Geographies of Chemical Warfare in Vietnam: The Merry Band of Retirees

Author: Bryan R. Higgins[1]

[1]Bryan R. Higgins is a Distinguished Service Professor of Geography and Planning Emeritus at the State University of New York. He was drafted into the US Army and served as a Science and Engineering Aid in the Neurophysiology Section of the US Army Chemical Corps during the Vietnam era. Email: higginbr@plattsburgh.edu

Abstract

This review explores the recent development of research on rainbow herbicides as chemical weapons and the geographies of chemical warfare in what is now the Socialist Republic of Vietnam. While the use and impacts of Agent Orange have previously been well documented, the production and extensive application of five other rainbow agents by the United States military has only recently been investigated in detail. What is exceptional about this research of chemical warfare landscapes is that the 23 refereed journal publications in this review were designed, implemented, and published in a unique collective research project by Ken Olson and a Merry Band of Military Retirees. Their groundbreaking research portfolio includes many geographical dimensions and the geopolitics of chemical warfare. This includes the extensive exposure of civilians in Vietnam to these chemical agents, exposure of US military personnel in Southeast Asia and Panama, exposure of civilians near the private industrial sites that produced these rainbow agents in North America and the hazardous soil contamination that perseveres at these sites in Vietnam and the US. Given this impressive research depth and global scope, this review explores the unique way this research portfolio was developed by a Merry Band of Retirees through an interview with its leader, Ken Olson. This interview examines the background of these military veterans, their goals and ethical orientation with this research, the political ecology involved, the creative strategies they utilized to produce this innovative research, how they managed to publish these findings and how they changed the way Veterans exposed to chemical warfare agents are treated by the US government.

Key Words: Chemical Warfare, Rainbow Agents, Geography, Merry Band of Retirees, Political Ecology

1.0 Introduction

This research update focuses on two realms that relate to soil science research. First, it highlights the groundbreaking character of the 23 Merry Band of Retirees refereed journal publications **[1 to 23]** regarding rainbow herbicides as chemical weapons during the US Vietnam War. Second, it explores the unique way in which this body of research was developed by an unofficial Merry Band of Retirees (MBR) committee. While it is beyond the scope of this brief survey (short report) to analyze and synthesize all these papers into a comprehensive monograph, this review provides a precis of the Merry Band of Retiree's portfolio and a synopsis of their unique

collective approach and achievements as described through an interview with Ken Olson, the leader of the MBR.

It is important to note that this collective portfolio of chemical warfare research is not just one or two articles but a group of 23 publications with more than 700 total journal pages. Overall, they identify a political ecology of chemical warfare in an objective manner by re-evaluating its complex impacts in soil science, revealing the discursive struggle with the secret use of rainbow agents, and highlighting their continuing deadly human impacts through mixed methods analysis of maps, photos, interviews, and related military documents. In terms of geographical coverage, twelve of the articles investigate sites in Vietnam, four consider sites in the US, three study sites in Panama, two sites in Laos, one site each in Canada, Thailand, and Cambodia. It is especially significant to note that this overall initiative was not funded by any branch of the US military, any government agency, any non-profit organization, any university, or any news organization. It was in fact, designed, implemented and self-funded by the Merry Band of Retirees. The central focus of this research is on the historical way rainbow herbicides were first privately developed, with minimal attention to health and safety issues, and then secretly applied as chemical weapons over large areas in Vietnam and Southeast Asia. The explication of this political ecology also makes important connections to the global supply chain of this military-industrial complex by identifying the role of rainbow chemical agents on the plants, soils, military and civilians in North Vietnam as well as the health impacts on US military service personnel throughout this warzone. It also expands this chemical warfare research to the secret US military operations and sites in Laos, Cambodia, and Thailand. A final special contribution of this research is its detailed analysis of the toxic contamination by private businesses in the US and Canada at their industrial production sites and the continuing toxic health risks and environmental contamination in these local communities on the other side of the world.

Given the impressive global scope and academic depth of these publications, the primary objective of this article will explore the unique way in which this research was designed, implemented, funded, accomplished, and published as a Merry Band of Retiree's project. It was done through an interview with Ken Olson, who organized this military retiree group and the research project. For this short report, the idea of a researcher interview and the interview questions were developed by me. A summary of the Merry Band of Retirees achievements is provided below.

