

Myron “Mike” Schultz, DVM, MD, DCMT, FACP (EIS 1963) and his wife, Selma describe their experiences at CDC and other public health institutions over a 50+ year time period. Dr. Schultz, who is also a noted public health historian, relates his memories of noted CDC personalities and others who had a major impact on his career and public health goals. Dr. Schultz relates information about the Office for Control of Malaria in War Areas and its eventual end in the United States from information he gleaned over the years. He adds key information about the genesis of CDC and the EIS program, along with stories of his own international work in parasitology.

Notable Quotations from Interview:

On the change from MCWA to CDC: *“So as far as malaria goes, it died of its own accord, and fortunately the program was converted from the Office for Control of Malaria in War Areas to the Communicable Disease Center which eventually became the Centers for Disease Control. CDC was changed from Communicable Disease Center to the Center for Disease Control by Dave Sencer, and then later they added the word ‘Prevention,’ and of course it became ‘Centers,’ not one ‘Center’.”*

On bioterrorism and EIS: *“The Epidemic Intelligence Service (EIS) was formed in 1951 because of the fear of chemical and biological warfare. Dr. Langmuir was charged with training physicians who could go out and make diagnoses in the field. But that raison d’être went away very fast. So he converted it to an infectious disease cadre.”*

On Dr. Langmuir: *“There’s so much to be said about Dr. Langmuir...He was an important influence in my life. What he gave me was opportunity, like he gave everybody else. Oh, there’s a story that illustrates that point. Dr. Langmuir was in the company of a young physician when they were entering a lecture hall where there was a meeting of the American College of Epidemiology going on, and the young man said to Dr. Langmuir, ‘Dr. Langmuir, I want to thank you for all the things you’ve given me; you’ve given me so much opportunity.’*

And Dr. Langmuir, in his modest way, said, ‘Yes, do you see all these people in here? The same is true for them.’ “

On the climate of the early days of CDC: *“I consider the early years of the EIS, particularly the 1960s, as a type of Camelot. There was a simultaneous Camelot in Washington under the Kennedy administration. I didn’t know I was in Camelot until I looked backwards on it. It was a golden time with great leadership, great opportunities.*

Key Terms in Interview:

Zoonotic diseases; emerging diseases; bird flu; parasitic disease; malaria program; clinical tropical medicine; EIS; giardiasis; babesiosis; Pneumocystis carinii pneumonia; pentamidine; AIDS; vivax malaria; Viet Nam War; introduced malaria; MMWR; leprosarium; Malaria Control in War Areas; anopheline mosquito hosts; entomologist; epidemiologist; malaria surveillance; WHO; Walter Reed Army Institute of Research; induced malaria; dengue; tuberculosis; typhus; cholera;

Key People Mentioned in Interview:

Baumgartner, Leona	Hermos, John	Munson, Mr. J. Paul
Brachman, Phil	Jeffery, Geoff	Nicole, Charles
Bruce-Chwatt, Bruce	Johnson, Prof. Garth	Pawlowski, Dr. Zbigniew
Carrion, Daniel	Kagan, Irving	Ravenholt, Rei
Carter, Henry Rose	Kaiser, Dr. Robert	Schwabe, Calvin
Collins, Bill	Kean, Dr. Benjamin H.	Sencer, Dr. David
Contacos, Peter	Langmuir, Dr. Alex	Steele, Dr. Jim
Foege, Dr. Bill	Louria, Dr. Donald	Steere, Allen
Frieden, Tom	Marsden, Philip	Virchow, Rudolph
Garnam, Dr. P.C.C.	Millar, Don	Weller, Prof. Tom
Gleason, Neva	Morens, David	Williams, Dr. Cicely
Goldberger, Joseph	Morrison, Phillip	Yoeli, Meir
Harkness, Rebecca	Mountin, Joe	Zinsser, Hans



Selma and Mike Schultz 1978. Photo courtesy of Myron and Selma Schultz .

MALARIA: CDC BEGINNINGS INTERVIEW

It's May 20, 2012 and I'm in the home of Dr. Myron and Selma Schultz, or as he is better known, Mike Schultz. Is it all right if we record our conversation, Dr. Schultz?

For sure.

First, Dr. Schultz, would you tell me a little bit about your background and how it was that you not only earned a D.V.M., but also earned an M.D. and then ended up at the Center for Disease Control?

Sure. I started my career at Cornell University in the College of Agriculture. I was intent on being a veterinarian. After two years in the College of Agriculture, I went into the College of Veterinary Medicine. In those days you could do that with just two years of undergraduate education. Nowadays, you need four years. So, I had six years total at Cornell University. They were very good years for me, years of growth intellectually and challenges. And the thing that shaped my future course was my encounter with medical science. I had no appreciation of what medical science was all about until I got into veterinary school, and it was exciting for me. I don't think I was a particularly good student but I enjoyed learning and I wanted to keep on learning. I was single and young

and nobody put any obstacles in my way. And I decided I would go on into the study of medicine.

