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National Foreign Assessment Center

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# **Scientific Intelligence Monthly Review**

31 January 1980

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9	Status Report of Foreign Epidemiology Activity, December 1979	The most significant epidemiological events included Japanese B encephalitis in India, malaria in Nicaragu and Haiti, anthrax in Rhodesia, and sugarcane rust in Cuba. (b)(3)
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Status Report of Foreign Epidemiology Activity, December 1979

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Office of Scientifc Intelligence

# Highlights

The most significant epidemiological events reported during December included Japanese B encephalitis in India, malaria in Nicaragua and Haiti, anthrax in Rhodesia, and sugarcane rust in Cuba.

Outbreaks of Japanese B encephalitis in India have spread to several districts of Andhra Pradesh where more than 220 cases and at least 50 deaths have occurred, mostly among children. Most of the previous outbreaks of this disease in India were confined to the north and northeastern states.

Serious malaria outbreaks in Nicaragua and Haiti threaten to spread into neighboring countries. Nicaragua, with assistance from the Pan American Health Organization, is planning an emergency antimalaria program. Haiti has a cooperative agreement with

#### Discussion

# **Epidemiology** Activity

Asia

New outbreaks of Japanese B encephalitis have been reported in several districts of Andhra Pradesh. India. The Kolar District near Bangalore has been the most affected; more than 220 cases and 50 deaths have been reported. This is the first indication of a serious outbreak of the disease in southern India. The origin of the outbreak is unknown, but it could be associated

Japan that includes a malaria control program, but the effort is too small to impact on Haiti's malaria problem during 1980.

Anthrax is widespread among the Tribal Trust lands of central Rhodesia but has not been detected on commercial animal farms. The epizootic has resulted in over 2,000 human cases and 40 deaths, and an undetermined number of animal deaths. (b)(3)

An epiphytotic of sugarcane rust has affected 25 percent of Cuba's sugar crop and is expected to reduce this year's yield by 1 million tons. The impact of this loss, however, may be offset by Cuba's efforts to reduce postharvest losses and by price manipulation.

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with a shipment of cattle and swine infected with the disease from the north. Additional cases can be expected in Bangalore because available vaccine is being used in West Bengal, where the disease is (b)(3)endemic.

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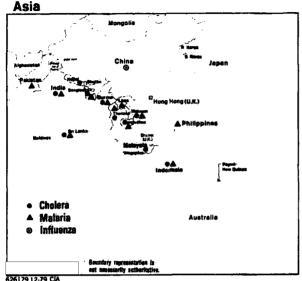
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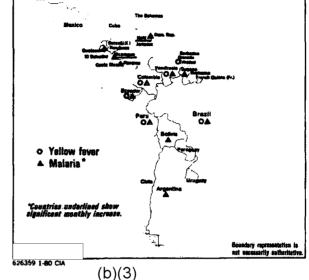
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Latin America



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Japanese B encephalitis, an acute viral disease that affects the central nervous system, can cause serious illness in adults, but children are the most vulnerable. In India, the disease is transmitted to man by the mosquito *Culex vishnui*, and cattle and swine are believed to be the primary virus carriers and reservoirs of infection. Primary methods of control include ultralow-volume insecticide spraying to reduce the

(b)(3) mosquito population and also vaccination, using a vaccine currently produced in Japan.

Vietnamese in Kampuchea reportedly continued to experience serious outbreaks of malaria.

Vietnamese lack of

effective malaria-suppressive drugs and the prevalence of *Plasmodium falciparum*, the most serious malaria parasite. Large numbers of casualties attributed to malaria suggest that effective antimalaria drugs are in short supply.

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# Latin America

Serious malaria outbreaks have been reported in Nicaragua and Haiti. Experts from the Nicaraguan Ministry of Health and from the Pan American Health Organization (PAHO) have described the outbreak in western Nicaragua as an epidemic situation, requiring emergency control efforts. Malaria outbreaks in northern and southern Haiti represent not only a serious public health threat to Haiti but also to the flooddamaged areas of the Dominican Republic.