2.0 Results Interview Achievements

I will list the most important Merry Band of Retirees achievements as noted in my interview of Ken Olson:

(1). After 55 years, the Merry Band of Retirees team finally made Agent Blue, cacodylic acid and arsenic household words in Vietnam Era veteran families and in the literature.

(2). They were able to get Walter Reed hospital doctors and the VA to read their Agent Blue **[1 to 7]** publications since they were published in an open access journal that did not have the DoD and CIA filters applied. The doctors and researchers at Walter Reed hospital then published their paper on Agent Blue using their own Vietnam War veteran's case study. They also issued a directive to all the VA centers in the US to test all future Vietnam Era veterans who submitted claims for benefits from exposure to either or both arsenic and dioxin.

(3) Ken Olson was asked by some of his contacts at the Can Tho University located in the Mekong Delta to apply for a Fulbright Specialist grant to travel to Vietnam to give lectures on

Agent Orange **[8 to 15]** and Agent Blue **[1 to 7]** as well as conducted research related to arsenic, both anthropic and natural, in the Mekong Delta soils and groundwater **[5].** Ken's entire 5-week trip expenses were paid by the Fulbright Specialist program, and he spent much of September and October of 2022 in Can Tho or Ho Chi Minh City. The Fulbright program was named after Senator Fulbright (Arkansas) who had held hearings in the late 1960s and early 1970s to stop the spraying during the Vietnam War for environmental and human health reasons. Olson's visit fit with the historic mission of the Fulbright Specialist program. The US State Department approved his visit to Vietnam.

(4) Two Vietnam War team papers **[16 to 17]** will be presented in April of 2025 at the 50th Anniversary of the end of the Vietnam War Conferences at the Vietnam Archive in Lubbock, Texas (Texas Tech). All the team papers (including soil tunnels) **[18 to 20]** have been signed by co-authors and placed in the Olson drawer at the Vietnam War Archive after scanning. These papers are now available in the archive and electronically for future Vietnam War geographers, historians, and scholars.

(5) After the team completed their team research work in Vietnam, they expanded it to include Laos, Thailand, and Cambodia which were affected by the 2nd Indochina War. That war was a secret. Only 20 years after the end of the war did the US public become aware of it. By that time, the public interest level had dropped in the US and other countries paid little attention to the war on the Ho Chi Minh trail. The findings were published in four papers **[16, 21 to 23]** that are included in the attached list of Merry Band of Retirees articles.

(6) The Merry Band of Retirees has worked with the Panama veteran groups to address the impact of herbicides and pesticides on the Panama Canal Zone. They published three papers **[6, 10, and 15]** addressing the use of commercial herbicides containing dioxin TCDD or arsenic, with dioxin TCDD and/or arsenic, on eight military grounds and perimeter fences.

3.0 Discussion Emerging Themes

Reflecting on this interview, several themes emerge from the collective action of this MBR research initiative. First, since this chemical warfare research involved documents that were originally classified as secret information by the United States government it was necessary to have expertise in classified information, dealing with government agencies in many countries and juggling complex institutional protocols. In addition, the MBR also did fact checking of complex scientific details and consulted regarding questions of ethics, law, and research protocols. Overall, this MBR oversight was like what Institutional Review Boards perform at universities and colleges but also involved ongoing research support in addition to their initial project reviews.

Since this research involved substantial and sometimes challenging fieldwork, the MBR offered broader connections to disciplinary scientists, regional experts, and military experts in various fields. It also provided creative solutions for fieldwork collaboration, informed consent, dealing with counterintelligence operations, logistical challenges, and local dissemination of information.

Since the MBR convinced the doctors at Walter Reed Hospital to direct VA Centers in the US to test all future Vietnam Era veterans submitting chemical weapons claims to either or both arsenic and dioxin it provided a direct improvement in the way in which Vietnam Era veterans were treated regarding this chemical warfare. By dealing with various roadblocks, threats, and obstacles to improve the Veteran's Affairs service for Vietnam Era Vets the MBR demonstrated

their courage and commitment to honor the sacrifices of their fellow soldiers. Since this occurred long after their formal military service ended, it should be noted that it was above and beyond the call of duty.