So, when I graduated the veterinary college, I went within the very week of graduation into practice of veterinary medicine in Albany, New York, doing both small animal medicine, working in another doctor's practice as his assistant and also as the track veterinarian at Saratoga Raceway, where I had some exciting times. And I started my studies in medicine.

I had a unique life. I would work at the racetrack in the evening and then go and deliver babies at the hospital. During my years in medical school I encountered my wife to be, Selma. She was secretary to the Professor of Preventive Medicine, Professor Garth Johnson. And he was a true mentor to me — a real fine gentleman. He told me about the existence of CDC. I had no knowledge of it before that. I had already set my heart on studying diseases of animals transmitted to man because that's what I was qualified to do. These are called 'the zoonotic diseases,' which everybody in public health now knows about. In fact, of all the emerging diseases nowadays, 75% are zoonoses that come from animals, such as bird flu, for example. But then it was something hardly anyone knew about or appreciated.

There was one textbook I had in my collection which is still here in my library at home. It is Hull's *Diseases of Animals Transmitted to Man* that was an important stimulus to me. After I had made my decision, while still in veterinary school, I encountered an article in a veterinary journal about the zoonoses and it was a very informative article and it told me that there was someone else in the world who was interested in this subject. It provided a picture of the author, and seven years later, on the day that I arrived at CDC, I encountered that person. It was Dr. Jim Steele. So I knew I was in the right place for sure when I got to CDC. But it was Dr. Garth Johnson who directed me, fortunately. I was very fortunate throughout my early career in the mentors that I had who gave me good guidance.



James Steele, DVM. http://worldvet.org/docs/JimSteeleSnapShot_medium.jpg

I arrived at CDC in 1963 and a lot of important things were happening during that era in the '60s and '70s. As an EIS officer, you have two years to show your stuff, and I knew

that I wanted to continue in public health. A trip that I made to Vietnam in 1964 to investigate the status of malaria in Vietnam was very formative in my career, because I saw all the opportunities in international public health, so I knew that's where I wanted to spend my life's work.

While I was an EIS officer, I was assigned to work on parasitic diseases. I knew absolutely nothing about it except my book learning from veterinary school and medical school. There wasn't any unit on the epidemiologic side of CDC that was devoted to parasitic diseases. So I and Dr. Robert Kaiser started a two-man unit. Within a few years Dr. Kaiser was reassigned to work on the preexisting malaria program that had been going on ever since the war years. So I inherited the two-man unit which became a one-man unit. And I inherited it after CDC provided me with two years of graduate training. I spent the first year at Bellevue Hospital in the Cornell Division doing infectious diseases. It was a very good year for me under Dr. Donald Louria, a brilliant infectious disease physician. And I spent the second year in London as a graduate student in the London School of Hygiene and Tropical Medicine where I studied clinical tropical medicine. So, when I came back from my training, I had this one-person unit in parasitic diseases.

But it was a time of rapid expansion and growth at CDC. Opportunities lay everywhere. I had EIS officers assigned to me. Over the years I trained 30 EIS officers, two per year. Their assignments were for two years, so this went on for about 15 years. And during that time we did many investigations of many different entities.

Some entities we more or less put on the map. For example, giardiasis was known as a parasite of humans but it was thought to be a commensal. That is to say it did no harm. But we studied epidemics where it *did* do harm. It caused diarrhea both in travelers and in preschoolers. So, that was one entity we put on the map. Another was the discovery of babesiosis. Hardly anybody had ever heard of this disease. We had received a call from a practitioner in Nantucket Island about a middle aged woman in whom he had diagnosed malaria. But she had never been abroad, she had never had blood transfusions, she wasn't a drug user, and it of course was very suspect as to what the diagnosis was. I asked him to send the slide to us. Our expert microscopist, Neva Gleason, diagnosed malaria. I said to her in the kindest ways, "I'm sorry, Neva, but you're wrong."

And that went around three times. I refused to accept her diagnosis. The third time she saw the unusual formation known as a Maltese cross formation within a blood cell which is pathognomonic of the infection in animals. It is called piroplasmosis in animals but the human equivalent is babesiosis. That was the first discovery of babesia in an otherwise healthy human being. It opened the door to many other investigations on that disease. We advanced knowledge of many other diseases.

Pneumocystis carinii pneumonia had been known to medical science but it's epidemiology was poorly understood. We launched several studies, principally at St. Jude Hospital in Memphis, to study pneumocystis carinii pneumonia. I had established a service for CDC to provide drugs for rare diseases to physicians in the United States, and we had the drug called pentamidine which was appropriate treatment for

pneumocystis, so cases came our way. Incidentally, Dr. Langmuir was against my doing it because he looked on it as a service rather than as an epidemiologic enterprise. But in August 1981, because we were providing pentamidine, cases of pneumocystis in adult males quickly came to our attention, and that was the opening salvo for the AIDS epidemic. I had a nice encounter with Dr. Langmuir in which he acknowledged, yes, it was a good thing to provide pentamidine because it led to the discovery of a new disease – acquired immunodeficiency syndrome (AIDS).

