

DEATH:

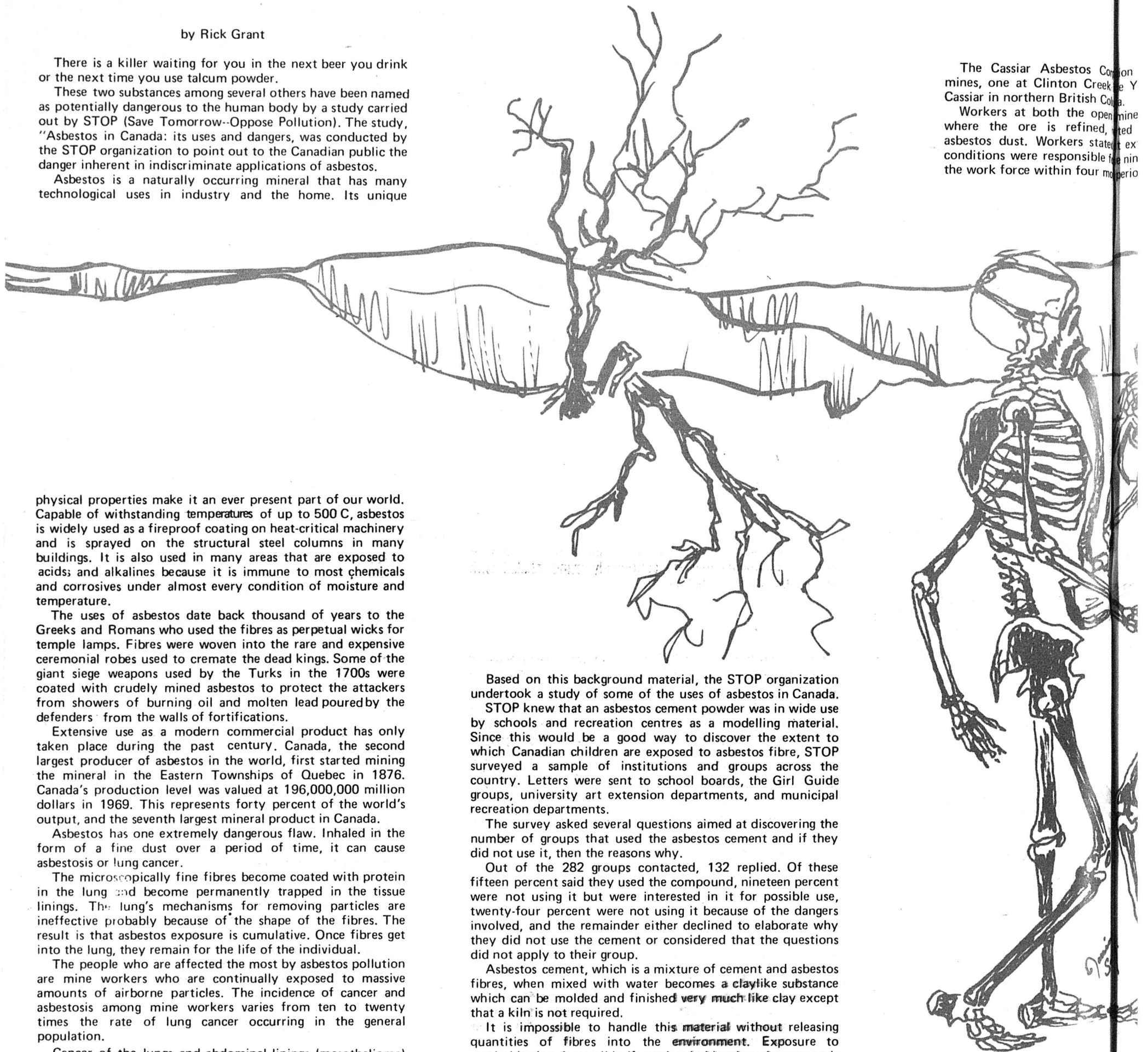
NOT WITH A BANG

by Rick Grant

There is a killer waiting for you in the next beer you drink or the next time you use talcum powder.

These two substances among several others have been named as potentially dangerous to the human body by a study carried out by STOP (Save Tomorrow--Oppose Pollution). The study, "Asbestos in Canada: its uses and dangers, was conducted by the STOP organization to point out to the Canadian public the danger inherent in indiscriminate applications of asbestos.