Haiti and Nicaragua have serious endemic malaria affecting most of their populations. The lack of a concerted antimalaria vector control program, increased levels of insecticide resistance among the mosquito vectors, and inadequate medical resources have contributed to the severity of this disease problem. The Dominican Republic health officials are concerned that malaria will spread into the country, because Haiti has no effective antimalaria program. and it is unlikely that current outbreaks will be controlled. The Dominican Republic would be vulnerable to the spread of vector-borne diseases in vast areas where Hurricanes David and Frederick caused severe damage to rural and urban water supplies and dislocated thousands of people from their homes during August and September.

A recently concluded emergency plan between the Government of Nicaragua and PAHO will be aimed at malaria eradication in parts of western Nicaragua (b)(3)

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where the situation is most severe. This agreement calls for US aid in the form of larvicides, insecticides, and antimalarial drugs. The agreement also calls for a program to control the mosquito *Aedes aegypti*, the primary urban vector of yellow fever and dengue fever. Severe flooding in northeast Nicaragua during early December may have created an environment especially suitable for mosquito population buildup and the resultant potential for vector-borne epidemics of human disease.

Haiti recently signed an aid agreement with Japan which includes a malaria eradication program for the Les Cayes region. This agreement will do little to prevent the spread of malaria this year into the Dominican Republic, which continually experiences malaria importations from Haiti, especially in the northern region. Haitian health officials believe this agreement is the first step toward the development of a much larger aid commitment by Japan.

During November, Costa Rica experienced cases of malaria resulting from travelers from Nicaragua. As a consequence, health officials in Costa Rica have been <u>alerted in order to prevent the spread of this disease</u>.

### Africa

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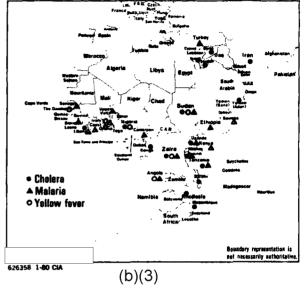
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The northern population of Zaire reportedly is experiencing a proliferation of endemic diseases, including tuberculosis, measles, cholera, and venereal diseases. Serious outbreaks of measles, primarily affecting infants, have been reported in various communities in the vicinity of Bafwasende. There also is evidence of a resurgence of cholera in northeastern lake regions, especially near Bukavu where cholera was epidemic in 1978.

The various types of outbreaks are indicative of the general lack of health care and food resources in this area. Domestic aid probably will not be directed to the affected population, and the outbreaks will continue. High mortality associated with measles is a good indication of inadequate food supplies, inasmuch as malnourished children are extremely vulnerable to measles. Tuberculosis outbreaks also can be expected

# Africa and Middle East



to be the major public health problem in areas of overcrowding, such as refugee camps, if adequate medications are unavailable. Cholera probably will spread unabated and Zaire will become a reservoir of cholera infection for neighboring countries as it was in 1978. (b)(3)

New cholera outbreaks in Africa also have been reported from Rhodesia, Malawi, Uganda, and Tanzania. The outbreaks in Tanzania have occurred in the western regions, and travel restrictions have been imposed to prevent the spread of cholera into the western part of the country. The current disease situation appears consistent with the annual resurgence of cholera in this part of Africa, which is associated with the December through April rainy season.

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#### **Epizootic Situation**

#### Africa

The Department of Veterinary Services in Rhodesia has reported numerous anthrax outbreaks in districts and tribal trust territories of Matabeleland, the Midlands, and Mashonoland. Anthrax, a highly fatal bacterial disease of herd animals and man, has been spreading steadily since it was first reported in the Midlands during August. Veterinary officials have attributed the disease spread to the high rate of livestock thefts, particularly cattle. The number of animal deaths has not been reported, but 2,260 persons reportedly were treated for anthrax and 40 deaths were reported during November 1979. (b)(3)

Man acquires anthrax from contact with anthraxcontaminated animal blood or tissues and from inhaling anthrax spores when handling contaminated animal hides. Rigid control measures and early treatment with antibiotics are necessary to control this disease. Livestock immunization also can be used effectively to prevent animal infection in anthrax endemic areas. Most of the human cases reported in Rhodesia involved skin lesions. (b)(3)

The anthrax outbreaks have been confined to tribal trust territories and to areas previously known as African purchase areas. Anthrax has not spread into livestock in the commercial farming areas; thus current outbreaks have not affected beef supplies. Veterinary controls are relatively good in the commercial farming areas, as compared to the tribal lands where control measures are virtually ineffective.