One of my EIS officers, Dr. Peter Walzer, spent the rest of his adult life studying pneumocystosis. That's how influential CDC can be in shaping people's careers.

These are three diseases where we made inroads. Plus, we did many studies on malaria. There are instances where malaria was introduced or imported into the United States that required thorough investigation. Early in my career we got a call from the Auburn-Opelika County Health Department in Alabama that they had three teenagers with malaria. The very day we got the call, I took a government car and with Dr. John Hermos, an EIS officer, we went to investigate. We confirmed that the cases were indeed malaria, vivax malaria, in three teenagers. Two of them were boyfriend and girlfriend, the other didn't know the other two. While we were in Alabama, we got a call from headquarters that the EIS officer in Rochester, New York, had a teenager in Rochester with malaria. And I said, "Find out if that teenager had been in Auburn-Opelika," and the answer came back, "Yes!"

So we had four people who had acquired malaria, all within a short period of time in Auburn-Opelika and they'd never been out of the United States. Now, Auburn-Opelika is right next to Ft. Benning and this was during the Vietnam War. It was 1968. And all of these four teenagers had been at a drive-in movie theater on three consecutive nights. So we understood that this was an episode of what's known as introduced malaria, meaning it's brought in by a human and then picked up by a mosquito which transmits it to other humans. During that time it happened rarely, but we picked up on it and it was a source of pride for me because we not only did a quick and correct investigation but John Hermos and I wrote it up in the car on the way back home and we gave it to the MMWR staff hot off our hands as soon as we arrived and it was published the same week of the investigation. Recently, I examined back issues of the MMWR. I confirmed that the date of publication was within the same week of the date of the investigation. So that's just a flavor of the fun we were having and the excitement of being at CDC.

There were other diseases and other opportunities that came along, so for 15 years I had the privilege of leading the epidemiologic work on parasitic disease. It started as a unit, then a section, then a branch, and then a division.

Nowadays it's very large. It grew rapidly while I was there, not because of anything that I did specifically but because CDC at large was growing rapidly and there were so many opportunities. And nobody ever said don't do this or that. We had a lot of freedom and that was another great feature of CDC. We had good leadership under Dr. Langmuir, Dr. Sencer and Dr. Foege, and I should add Dr. Steele. Dr. Steele left CDC in 1971 to go to the University of Texas School of Public Health in Houston. We have maintained

our friendship ever since. He's now 99. I just spoke to him a few days ago and we often have telephone conversations about public health and the state of the world. He's an extraordinary man. Among his strengths, he has total recall. If you tell him a date, he'll tell you what happened on that date. Or if you tell him what happened, he'll tell you the date that it happened.

He loves music. During EIS week in recent years we'd spend one evening in my home listening to Mahler's 9th Symphony. He was an important influence on me.

I have had six mentors in my career. The first was Mr. J. Paul Munson. Mr. Munson was an educator who was in charge of the school system in Lansing County, New York, near Ithaca, along the shores of Lake Cayuga. He also owned a large dairy farm, and I lived on that farm for six years before and during my years at Cornell. He was my first mentor. Then Selma's boss, Dr. Garth Johnson, was a mentor to me. I have already mentioned Dr. Donald Louria. He was a brilliant physician who taught me infectious diseases at Bellevue Hospital.

Another mentor was Professor Meir Yoeli. He was a professor at New York University. He was a romantic individual who would write beautiful papers and give inspiring talks that were half literature, half science. I first encountered his writing while I was on a train in England, going to the leprosarium in Redding. I brought some medical journals with me. There was an article in the New England Journal of Medicine that he wrote about Charles Nicole and Hans

Zinsser meeting in Tunisia.



Hans Zinsser, 1930. <http://neglectedbooks.com/wp-content/uploads/2010/07/zinsser.png>

It was such a beautiful article that it stayed in my mind and in the fall when I was back in the states, I encountered him at a tropical medicine meeting. I was writing medical history at that time. We had similar interests and we developed a close friendship. On December 5, 1975, he died suddenly of a heart attack. The family called me and asked me to give the eulogy at his funeral with less than a day's notice. I did it, but I don't

know how I did it. It came to me as an inspiration. I don't think I could ever do it again. He was a man who had a deep influence on me.

There are three other people in my life who had an important influence on me. I wouldn't call them mentors, per se, but nevertheless they made my life sweeter. One was Philip Marsden. He was a lecturer at the London School. I met him the year before I went to London when he was doing a year-long assignment as an instructor at Cornell in tropical medicine. Then when I went to London, he turned out to be my instructor. We were close friends for the next 15 years. We went to South Carolina with an elderly professor, Dr. P.C.C. Garnam. Professor Garnam discovered the liver stage of the malaria parasite in 1948. When he came to Atlanta he stayed with us. Selma and myself, Professor Garnam, Philip Marsden and his wife, we all took a trip by automobile to South Carolina to Sullivan's Island to find the tulip tree that Edgar Allen Poe wrote about in the short story called *The Gold Bug*. For some reason this fascinated Professor Garnam, so that was a little adventure.

