

First Report of Coffee Rust in Guatemala

E. SCHIEBER, Consultant Plant Pathologist, P.O. Box 226, Antigua, Guatemala, and A. SANCHEZ DE LEON, Plant Pathologist, Asociación Nacional del Café, Guatemala City, Guatemala

ABSTRACT

Schieber, E., and Sanchez de Leon, A. 1982. First report of coffee rust in Guatemala. *Plant Disease* 66:855-856.

Coffee rust has been present in Central America since 1976 but was confined to the region of Carazo in Nicaragua. In 1979, the rust spread into El Salvador. By the fall of 1980, the rust was detected in Honduras, and late in 1980 in Guatemala. This constitutes the first report of coffee rust in Guatemala, in the Chiquimulilla region, close to the El Salvador border.

Coffee rust incited by *Hemileia vastatrix* Berk. & Br. was first detected in Guatemala early in December 1980. The rust had been spreading for a year in neighboring El Salvador and was expected eventually to invade the eastern region of Guatemala.

The disease was found by a small coffee farmer of Tierra Blanca in the Department of Santa Rosa in eastern Guatemala (Fig. 1). On 10 December 1980, the farmer advised the Asociación Nacional del Café (ANACAFE) that leaves showed the

typical symptoms of rust in several of his plants. ANACAFE and the Mexico-Guatemala joint commission for the prevention and control of coffee rust confirmed that it was coffee rust. The rust was found on *Coffea arabica* cv. Typica.

The Ministry of Agriculture, ANACAFE, and the Mexico-Guatemala joint commission mobilized survey forces to the eastern regions of Guatemala. In surveying the eastern provinces bordering El Salvador and Honduras, rust was also found (on 20 December) in El Molino in Santa Rosa, and an additional focus area was located in the province of Jutiapa. By 23 December, rust was detected in Los Amates in the province of Izabal, located in northeastern Guatemala (Fig. 1B). Later the disease was also found in the province of Zacapa.

We suspect that the rust crossed the Guatemala-El Salvador border by way of

coffee pickers who temporarily come into Guatemala from El Salvador at harvest time, or by wind, because of the proximity to the coffee region in the province of Ahuachapán in El Salvador. The rust probably crossed the Guatemala-Honduras border, reaching Los Amates in the province of Izabal, in the same way. Early in January 1981, the rust was



Fig. 1. Location of outbreaks of coffee rust in Guatemala in 1980-1981. The first outbreak was at Tierra Blanca, Santa Rosa Province (A). Subsequent outbreaks were at Los Amates, Izabal Province (B), San Francisco Zapotitlan, Suchitepequez Province (C), and then in Jutiapa (D), Escuintla (E), and Quetzaltenango (F) provinces.

Accepted for publication 8 March 1982.

The publication costs of this article were defrayed in part by page charge payment. This article must therefore be hereby marked "advertisement" in accordance with 18 U.S.C. §1734 solely to indicate this fact.

0191-2917/82/09085502/\$03.00/0
©1982 American Phytopathological Society

detected in a fifth department in the very important coffee region along the Pacific coast in the area of San Francisco Zapotitlán in the province of Suchitepequez (Fig. 1C). Shortly thereafter, further outbreaks (Fig. 1E and F) were detected strategically along the Pan-American Highway parallel to the Pacific coast.

With this finding, we now consider that the rust cannot be stopped in its spread and may also threaten Mexico.

When coffee rust was first detected in Central America in the Carazo region of Nicaragua (1,2,6), the attempt to eradicate it was apparently successful because it was confined to the Carazo region for several years (4-6). However, it was detected late in 1979 in El Salvador, and it spread in a year from the eastern to

the western coffee region in El Salvador, threatening Guatemala.

It is of interest that the rust spread into Guatemala during the dry rather than the rainy season. Schieber in 1970 (3) observed that rust was also severe in dry regions of Brazil and Africa. The literature points out, however, that the pathogen *H. vastatrix* needs high humidity to spread and develop (3).

While this note was being revised (summer 1981), the rust had spread farther to the west to only 65 km from the border with the Mexican state of Chiapas, the primary coffee-producing state in Mexico.

ACKNOWLEDGMENTS

We are indebted to George A. Zentmyer, University of California, Riverside, for suggestions and revision of this note.

LITERATURE CITED

1. Anonymous. 1976. Informe sobre la situación y acción tomada en la República de Nicaragua con relación a la Roya del Café (*Hemileia vastatrix*). Dep. Sanid. Veg., OIRSA-San Salvador, El Salvador, C.A. 30 pp.
2. Llano, A. 1977. The orange coffee rust in Nicaragua. Plant Dis. Rep. 61:999-1002.
3. Schieber, E. 1970. Viaje al Brasil y el Africa para estudiar y observar el problema de la herrumbre del café. Rep. Organ. Int. Reg. Sanid. Agric. 109 pp.
4. Schieber, E. 1977. The coffee rust in Latin America: Analysis of its economic consequences. Pages 11-18 in: Lucha Contra la Roya del Café. Seminario de Estudios, Paipa, Colombia, 1977. Inf. Eschborn, GTZ, 1979.
5. Schieber, E. 1977. Some aspects of the coffee rust outbreak in Central America. Coffee Rust Workshop. Annu. Meet. Carib. Div. Am. Phytopathol. Soc., 17th. Miami Beach, FL.
6. Schuppener, H., Harr, J., Sequeira, F., and Gonzales, A. 1977. First occurrence of the coffee leaf rust *Hemileia vastatrix* in Nicaragua, 1976, and its control. Café Cacao Thé 21:197-202.