The extensive use of Agent Blue to destroy the rice harvest in South Vietnam and cause hunger in the civilian population raises new questions regarding the Geneva Conventions. While this issue has previously been investigated and debated by various sources, this recent research casts new light in this regard. First, the updated insights of MBR research about the prolonged impacts of these chemical agents in the soil and on human health provide a substantially improved scientific framework for analysis. In addition, the release of previously classified documents regarding the hidden decision making of US government officials in that era establishes what these officials knew about these chemical weapons, what they really intended to accomplish with their use and how they planned to secretly cover up their tactical interventions. The MBR response to these new research challenges was to treat everyone who was exposed to these chemical weapons with respect and concern, no matter what their country of origin was. Perhaps one day a documentary or Netflix series will further explore the global quest of the Merry Band of Retirees to show the objective reality as well as acts of humanity along the way.

References

[1] Olson, K.R. and Cihacek, L. (2020) The Fate of Agent Blue, the Arsenic Based Rice Killer Used in South Vietnam before and during the American Vietnam War. https://doi.org/10.4236/ojss.2020.1011027

[2] Olson, K.R. and Cihacek, L. (2022) How United States Agricultural Herbicides Became Military and Environmental Chemical Weapons: Historical and Residual Effects. Open Journal of Soil Science 12(1): 13-81. https://doi.org/10.4236/ojss.2022.122002

[3] Olson, K.R. and Cihacek, L. (2022). Agent Blue Spraying in the Mekong Delta during the Vietnam War: Fate of Arsenic Based Herbicide Weapon To Destroy Rice crop and Mangrove Forests. Open Journal of Soil Science 12(5): 253-294. https://doi.org/10.4236/ojss.2022.127012

[4] Olson, K.R. (2022) The Mekong Delta in Vietnam and Cambodia Is Subsiding and in Need of Remediation. Open Journal of Soil Science, 12, 171-192. https://doi.org/10.4236/ojss.2022.125007

[5] Olson, K.R. and Chau, K.M. (2022) Natural and Anthropic Sources of Arsenic in the Groundwater and Soils of the Mekong Delta. Open Journal of Soil Science, 12, 541-570. https://doi.org/10.4236/ojss.2022.1211023

[6] Olson, K.R. (2023) Review and Analysis: Fate of Arsenic Applied to Canal Shipping Lane Vegetation and United States Military Base Grounds in the Panama Canal Zone. Open Journal of Soil Science, 13, 391-413. https://doi.org/10.4236/ojss.2023.1310018

[7] Olson, K.R. (2023) Agent Blue: A Secret Military and Environmental Chemical Weapon Used for Food Denial in South Vietnam during the Vietnam Civil War (1962-1965). Open Journal of Soil Science, 13, 151-186. https://doi.org/10.4236/ojss.2023.133007

[8] Olson, K.R. and Morton, L.W. (2019) Long-Term Fate of Agent Orange and Dioxin TCDD Contaminated Soils and Sediments in Vietnam Hotspots. Open Journal of Soil Science, 9, 1-34. https://doi.org/10.4236/ojss.2019.91001

[9] Olson, K.R. and Tharp, M. (2020) How Did the Passaic River, a Superfund Site near Newark, New Jersey, Become an Agent Orange Dioxin TCDD Hotspot? The Journal of Soil and Water Conservation, 75, 33A-37A. https://doi.org/10.2489/jswc.75.2.33A
[10] Olson, K.R. and D. Tornoe. 2021. Long-Term Environmental Impacts of Pesticide and Herbicide Use in Panama Canal Zone. Open Journal of Soil Science 11(9): 403-434. https://doi.org/10.4236/ojss.2021.119021

[11] Olson, K.R. and Speidel, D. R. (2022). Agent Orange Chemical Plant Locations in the United States and Canada: Environmental and Human Health Impacts. Open Journal of Soil Science 12(7): 363-426. https://doi.org/10.4236/ojss.2022.128016
[12] Morton, L.W. and Culbertson, C. (2022) Persistence of Dioxin TCDD in Southern Vietnam Soil and Water Environments and Maternal Exposure Pathways with Potential Consequences on Congenital Heart Disease Prevalence in Vietnam. Open Journal of Soil Science, 12, 119-150. https://doi.org/10.4236/ojss.2022.124005