The other Englishman who I had a close relationship with Professor Leonard Bruce-Cwatt. He was a distinguished malaria researcher and the head of one of the institutes within the London School, the Ross Institute. I spent a short sabbatical in London that CDC was very generous in giving me. It was in the early 80's and it was under the tutelage of Professor Bruce-Cwatt. He enriched my life.



Benjamin H. Kean, MD
Photo courtesy of Weill Cornell Medical College

And then there was Professor Ben Kean. Ben Kean was a notorious professor at Cornell Medical School. I say notorious because he was the most popular teacher. He taught tropical medicine but he was also a thespian. He loved to act and perform and he would put on incredible lectures.

Dr. Kean wrote a two-volume work on the history of tropical medicine. I have copies in my library that were a gift from him to me. He inscribed it, "To Mike, who was too young to have his work included; with admiration and respect, Ben."

I also have his autobiography, *One Doctor's Adventures Amongst the Famous and Infamous*. In his later years he was doctor to all the 'hoi palloi' of New York who thought they had tropical diseases. Some did and some didn't.



Mohammad Reza Pahlavi, late Shah of Iran in 1978.

Photo retrieved from:

<http://iranpoliticsclub.net/photos/U23-Pahlavi3/images/Mohammad%20Reza%20Pahlavi%20Shah%20of%20Iran%201941%20-%201979.jpg>

When the Shah of Iran was deposed he went to Cuernavaca, Mexico, and while there he became ill. The local physicians diagnosed malaria which on the face of it was an incorrect diagnosis. The Shah had never been in a malarious area and Cuernavaca is not malarious. Because the diagnosis was malaria, Professor Ben Kean was called on to attend to the Shah. He went to Cuernavaca and he decided that the Shah needed to be hospitalized in New York. He was hospitalized at the Sloan Kettering Cancer Institute because the Shah was, in fact, in the throes of leukemia. When the Shah went to New York, everything became topsy-turvy. The Iranians invaded our embassy and fingers were pointed at Dr. Kean for starting this process.

This is a photograph of Professor Yoeli, and this is the eulogy that I wrote and gave at his funeral in New York.

He died suddenly of a heart attack. Very tragic. He was at the height of his career. I had written a nomination for him to get a medal from the World Health Organization and it was sitting on Dave Sencer's desk when Meir passed away.

Well, that's a great background you gave and that gives us a context for going back, I suppose, a little bit more into the history of malaria and its impact on the way CDC formed, what it was like or why the Malaria Control in War Areas came to be. If you know of people who worked then and what they did and how they evolved in their jobs and maybe some of the ones who came from that discipline and into CDC when it formed, would you tell us about that?

Well, what I know is all hearsay because I wasn't here in Atlanta until 1963. But it started with the concern that malaria would be reintroduced into the United States. We had soldiers in tropical areas. The South was what's termed 'receptive,' meaning it's warm enough and it had the right anopheline mosquito hosts. So there was concern that malaria would come back. At the same time, malaria was declining, going through a natural death you might say, a natural decline in the late '30s and '40s. It wasn't really appreciated until there was a thorough analysis of case reports. The key thing was to ask for the names of cases and other identifiers; gender, age, and so on. They had only been going on lab smears in counting cases. Once they asked for more information it couldn't be produced. So the reports that were coming in were in part erroneous, fictional. People were looking at platelets and calling them malaria parasites, not really doing it in a skillful way. And the screening of homes during and after World War II and the availability of quinine were also influences on the decline of malaria. So these two elements were occurring at the same time. Malaria was in a natural decline but yet there was concern about reintroduction of malaria from the tropics.

Earlier in this session I told you about what happened near Ft. Benning where the four teenagers were infected by what we termed 'introduced malaria.' So, people were concerned about this since World War II. Malaria wasn't introduced into the United States by returning soldiers, but nevertheless to deal with this possibility, an office was created, the Office for the Control of Malaria in War Areas here in Atlanta because this was the center of the southern states. It was four rooms on the sixth floor of the Volunteer Building on Peachtree Street.

They had entomologists, I don't know the epidemiologists they had. All I know is that Alex Langmuir summarized the situation in a key paper that he wrote in 1963 *New England Journal of Medicine*.

The people who were in charge of the nation's public health at that time fortunately were wise folks. One was Joe Mountin, who we still celebrate every year. And Joe Mountin decided to convert the malaria control program into a communicable disease control effort and that is how got CDC got started.

