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BOOK REVIEW

RUSSELL E.: WAR AND NATURE. FIGHTING HUMANS AND INSECTS WITH CHEMICALS FROM WORLD WAR I TO "SILENT SPRING". Cambridge University Press, Cambridge, UK, 2001, 315 pp., ISBN 0-521-79003-4 (hardback), 0-521-79937-6 (paperback). Price GBP 12. 95 (paperback).

Without the subtitle it would not be evident that this book deals with entomology! But after reading a few pages it is clear that the book is entomological and that the author aims to link "wars against humans" and "wars against insects" using chemical weapons.

At first, I shall deal with the rhetoric. During wars human enemies are considered nothing more than insects. They must be "exterminated", "eliminated", "utterly destroyed" or "annihilated" in the same way as insects that are a nuisance. During the first World War, (European War of the Americans), a Dutch newspaper cartoon aptly depicted "Germania" sprinkling a can of chlorine on a horde of tiny soldiers, much as a homemaker would sprinkle insecticide powder on a horde of ants. During the second World War Japanese were portrayed on posters as mosquitoes, (with their wings bearing a Japanese insignia) or an ugly, hairy, six-feet arthropod decorated with Japanese symbols and typical Japanese incisors ("Louseous Japanicas"). In 1944 it could be one of three cockroaches - with the head of Hitler, Hirohito or Mussolini - already killed by insecticide spray applied by Allies. And if propaganda was needed, the Hessian fly (*Phytophaga destructor*) introduced into USA from Germany or the Japanese beetle (*Popilia japonica*) became "insect saboteurs" working for the enemy. In peace time the "war on insect" should mercilessly continue. Some dreamed completely erradicate these creatures. Some insects seemed to come from another planet, as there were regarded as monstrous, atrocious etc. There was no place for them here.

Secondly, the chemicals used against humans and insects are often the same, e.g. organophosphates, which are a nerve gas for both. From the production the chemical industry made large profits. It is in their interest to keep these wars going.

The chapters of the book are grouped chronologically with titles like "Chemical Warfare in Peace (1918–1937)", "Total War (1936–1943)" or "War comes Home (1945–1950)" etc. They cover the development during these periods, all important events, campaigns, speeches etc. Even though the author is rather a supporter of Carson's "Silent Spring", an important part of one chapter is devoted to DDT and its importance for Americans soldiers fighting in the Pacific. Early in the Pacific war, malaria caused eight to ten times as many casualties as did battle. Some units became so sick that they had to be evacuated before they did any fighting at all. Special units, including entomologists, were created and a gigantic mosquito-control campaign was carried out using DDT. The DDT functioned as the famous magic bullet and completely annihilated also the typhus fever by elimination of its vector, lice.

The book is full of information. For example, the Geneva Protocol of 1925 baning the use of chemical weapons and the first post-World War II agreement on biological weapons were signed by the American President Ford as late as - 1975! And it was not until 1997 that U.S. Senate ratified the new Chemical Weapons Convention!

Edmund Russell is a historian. About sixty pages of the book are devoted to perfectly compiled notes and citations which enable one to find easily all sources of interest. A well organized index allows one to orient backwards in the book. It is a useful and interesting read, not only for practical entomologists, but for all interested in this topic.

J. Chalupský