

mental hazard with its various organic effects, including carcinogenic sequelae. Baader added that these observations demonstrated that relatively small amounts of arsenic are evidently capable of producing severe organic damage in animal life.

It cannot be assumed that such deplorable pollutions of the atmosphere by arsenical fumes emitted by smelting establishments are confined to Germany. Prell stated, for instance, that the smelters of the Anaconda copper mines in Montana are said to release every day 26 tons of arsenic into the atmosphere. There are a great number of other industrial establishments in this and other countries which pollute the atmosphere with arsenical waste products to the detriment of the health of human and animal life inhabiting the environmental fume zone (Sowden).

While these sources of artificial environmental contamination with arsenical compounds are of more or less localized nature, as they depend upon the presence of certain mining and smelting activities of arsenic containing ores or of chemical industries handling larger amounts of arsenicals, the rapidly extending use of arsenical parasitocides and insecticides in agriculture and forestry has introduced a much more generalized health hazard. The quantities of arsenicals annually used in the United States for this purpose was estimated by Sturmer to have amounted to 80,000,000 pounds (mainly lead arsenate). It is likely that this figure is too low, as it was stated in an editorial appearing in the *Journal of the American Medical Association* in 1937, that one particular valley in the Pacific northwest received as much as 7,000,000 pounds of lead arsenate annually for the past twenty years. This means that approximately 50,000 tons of lead arsenate have permanently contaminated the soil of this valley and that a good portion of this arsenate is gradually taken up from the soil by vegetation growing in this valley. A part of the arsenical dusted or sprayed on fields, meadows, truck gardens, vineyards, orchards, lawns, fields and swamps remains attached to the leaves and fruits and represents a serious danger to those who ingest them. It has been reported that live stock was poisoned by the spray residue carried as "drift" to pastures from orchards that had been sprayed from airplanes. Similar observations were made in regard to man poisoned by the ingestion of fruits and vegetables sprayed with arsenicals (wine grapes, lettuce, spinach, beans, cabbage, and asparagus) (Evans; Medical News; Dörle and Ziegler; Ledoux; Tropp and Rauch; Mühlens; Thorel and Vincent; Lendrich; and others). In instances several hundred individuals were poisoned acutely at one time by the ingestion of foodstuffs, usually wine, contaminated with arsenic, and developed later melanoderma and hyperkeratoses. Even the smoking of tobacco contaminated with arsenic has been the cause of arsenic poisoning in several cases (Barksdale).

Attention may be called to the fact, also, that the use of arsenical insecticides has given rise to an increase of the arsenic content in smaller and larger bodies of water. Such contamination may not only be injurious to the animal life