1963 EIS Class 48 officers

The gift created by the 1963 EIS class was a plaque in the format of an ersatz monopoly board. Each property of the monopoly board was named for a place where members of the 1963 EIS class had carried out an epidemic aid investigation. In addition, there are flip-cards in the center of the monopoly board that called attention to foibles of CDC staff and EIS officers. It was presented to Dr. Langmuir on stage at the completion of the EIS Skit. When 3 of the flip-cards were read and the presentation completed, Dr. Langmuir responded by saying, "You rascals!"

The creation of the plaque was led by Myron Schultz. The plaque hung on the wall of Dr. Langmuir's office, along with other class plaques, until his retirement from CDC. It is presently on exhibit.



Dr. Alexander Langmuir with members of EIS Class of 1963 (Mike Schultz second from Right)



<http://www.cdc.gov/museum/eis/EIScopy1960.pdf>. Donated to David J. Sencer CDC Museum by Dr. Myron Schultz

As you well know, CDC was changed from Communicable Disease Center to the Center for Disease Control by Dave Sencer, and then later they added the word Prevention, and of course it became “Centers”, not one “Center”. The land for CDC belonged, I believe, either to Woodruff or to Emory, one or the other. But I’m told it was sold to the government for \$1. And it’s on the site where Building 1 stood (which sadly has just been pulled down). If you’re looking for memories and reminiscences, it all happened in Building 1 as far as I’m concerned. That, to me, was the center of the universe. Alex had his office on the 5th floor, it was very accessible. All the young staff had offices nearby. I had my office nearby his.



Photos retrieved from:
<http://www.cdc.gov/ncird/div/DBD/newsletters/2011/spring-summer/index.html>

You said at the beginning that I was doing malaria surveillance and that’s why you were looking for my reminiscences. You’re correct, I was entrusted with the malaria surveillance work. I got an understanding of WHO’s approach by reading their literature, so I recall putting in the annual malaria surveillance report the WHO definition

of malaria cases, such as introduced, imported, and so on. That hadn't been in the report. And step by step we enhanced it and then, of course, the Vietnam War came along which was in the late '60s and I was called upon to report biannually to the Malaria Commission of the Armed Forces Epidemiologic Board which met at Walter Reed Army Institute of Research. So that was the stage that I acted on for several years.

In my career as an epidemiologist I have predicted two epidemics before they occurred. One of them I predicted to the Malaria Commission and it turned out it was a correct prediction. There were significant attack rates of malaria in our troops in Vietnam and there was intravenous drug usage. So it wasn't that difficult to put two and two together. I predicted to the Malaria Commission that there would be an outbreak of induced malaria. And six months later when I came back to the next Malaria Commission meeting, we reported on a current outbreak that was in Southern California. That reignited CDC's interest in malaria. We were telling the military what was happening to their troops and they were very appreciative of it. I got to rub shoulders with the top brass and I also saw Professor Yoeli who was a member of the commission. I would be with him there. I said in my eulogy that I recalled being in the yard of Walter Reed when a young surgeon encountered Professor Yoeli and the surgeon was very generous in his praise of Prof Yoeli. He said, "Oh I remember your lectures at NYU so much and thank you."

Apparently a lot of people in the beginning were stationed in Puerto Rico and that that was part of the effort. Did you know any of those people and what they were doing there that may have been different from what they were doing in the continental United States?

There was a laboratory in Savannah, Georgia, devoted to malaria which Bob Kaiser rather painfully had to close down, and I think Geoff Jeffery was part of that closure. You really need to talk to Geoff about this. I don't recall anything about a malaria lab in Puerto Rico. There is presently a dengue lab that's part of CDC that is an internationally known lab for dengue. I've been in Puerto Rico. Never encountered people working on malaria, so I don't know about that.

There were quite a few university professors who ran laboratories devoted to malaria research studying the parasite or studying the vector or studying drugs in people. Some drug trials were done in inmates of federal and state institutions for malaria. There's a book on my shelf about simian or monkey malaria done by Peter Contacos and others who were also members of that consortium.

Professor Weller was at Harvard and he invited me to come to Harvard to talk about malaria. He was a Nobel Laureate in Medicine. That's another thing about my career that I met such an extraordinary range of people. I had a long-term collaboration with a Polish professor, Dr. Zbigniew Pawlowski. He and I did a monograph together on tapeworm infection. Our collaboration on parasitic diseases led to my frequent travels to Poland, his frequent travels to Atlanta and a really delightful friendship.

That's one of the best things about CDC that you're describing.

Oh, the travel was great.

The travel and the friendships.

Yes. About the travel, I never dreamed that I would be in the places I have been to. I went to Mecca on one of my trips. Can you imagine?

No.

We went to St. Paul's Cathedral.

There's another book on my shelf. It's called "Cicely" and it's the biography of Cicely Williams, a pediatrician who first described kwashiorkor in African children, and I met her in St. Paul's Cathedral. I shook her hand.



