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*A dearth of information continues to keep open the Soviet germ warfare intelligence gap.*

## THE ENIGMA OF SOVIET BW

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Despite a considerable expenditure of time and resources, the pursuit of intelligence on biological warfare activities in the USSR has been unrewarding. There is no firm evidence of the existence of an offensive Soviet BW program. Some Soviet biomedical research transcends normal public health requirements, and from time to time top Soviet military officials have boasted publicly that they have the means to rebuff a U.S. attack with nuclear, chemical, or biological weapons. We know that the Soviet military establishment is concerned over U.S. BW research, and we have some insight into their organization and activities for medical defense against BW attack. But we still do not know their precise defense readiness posture or their specific logistical preparations.

The paucity of real evidence has forced us to resort to indirect signs. Attempts have been made to examine all military-related activity in the fields of biology and medicine, all technical publications which appeared to be censored by security considerations, and all biomedical studies which did not jibe with Soviet public health requirements as we know them. Analysts have used speculation, analogy, and parallels with other nations' BW research, development, and practice in recent times and in the historical past. They have analyzed Soviet, Satellite, and Chinese propaganda charges of U.S. germ warfare for clues as to the Communists' sophistication and familiarity with BW hardware and agents.

### *The Grim Presumption*

The accepted premise had been that the heavy U.S. BW commitment which has been public knowledge, along with the Japanese World War II effort as known to the Soviets, would probably have engendered a comparable program in the USSR. Postwar defector

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reports and German intelligence findings implicated several persons and locations in such a Soviet program. It was with this premise in mind that available sources, primarily the open literature, had been closely screened for indications such as those cited above. But it seemed that good Soviet security, censorship, and care not to mar the image of their well-advertised adherence to the Geneva Convention had eliminated from the scientific literature all trace except of defensive preparations and attitudes. The same was true of writings on military doctrine. Sensitization of expert travelers to the problem and the evaluation of such evidence as there was by the most knowledgeable sources in the United States brought no new insights. Then suddenly new photographic and other intelligence seemed for a time to confirm our worst suspicions with hard evidence of elaborate BW test range activities.

The foremost suspect as a biological warfare center had long been Vozrozhdeniya Island in the Aral Sea. The finger was first put on this island in 1951 by the "Hirsch Report." Hirsch, who had been a German intelligence officer during the war, compiled his report on Soviet BW and chemical warfare activities from data in German intelligence files. The bulk of its great volume was devoted to CW, and since much of this agreed with other information available to U.S. intelligence, the entire report gained some credence.

Hirsch declared that the Soviets had been engaged in BW research in the early 1930's, carrying out experiments in a Moscow laboratory and on Gorodomlya Island in Lake Seliger northwest of Moscow. BW field trials were at first held at the CW proving ground at Shikhany near the city of Volsk. But the proximity of this proving ground to the city limits made it too hazardous for BW, and they were shifted in 1936 to Vozrozhdeniya Island and reportedly again in 1937.

The island is well suited to BW experimentation. It is located quite a distance from the nearest shore of the Aral Sea, which itself lies in an arid, barren, and sparsely settled region of the USSR. Animal ecology difficulties which would plague a mainland facility are virtually nonexistent; only a transient bird population presents a problem in containing the spread of experimental diseases. Security against observation and accidental or intentional intrusion by unauthorized persons is at a maximum. The climate is suitable for testing the influence of a variety of environmental conditions.

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Trials could be carried out over water, as the British had demonstrated during their offshore BW trials at Bermuda. The site offers few of the restrictions which the U.S. mainland facility has had to overcome.

#### *Target Analysis*

With this first clue to an intelligence target, BW analysts in the community embarked upon an intensive search of Soviet literature dealing with the Aral Sea region. Requirements were levied upon all collectors, and a comprehensive survey was made of all the economic and scientific aspects of the area. In support of collection and analysis, surveys were made of fishing, transportation, geography, scientific expeditions, hydrochemistry, marine biology, geology, and climate and weather in the area. It is probably safe to say that some of the analysts came to know this region and its problems better than the inhabitants.