#### Asia

Efforts to increase livestock production in the mountain areas of northern Vietnam are being hampered by continued outbreaks of anthrax. The provinces of Son La, Lai Chau, Ha Tuyen, Hoang Lien Son, Cao Bang, and Lang Son have reported outbreaks of anthrax since 1973. Herds of buffalo, cattle, and horses in these provinces reportedly account for 25 percent of the total number of livestock in the country and are a valuable source for draft animals supplied to the Red River Delta and the southern provinces. The Party Central Committee recently passed a resolution making the control of anthrax an urgent matter in order to expand the herds of cattle, buffalo, and horses in the affected provinces and to preclude the spread of the disease to other areas. (b)(3)

Newcastle disease also was reported to be widespread throughout Vietnam. The poultry industry is an important sector of the economy, but the disease kills 30 to 40 million chickens annually (40 to 50 percent of the poultry population). A concerted effort is being made to control the disease through the use of vaccine

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and better husbandry practices. If the disease can be controlled, the flocks of chickens can be increased rapidly, making a major contribution to the supply of animal protein. Thus far, five provinces—Ha Nam Ninh, Hai Hung, Thai Binh, Ha Son Binh, and Thanh Hoa—have completed their vaccination programs.

Twenty-five percent of the racehorses in western Australia are reported to be suffering from what is described as a severe virus infection that affects the respiratory system. According to Australian veterinary officials, the disease is difficult to detect because the horses continue to eat well and look healthy during the early stages of the disease. It becomes apparent when horses are put under stress, either on a training track or in a race. (b)(3)

#### **Epiphytotic Situation**

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#### Latin America

Cuban officials claim that sugarcane rust has affected 25 percent of Cuba's crop, thus reducing this year's anticipated yield by 1 million tons. The impact of the disease is partially offset by Cuban efforts to increase yield this year by reducing postharvest losses, but the Cuban sugarcane harvest is unlikely to reach its projected 8-million-ton goal. (b)(3)

Sugarcane rust is caused by the fungus *Puccinia melanocephala* that occurs in Cuba, but it is not normally regarded as a serious economic disease. Cuban officials in the past have called attention to the rust disease problem in order to raise the price of their crop. Cuban officials claim that rust attacks Barbados 4362, the main sugarcane variety grown in Cuba, which accounts for about 25 percent of that planted on the island. If the reported 15 percent losses can be attributed to rust, Barbados 4362 may be highly susceptible to this disease. Disease control can be affected only if the vulnerable sugarcane is replaced by rust-resistant varieties. (b)(3)

Scientists of the National Institute of Agricultural Technology in Argentina have detected for the first time in Argentina, an infestation of a nematode (Meloidogyne incognita) in soybeans. The parasite is known to attack ornamental plants, trees, and shrubs, as well as potatoes and tobacco. The life cycle of the parasite varies from one to two months, depending on the prevailing temperatures. Control can be effected by using nematocides, rotating crops, or by planting resistant strains. (b)(3)

The Costa Rican Agricultural Ministry has begun a mass campaign to eradicate the outbreak of coffee rust in Nicaragua. Technicians have been sent to Nicaragua to destroy coffee plants affected by the disease. Also, the Costa Rican border post in Penas Blancas is fumigating all incoming vehicles from Nicaragua

The Economic Group of Latin American and Carib-(b)(3)bean Sugar Exporting Countries (GEPLACEA) has announced a plan to control and prevent smut and rust diseases that attack sugarcane fields on the continent. The plan was introduced officially at the 11th plenary meeting of the 21 member countries. (b)(3)

#### Asia

The Thailand Agricultural Extension Department reported a widespread infestation of white fruit flies, a sugarcane pest, in Chonburi, Rayong, and Chachoengsac Provinces. Helicopters of the Agricultural Aviation Division are being used to spray the affected sugarcane plantations. Crops in the northeast provinces, particularly in Udonthani Province, are being damaged by sugarcane borers. (b)(3)

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