Asbestos is a naturally occurring mineral that has many technological uses in industry and the home. Its unique



physical properties make it an ever present part of our world. Capable of withstanding temperatures of up to 500 C, asbestos is widely used as a fireproof coating on heat-critical machinery and is sprayed on the structural steel columns in many buildings. It is also used in many areas that are exposed to acids; and alkalines because it is immune to most chemicals and corrosives under almost every condition of moisture and temperature.

The uses of asbestos date back thousand of years to the Greeks and Romans who used the fibres as perpetual wicks for temple lamps. Fibres were woven into the rare and expensive ceremonial robes used to cremate the dead kings. Some of the giant siege weapons used by the Turks in the 1700s were coated with crudely mined asbestos to protect the attackers from showers of burning oil and molten lead poured by the defenders from the walls of fortifications.

Extensive use as a modern commercial product has only taken place during the past century. Canada, the second largest producer of asbestos in the world, first started mining the mineral in the Eastern Townships of Quebec in 1876. Canada's production level was valued at 196,000,000 million dollars in 1969. This represents forty percent of the world's output, and the seventh largest mineral product in Canada.

Asbestos has one extremely dangerous flaw. Inhaled in the form of a fine dust over a period of time, it can cause asbestosis or lung cancer.

The microscopically fine fibres become coated with protein in the lung and become permanently trapped in the tissue linings. The lung's mechanisms for removing particles are ineffective probably because of the shape of the fibres. The result is that asbestos exposure is cumulative. Once fibres get into the lung, they remain for the life of the individual.

The people who are affected the most by asbestos pollution are mine workers who are continually exposed to massive amounts of airborne particles. The incidence of cancer and asbestosis among mine workers varies from ten to twenty times the rate of lung cancer occurring in the general population.

Cancer of the lungs and abdominal linings (mesothelioma) were once so rare they were considered pathological curiosities. But in 1960, researchers began to find large series of cases in populations living or working in and around asbestos mines. Mesothelioma is now a major cause of death among asbestos workers. This has led to the conclusion that Asbestos pollution is by far the largest cause of this disease.

The hazard of asbestos exposure is extremely critical: there have been numerous cases of the disease documented in which the individual's exposure to asbestos has been extremely short of indirect.

Researchers have found, in the lung material from large numbers of autopsies, that up to fifty percent of urban resident examined contained asbestos particles. This indicates that asbestos is a general pollutant in the urban atmosphere and the urban residents are inhaling small quantities of asbestos fibre with each breath they take.

Based on this background material, the STOP organization undertook a study of some of the uses of asbestos in Canada.

STOP knew that an asbestos cement powder was in wide use by schools and recreation centres as a modelling material. Since this would be a good way to discover the extent to which Canadian children are exposed to asbestos fibre, STOP surveyed a sample of institutions and groups across the country. Letters were sent to school boards, the Girl Guide groups, university art extension departments, and municipal recreation departments.

The survey asked several questions aimed at discovering the number of groups that used the asbestos cement and if they did not use it, then the reasons why.

Out of the 282 groups contacted, 132 replied. Of these fifteen percent said they used the compound, nineteen percent were not using it but were interested in it for possible use, twenty-four percent were not using it because of the dangers involved, and the remainder either declined to elaborate why they did not use the cement or considered that the questions did not apply to their group.

Asbestos cement, which is a mixture of cement and asbestos fibres, when mixed with water becomes a claylike substance which can be molded and finished very much like clay except that a kiln is not required.

It is impossible to handle this material without releasing quantities of fibres into the environment. Exposure to respirable dust is possible if not inevitable when the cement is mixed with water and when working the dried artifact.

Although a number of school administrations across the country have either banned the use or warned of the dangers of the product, there is no government control or dissemination of information concerning the health hazards inherent in the product's use.

The STOP study discovered that large numbers of groups and individuals were ignorant of the hazards to the human body arising out of the use of asbestos products.

Following this survey the STOP researchers gathered information at the Cassiar Asbestos Mine in BC as well as in Vancouver, Edmonton, and Toronto. Throughout the study, the researchers found a general lack of concern for the health of the asbestos miners, a large amount of ignorance about the mineral's dangers and rampant apathy among various officials of the government and industry.

The Cassiar Asbestos Corporation mines, one at Clinton Creek and the Y Cassiar in northern British Columbia. Workers at both the open-pit mine where the ore is refined, and the asbestos dust. Workers stated that the conditions were responsible for the death of the work force within four months.

Although there are provincial regular visits to the mines to force workers are unanimous in their opinion by these visits.

"When questioned about inspectors, workers replied that every six months, but always ample advance notice. Worker common company policy to prevent clean everything all by private government inspectors."