Despite all this area research, little was found specifically about Vozrozhdeniya Island. It had been surveyed by a scientific expedition in the early 1900's; there was a prison camp there in 1926. A small fishing village, uninhabited during the winter months, apparently existed on the island in the 1920's and 1930's. But the paucity of information about this island could not be an indicator of anything particularly sinister, for there was very little known about any of the many islands in the Sea, including the largest one, Barsa-Kelmes.

Other sources than literature yielded little information. Two clandestine reports noted physical security measures to prohibit access to the island but revealed nothing of the nature of any facility on it.

Then in 1957 high-level photography brought the first big windfall. Photographs of the island revealed the rather extensive installations shown on the model pictured on page 18. There were more than 150 buildings of various sizes grouped into two settlements about 2½ miles apart. The northern and largest group of buildings appeared to be the administration, housing, and logistics area, marked "operational headquarters" on the model. Its barrack-like buildings were large enough to accommodate about 1,400 people. The southern group was contained within a high walled area which appeared to be the work or "laboratory" site. South from the "laboratory" area tangled roads and tracks led to five centers, called "test sites" on the model. At each of these centers was a tower and one or two

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small buildings. About three miles to the south, not shown, lay the small island of Konstantin, with some 35 buildings on its northern tip.

*Return to Enigma*

The fact that Vozrozhdeniya Island had been carried for years as a suspect BW site so oriented the thinking of PI analysts that a BW function was immediately hypothesized. Many of the parameters of a BW research and test area do fit the picture of the island, but it was soon realized that a few do not, some of them too critical to be discounted. The whole range of other possible functions was therefore examined with all the background information on the area in mind. CW research or testing, a guided missile or electronic installation, fishing and fish processing, geological exploration, a prison, a secret police training establishment, and a paramilitary training area were considered and discarded. The only certain finding was that the general layout of the buildings, parade ground, and other features distinguished it as a military rather than civilian establishment.

The island was photographed a second time in 1959. Although there were changes such as additional building, there were no new clues to its function. Three major obstacles remained before it could be classified as a BW installation. First, the apparent "grid systems," needed for measuring dispersion of test agents, were small, ill-defined as to configuration and purpose, and not comparable to those at the Soviet CW proving ground and U.S. BW-CW proving grounds. Second, there were no indications of the necessary air support for BW test activities. For example there was no evidence of a sophisticated landing strip, decontamination facilities for aircraft, or night landing facilities. Third, the buildings and presumed inhabitants of Konstantin Island just to the south were in the path of the prevailing winds, precluding tests with live BW agents.

Since 1959 renewed efforts on an all-source basis have turned up no other indications of the nature of the activity on the island. In recent years the Soviets have published a considerable amount of material on the Aral area and its economic problems, especially the fishing industry. In this connection they have occasionally mentioned some of the smaller islands. The largest island, Barsa-Kelmes, has been given some publicity in the Soviet and British press as a unique game preserve. But about Vozrozhdeniya Island the enigmatic silence holds.

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*New Directions*

Despite tight security, a highly developed Soviet BW weapons system and technology should have surfaced sometime during the years since the war, just as the nuclear and chemical warfare efforts have. Current analyses, therefore, while clearly stating our lack of positive knowledge, depart radically from the old assumptions and look at Soviet military doctrine realistically in terms of limited BW activity and the unsure potential of BW weapons.

This reappraisal has not lessened the need for an alert analytical thrust into Soviet capabilities and intentions with respect to BW weaponry. Rather, it points the way for greater emphasis on the possibility of Soviet covert action with such weapons in the light of U.S. vulnerability to clandestine attack. It calls for more intensive scrutiny of available R&D benchmarks for BW activity and of medical defense applications that could also be used for offensive purposes. Intelligence on the biomedical aspects of unconventional warfare in the USSR will also continue to contribute to other related fields—biological contamination of aircraft and spacecraft, bioastronautics applications of BW-related technology, estimates of Soviet vulnerability to BW attack and the socio-economic consequences.

Retrenchment and reorientation are thus helping us make the best of our few resources. Nonetheless, the BW intelligence effort needs new overt collection methods and more emphasis on covert penetration in order to improve the low-quality information now available from reliance on collective experience and sensitivity to indicators.