[13] Giang, H., Hai, T.T., Nguyen, H., Vuong, T.K., Morton, L.W. and Culbertson, C.B. (2022) Elevated congenital heart disease birth prevalence rates found in Central Vietnam and dioxin TCDD residuals from the use of 2.4.5-T herbicides (Agent Orange) in the Da Nang region https://doi.org/10.1371/journal.pgph.0001050

[14] Olson, K.R. (2023) Saigon River Valley: Navigation, Trade, Mitigation, Invasion, Liberation, and Unification Pathway. Open Journal of Soil Science, 13, 46-82. https://doi.org/10.4236/ojss.2023.132003

[15] Olson, K.R. (2023) Review and Analysis: Did the United States Transport, Off-Load and Use Commercial 2,4,5-T Herbicides with Unknown Amounts of Dioxin TCDD on Military Base Grounds in Panama Canal Zone between 1948 and 1999? Open Journal of Soil Science, 13, 490-515. https://doi.org/10.4236/ojss.2023.1311023

[16] Olson, K.R. and Speidel, D.R. (2023) Review and Analysis: United States Secret Wars in Cambodia: Long-Term Impacts and Consequences. Open Journal of Soil Science, 13, 295-328. https://doi.org/10.4236/ojss.2023.137013

[17] Speidel, D.R. and Olson, K.R. (2024) Review and Analysis: Evaluation of the Impacts and Consequences of Using Agricultural Herbicides as Military Chemical Weapons in the Second Indochina War. Open Journal of Soil Science, 14, 471-498.

https://www.scirp.org/pdf/ojss2024148_11660953.pdf

[18] Olson, K.R. and L. W. Morton. 2017. Why were the soil tunnels of Cu Chi and Iron Triangle in Vietnam so resilient? Open Journal of Soil Science 7: 34-51. https://doi.org/10.4236/ojss.2017.72003

[19] Olson, K.R. and Speidel, D.R. (2020) Review and Analysis: Successful Use of Soil Tunnels in Medieval and Modern Warfare and Smuggling. Open Journal of Soil Science, 10(5): 194-215. https://doi.org/10.4236/ojss.2020.105010

[20] Olson, K. R. (2023) How did Vinh Moc Village, located near Vietnam DMZ, protect their villagers from United States Air Force bombardment during the Vietnam War? Journal of Soil Science, 13, 1-27. https://doi.org/10.4236/ojss.2023.131001

[21] Olson, K.R. and Cihacek, L. (2023) Use of Agent Purple, Agent Orange, and Agent Blue on Royal Thai Air Force Base Perimeters in Thailand during the Vietnam War. Open Journal of Soil Science, 13, 233-261. https://doi.org/10.4236/ojss.2023.135010

[22] Olson, K.R. and Speidel, D.R. (2023) United States Secret War in Laos: Long-Term Environmental Impacts of the Use of Chemical Weapons. Open Journal of Soil Science, 13, 199-232. https://doi.org/10.4236/ojss.2023.134009

[23] Olson, K.R. (2023) Review and Analysis: United States Cluster Munitions and Unexploded Ordnance Left in Laos after the Second Indochina War. Open Journal of Soil Science, 13, 355-369. https://doi.org/10.4236/ojss.2023.138016

Conflicts of Interest

The Author declares no conflict of interest regarding the publication of this paper.

Acknowledgements

These 23 research studies were conducted with the support and approval of the Merry Band of Retirees Research Committee. The team included five US Vietnam veterans, two US Vietnam Era veterans, two US Army veterans, and four Agricultural College Professors. The team mission was to conduct soil, water, agricultural and natural resource management scientific research; the synthesis and analysis of current and historical documents and scientific evidence relevant to the legacies of war, especially the US Vietnam War; and the preparation and publication of peer-reviewed papers of interest and value to those who lead and served in the US military, especially Vietnam Era veterans, their families, and the general public. Finally, I acknowledge my Vietnamese friends, colleagues, and students for their camaraderie over the years.