Dr. Cicely Williams. Photo retrieved from:

<http://www.joyousjam.info/jamaicanhistoryfebruary2004/id9.html>

One of the things that we're focusing on with the forming of the Epidemic Intelligence Service and CDC itself is the impact that Bioterrorism may or may not have had on its formation. And I just read in Dr. Foege's book that at the time there was real fear about Korean hemorrhagic fever being introduced into the United States during the Korean War, and there were other diseases, too, that were of concern. Do you know very much about that?

Only hearsay. My understanding is that the EIS was formed because of the fear of chemical and biological warfare. And that was more or less the sole reason for it being founded, and Alex was charged with training physicians who could go out and make diagnoses in the field. But that *raison d'être* went away very fast. So he converted it to an infectious disease cadre. Yes, it was because of the fear of what Korea might send our way. I don't think it was Korean hemorrhagic fever because you need a vector for that. I think it was more fear of chemical or other different biological agents. It wasn't a terribly well-founded fear. I don't know what the evidence was at the time, but it went away fairly quickly.

What kind of politics were going on at the time?

Well, there was McCarthyism. I don't know if that played any role or not. Rei Ravenholt comes from the '50s era and he would know, and Phil Brachman would know.

Ravenholt was EIS class of '52.

He's been coming back to every EIS conference except this year's. I hope that he's well.

He is well. I've talked to him and we're trying to figure out a way to get together.

Great. He's an extraordinary person. He's written a lot on epidemiology. He has softbound volumes that he's put together. I can't recall the exact titles but it's his reflections on epidemiology. And he had an important job in US AID in the latter part of his working life and he was a pioneer in that era. But the 50's, he would know for sure. There's another person who you may want to contact from the '50s who still every year comes to the EIS conference. He is Robert Eelkema.

I guess to wind up, because I know you have another commitment here...

We've got plenty of time.

I'm going to be talking to Dr. Pratt on Tuesday.

Give him my regards.

I will. And I'm wondering what questions you would have for him that would be most helpful.

Well, the thing that's a gap in my knowledge, what happened with the malaria program in the '50s and early '60s? As I recall, he was an entomologist, was he not?

Mm-hmm.

Yes. And he was an early CDC-er and if he's still playing with a full deck I hope. He could be a good source of information. I ran into a colleague at this year's EIS conference, Harry Haverkos, who showed me a book about DDT and the misinterpretations about DDT. And he feels that DDT has been slandered down through history, misused. During World War II, in Naples, when people were dusted with DDT it stopped a typhus epidemic in its tracks, and typhus historically has been a great killer during wars. You know the book, *Rats, Lice and History*?

No.

Oh, it's a great book. It's a great classic. It, too, is on my shelf. It's the history of typhus written by Hans Zinsser, a professor from Columbia and Harvard.

So this [book] was copyrighted in 1934.

It's been reprinted many times. As I said, it's a classic. He sets out to give the world history of typhus but then in a clever way he says, "I have got to give you 12 chapters before I get to that," and he talks about other diseases.

And just to tie things together in this conversation, I told you that I read a paper of Professor Yoeli's and Yoeli described the visit that Zinsser made to Tunis to visit Charles Nicole because they were great minds working on similar problems. And Yoeli wrote about it in such a beautiful way and that paper impressed me and started my friendship with Yoeli. Well, the wheels turn and about three years ago I was at the EIS conference and I saw David Morens. David said he admired some of the papers I've written in medical history and I definitely admire his work. I said to him, "I'm preparing a paper on Charles Nicole." He said, "Oh, I'm working on a paper on Nicole's work on influenza."

I said, "Well, we definitely have to co-author a paper together."

So we did. It's in *Emerging Infectious Diseases*. So you never know how one part of your knowledge leads to something else of interest.

You've done more than one article like that; "Identify the man in this picture."

I've done seven of those, yes. To name them, I've done Rudolph Virchow which was the first. I did Henry Rose Carter, a public health service epidemiologist. The third was Theobald Smith. The fourth was Charles Nicole. I've done Daniel Carrion and Robert Koch. The latest one I did was of Calvin Schwabe who was a dear friend of mine.

Are they all in *Emerging Infectious Diseases*?

Yes, just look under Schultz and you'll find it.

It's M.G. Schultz?

Yes. I also did a lecture which you won't find anywhere because it was merely a lecture but it turned out very well. I did it last December at CDC. The title was *Did Charles Darwin Have Chagas Disease?*

How interesting. And what was your conclusion?

Well, I don't want to give away the punch line but I'll tell you the premise. Darwin took the famous voyage of the Beagle which lasted for almost five years. Three and a half years were on land. And when he was in western Argentina on March 25, 1835, he wrote in his diary that he was bitten by a giant Benchuca bug, the great black bug of the Pampas which we know nowadays is a triatome, the vector of Chagas Disease. Do you know what Chagas disease is? Okay. So when Darwin returned to England, he was ill and he remained ill for the next 40 years of his life. He led a reclusive life.

Some thought he was a hypochondriac.

