

The Real Swarm

After a 16-year remission, African locusts are swarming to plague proportions

BY JANET RALOFF

"Four months ago, we warned that East Africa was sitting on a powder keg; now the explosion has taken place."

Jean Roy, UNFAO locust-control official
Wall Street Journal, July 13, 1978

For reasons that are not completely understood, certain species of the normally docile grasshopper will, under stress conditions, such as crowding, metamorphose into a different creature. Although they remain grasshoppers, they become nervous and irritable, increase their metabolic rate, change color and grow longer wings, broader shoulders and a larger head. More significant is their behavioral change into what entomologists call a "gregarious phase." All of a sudden, normally solitary insects band into huge coordinated swarms that pillage crops and pasturelands to satiate a voracious, collective appetite. What's more, these grasshoppers, also known as locusts, migrate vast distances—up to 100 miles per day—something no ordinary grasshopper would dream of doing.

Just such a metamorphosis is occurring throughout northeast Africa. Winged hordes were first spotted in Saudi Arabia during January. By March, more than a dozen more hordes were reported in Sudan, Somalia, the Yemen Arab Republic and the People's Democratic Republic of Yemen, according to the United Nation's Food and Agricultural Organization. The agency coordinates and has provided emergency aid to a 50-nation locust-control campaign spanning from Africa to Asia.

National plant-protection services within countries bordering the Red Sea immediately attacked locust legions with aerial pesticide-spray campaigns. By the end of the winter breeding season, however, pesticide stocks were exhausted and equipment in need of repair. Since then the situation has worsened.

The July 6 *NATURE* reports that "one swarm in northeastern Somalia covers some 400 to 500 square kilometers, another covers 360 sq km, and that together with about a dozen other swarms the total area infested by locusts in Somalia is about 1,600 sq km." Another 50 swarms, some well over 100 sq km, have been spotted in Ethiopia; what spraying is done is "thought to be too little, too late." Swarms have been seen as far east as India and Pakistan.



Photos: UNFAO

UNFAO, which has already given more than \$500,000 in emergency aid for pesticides and equipment repairs, announced on June 30 that \$3 million more is needed "immediately" to "avert the threat of a major plague." Last week the Agency For International Development announced it will send \$2.3 million worth of wheat and corn-soy milk to Ethiopian regions already struck by drought and locusts.

A locust needs to eat its own weight—about two or three grams—each day. Since swarms covering a square kilometer may contain 40 to 80 million locusts, hundreds of tons of vegetation disappear daily. So in war-ravaged lands where farmers ordinarily live hand-to-mouth, starvation often follows in the locusts' wake.

UNFAO officials expect swarms will stay put until September, "reproducing repeatedly." Then progeny are expected to progressively sweep in a "self-perpetuating plague" south into Kenya and west into Central Africa. UNFAO fears "sustained seasonal winds might carry some swarms as far west as Morocco within this year."

Once developed, a locust plague is almost impossible to stop or control. Gregarious locusts fly spontaneously on warm, dry days when their body temperature is high; this activity further raises their body temperature. Swarms settle only when the weather changes—such as when it rains, cools or gets dark. The prevailing winds in East Africa are due to start shifting later this month. If swarms ride air currents into the Ogaden, their breeding ground, "explosive multiplication" of their ranks could threaten cash crops throughout Africa next year, UNFAO officials fear. □

Wars and skirmishes throughout the Horn of Africa and Arabian peninsula have hampered locust monitoring and control efforts, and limited aerial spraying, say UNFAO specialists. To make matters worse, locust-control teams have become "rusty" in the 16-year African locust hiatus, they concede.