A Vietnamese woman might ingest 2,4,5-T in dosages shown to be teratogenic. Despite the absence of any actual data, one can make the following calculations based on reasonable assumptions. In an area that had been sprayed with Orange at the usual rate (27 pounds per acre), and with a one-inch rainfall after the spraying, the concentration of 2,4,5-T in the water would be 50 mg/liter.[20] Drinking about two liters of water a day (an average amount) would give a dosage of 3 mg/kg of 2,4,5-T each day. If the spraying plane is forced (in emergency) to rapidly empty its tanks, the dose could increase about eight-fold to 25 mg/kg. Less rainfall would also increase the dose, as would exposure to the contaminated crops or direct contact with the spray.

The contaminant, dioxin, is extremely dangerous by itself. It is highly toxic (0.0005-0.001 mg/kg killed 50 percent of the male guinea pigs tested) and is a cumulative poison.[19] It also causes birth defects; 0.009 mg/kg given to pregnant hamsters killed 82 percent of the fetuses and left 82 percent of the survivors deformed.[19] Since dioxin is formed when substances such as 2,4-D and 2,4,5-T are heated,[18,19] the combustion of timber or other material exposed to these defoliants may liberate high concentrations of dioxin into the air.[19] Some military men have said that the practice of using wood from defoliated areas for charcoal is a benefit to the Vietnamese. But with the possible formation of dioxin by burning, and the fact that cooking fires are predominantly tended by women, the dangers posed are obvious. Still another danger of dioxin's widespread distribution is that it may, as DDT does, concentrate in food chains.

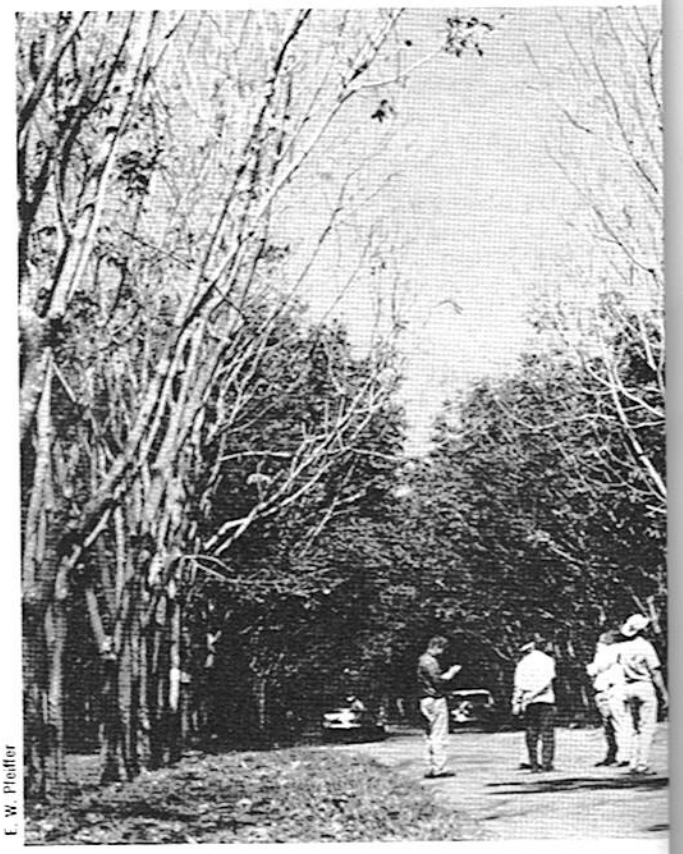
Bombing

Our B-52 bombing of Vietnam has changed rice paddies and forest into a lunar landscape. Each 500- to 750-pound bomb creates a crater as large as 45 feet across and 30 feet deep,[2] rendering this land useless for crops. We have dropped far more bombs in Vietnam than were dropped by the Allied forces in World War II.[21] In 1967-1968 alone, more than 3,500,000 such bombs were dropped in Vietnam.[2] Were these craters placed end to end, they would form a ditch 30,000 miles long—a distance greater than the circumference of the earth. The area they occupy is nearly 100,000 acres. Nor will the craters disappear with time; the jungles of New Guinea are still pockmarked from bombs dropped more than 25 years ago. Though it is theoretically possible to fill these craters, the job would involve moving more than 2.5 billion cubic yards of earth; clearly a monumental task.

Besides killing and maiming, the bombing forces many people to leave target areas or to live underground. A pediatrician recently returned from Vietnam said that as a consequence of the bombing, "People live underground day and night . . . children are suffering from a number of

Tigers . . . seem to have benefited from the war. In the past 24 years, they have learned to associate the sound of gunfire with the presence of dead and wounded human beings in the vicinity. As a result, tigers rapidly move toward gunfire and apparently consume large numbers of battle casualties.

From "Ecological Effects of the War in Vietnam," by Gordon H. Orians and E. W. Pfeiffer, *Science*, May, 1970.



E. W. Pfeiffer

Rubber trees stripped of their leaves by deliberate American aerial spraying of defoliants on a Cambodian plantation. Rubber production, like food production, has been seriously crippled in Indochina.