You've got it. Good for you. I gave the lecture giving his life history and talking about his health and then pointing out the evidence for and against his having Chagas disease. And the evidence is overwhelmingly against it. If you inspect his diary, which I was able to do when I lived in England and went to his homestead called Down House, it is filled with all of his physical ailments, recording his bowel movements every day and whether he had ringing in his ears. And this went on for years and he was seen by 20 physicians in his life. Some were famous physicians. And nobody ever diagnosed any physical disorder. Also, of his ten children, seven survived to adulthood and five of those seven had hypochondriasis or depression. His constant focusing on his bodily functions and being totally cared for by his wife, Emma, all point to me that he was a hypochondriac. So that's another bit of medical historical review that I have done.

Another work I've done is biographical work on Joseph Goldberger. He's a hero of mine. Goldberger was a Public Health Service commissioned officer who spent 15 years of his life working out the etiology of pellagra. And he showed convincingly that it wasn't an infectious disease, it was a nutritional deficiency disease. Unfortunately, he died before he could get to the final answer as to which nutritional element it was. For many years CDC has used his data as a teaching exercise for EIS officers. The officers are told at the outset, "We won't tell you what the disease is because that will give you a bias, we're just going to give you the data and as you put the data together, we're going to give you more and more data until you can make a hypothesis and come to your own conclusion."

And then at the end they're told, "This is Joseph Goldberger's own data that he created, and it's all about pellagra."

And then I give a presentation about Joseph Goldberger; not only what he did but also discuss his methods that were so pure. And I encourage the officers to emulate him.

For me, it's a story that I feel duty-bound to tell over again because it's a great epic in public health.

And lastly, another work I did in medical history was titled *The Strange Case of Robert Louis Stevenson* which I published in the Journal of the AMA. It involves Stevenson writing *The Strange Case of Dr. Jekyll and Mr. Hyde* in three days and three nights with no rest. When he was done, he showed it to his wife, Fanny, who didn't like it. She thought it should be an allegory. He got very unhappy, he threw the manuscript in the fire and he wrote the second version in another three days and three nights. And when he was done, he was exhilarated, not one bit tired after six days and six nights. He said, "I've got my shilling shocker."

And it turned out to be a successful book, a short story. So the question is—this work was done while Stevenson was lying sick in bed with consumption (TB). How could he have done that? And that's what I address. This story was done in the fall of 1885 when cocaine was first used for a broad range of illnesses. It was also a time when Sigmund Freud was experimenting on it. Freud had a three year involvement with cocaine. At that time, Stevenson had a laryngeal disorder. His physician, Thomas Bodley Scott, gave him morphine, and Stevenson wrote, "It cures the bray but it sews up the donkey." I found a notation from Stevenson's stepson that his mother, Fanny Osborne-Stevenson, was an avid reader of the *Lancet* in order to find anything that might help her husband. And sure enough, six weeks before Stevenson wrote *Jekyll and Hyde*, there was a paper in the *Lancet* about how good cocaine is for laryngeal disorder. To top it off further, when it was all done weeks afterwards, Stevenson said, "Well, I didn't write it. My brownies wrote it for me."

He said this about one other short story that he wrote in the same time period, and I interpret this to be Lilliputian hallucinations which is a phenomenon described in the medical literature that comes from cocaine and other drugs.

So that was my paper. I presented it four ago to the Atlanta Medical History Society. It was well received. That's where I get my fun out of life.

It sounds so interesting. I could see how that would be fun.

Do you have anything that you wish I would have asked that I didn't, that we should have covered?

There's so much to be said about Dr. Langmuir. We really didn't discuss him very much but I'm sure you've received many inputs about him. He was an important influence in my life. What he gave me was opportunity, like he gave everybody else. Oh, there's a lovely story about that. This is what I remember being told. Dr. Langmuir was in the company of a young physician when they were entering a lecture hall where there was a meeting of the American College of Epidemiology going on. The young physician said, "Dr. Langmuir, I want to thank you for all the things that you've given me; you've

given me so much opportunity.” And Dr. Langmuir, in his modest way, said, “Yes, and do you see all these people in here? The same is true for them.”



Dr. Alex Langmuir. Photo retrieved from:
<http://phil.cdc.gov/phil/quicksearch.asp> Picture #1087

There were two other episodes I will share with you. Dr. Langmuir visited visited Selma and me in London. He had been in Geneva and it was his practice to visit CDC staff who were students in London. So, he very kindly visited us. He sat in the chair in our living room and I gave him the two manuscripts that I was writing for my thesis. He promptly fell asleep and he never read them. But, later in the year, back in Atlanta, I was standing in the corridor of the 5th floor, holding a postcard. The postcard was an acceptance from the *New England Journal of Medicine* about one of those two papers. Dr. Langmuir strolled by and I showed the post card to him. He smiled and didn't say a word. But that meant everything to me to have his approval. It was priceless and a sweet memory.

The other episode was when he was a guest in our home for a Sunday supper. Allen Steere was the other guest, the man who discovered Lyme disease. During the course of the conversation Dr. Langmuir said he had a friend who had a personal Chinese cook. I said, “Who might that be?” He said, “Leona Baumgartner.”

So I said, “Oh, she's the author of the *Biobibliography of Fracastorius*,” which she was.

He was stunned. He didn't know that I knew anything about her. Of course, she was famous in her own right. She was Commissioner of Health of New York City. And I didn't know, but at that very time he was courting her. She was on around-the-world-trip and he was sending flowers to every hotel she stopped at. But I remember his being stunned when I said that. Subsequently, they both came to our home for one evening.

So that would be three commissioners of health of New York City that I've known: Leona Baumgartner, David Sencer, and Tom Frieden.

Interesting— you have had many visitors in your home.

Well, Selma is a great hostess and we were getting international visitors all the time and she opened the home to everybody.

Selma: It was just an open house. We had a big house. We have lived a life that we never dreamed.

I think that sums up public health, your career in public health. Do you feel like it was chance encounters that got you where you are, because I hear that so many times from so many people, just someone mentioning, “Oh have you heard about EIS?” And then people come and they're converted.

I said this to you in Roger's [Glass] patio and you said, “Yes, everybody says this.”

It's true in my experience. I had no concept of what the Public Health Service was all about. When I got my commission, it was in the form of a little diploma. I had no idea what it stood for. I didn't know that we ultimately would be wearing uniforms. I had no idea of the wondrous place that CDC was. It was just extraordinarily good luck.

It was Garth Johnson, my professor, and Selma's boss who told us to go to Atlanta. We were reluctant to go to Atlanta because we thought there was racism here and we didn't know what it was like, but we just packed up and went.

It makes you wonder how many people stayed away for that reason.

Well, the big magnet, this didn't influence me but it did influence people in the years immediately after me was the Vietnam War and there was a draft for physicians and the way to get around that was to get a commission in the public health service. So they called the EIS, “the yellow berets.”

Selma: But they took in the cream of the crop from medical schools.

Yes. That was Alex's doing because he was very highly regarded by professors of medicine in leading universities. So he would say to them, in so many words, “Send me your best and your brightest.”

Experiences I had in my late teens and early '20s living on a farm that gave me the strength to do it because I had to work hard then for a goal, and I used to milk a hundred cows every morning and every night, and I enjoyed it. But I knew I was tough enough to do it. So that gave me strength, built character you might say.

Selma: Well, I knew a lot of medical students and when I met Mike, I knew this one was very special. I don't think you've ever heard me say that. But he was very mature and he was just very interesting, just like today. You always learned a little bit from him.



Selma and Mike Schultz, 1971. Photo courtesy of the Schultzs.

That's made your marriage last how long?

Going on 53 years in August.

That's wonderful. Congratulations.

Selma: Thanks. Let's see, maybe on our 50th I said, I came up with something about we have lived a life that we never planned, a dream that we never planned....

Meir Yoeli would say, "Il faut faire de la vie un rêve, et d'un rêve une réalité" (Make of life a dream and make of that dream a reality.)

That's beautiful. I think that's a good place to wrap up. Thank you both.

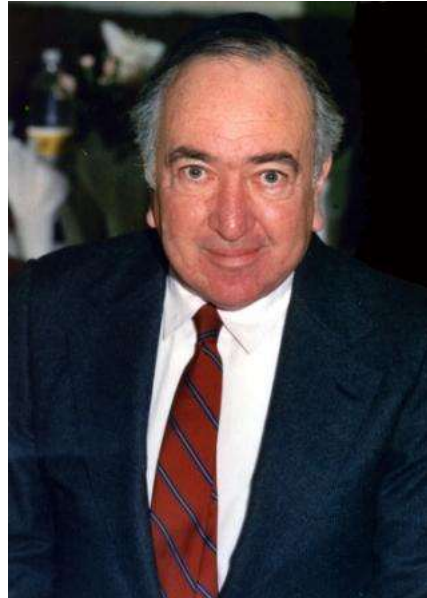
Thank you. We really enjoyed it.

END

American Society of Tropical Medicine and Hygiene

Myron G. Schultz receives the Watson Medal of Excellence

Myron "Mike" G. Schultz, DVM, MD, DCMT, a long-time member of our Society and winner of the Bailey K. Ashford Award in 1980, was awarded the William Watson Medal of Excellence, the Centers for Disease Control's most prestigious award, in June 2009.



Myron [Schultz] is credited with developing the Parasitic Division of the Bureau of Epidemiology of the Center for Disease Control. He has participated in or supervised more than 130 field investigations of parasitic diseases in the United States. Dr. Schultz also established the Parasitic Diseases Drug Service that provides difficult to obtain drugs for tropical medicine. Currently, Dr. Schultz is working in the Global Diseases Detection Operations Center in CDC's Coordinating Office for Global Health.