

**Vultures as Disseminators of Anthrax.**—In the article by Paul W. Parmalee on the vultures of Texas (Auk, 71; 1954) the following statement appears (pp. 447–448):—“Dubos (1948) states that bloodsucking flies, dogs, rats, coyotes, ‘and particularly buzzards’ should be barred from diseased animals (those with or dying from anthrax) since they ‘probably’ disseminate infectious materials, but published proof of this hypothesis in respect to vultures is wanting.”

The following is a brief summary of a popular article published by Dr. Luis Schmidt Herman, founder and head of the Veterinary Supply House, Dr. L. Schmidt Herman y Cia. Ltda. of Santiago, Chile. The article appeared in a private publication of the company entitled “El Doctor” of April, 1942, under the title,—“Los Jotes, simbolo de Atraso, Infección y Mugre.” (The Vultures, symbols of Backwardness, Infection, and Filth.)

Dr. Schmidt was called professionally to visit a large sheep farm in central Chile where it had been impossible to stop the constant loss of animals from Anthrax. In spite of the use of the best serums from France, Germany, the United States, Argentina, Australia, and Chile, the animals continued to die. Apparently it was impossible to immunize the stock so as to protect them from the disease.

A careful study of the situation on the spot revealed the fact that it was not customary to burn or even bury animals dying from infectious diseases. The vultures were allowed to dispose of them. These birds, both the Black Vulture (*Coragyps atratus*) and the Turkey Vulture (*Cathartes aura*) were there in sufficient numbers so that as soon as a sheep died it was only a question of minutes before the bones were nearly cleaned. The Black Vulture was by far the more abundant species. Vultures roosted by the hundred in eucalyptus groves in all the region the year round, and it was noticeable that the fields with eucalyptus groves where vultures roosted were those in which the most sheep died from anthrax.

After this preliminary study Dr. Schmidt told the administrator (the owner did not live on the farm) that unless something radical was done to eliminate the vultures, the Anthrax would continue and that the injections of serums, no matter how good they might be, would not stop the disease.

The administrator answered,—“Doctor, you know a lot, but the vultures do not cost me anything. Just imagine what it would cost me if I were obliged to burn or bury every sheep that died. On the other hand, I don’t take much stock in all this talk about microbes and that they are as dangerous as you say. Why don’t the vultures and the dogs die when they are eating dead animals every day? Haven’t you seen the battles royal between the dogs and the vultures as to which shall have the larger share of the meat?”

“My dear sir,” said Dr. Schmidt, “the owner of this farm has paid me to come here to his farm with a portable laboratory and everything necessary to make a careful study of the situation, find a solution if possible, and report my findings to him. What will you say if I can show you that vultures as well as dogs carry the microbes of anthrax in their intestines from animals which they eat?”

“If you can show me that, I will believe it,” he answered. Dr. Schmidt’s account continues. “My work was very simple. I shot half a dozen vultures and took excrement from them for my experiment. This was heated to 90 degrees centigrade for three minutes so as to destroy all the germs of the disease, but not the spores. The same procedure was followed with excrement from several dogs that had been feeding on dead animals. Some of this cooked excrement was sown on different types of cultural media. The following day typical colonies of Anthrax microbes appeared. With some of this material I inoculated guinea pigs, rabbits, and one sheep. They all died with anthrax.”

During all of this work Dr. Schmidt carefully explained each step to the administrator and his assistants, who gave careful attention to all the details, although they really understood very little of what was being done. Their frequent remarks to one another and the hilarious laughter which these frequently produced gave some idea of their opinion of the whole procedure. These also revealed their complete ignorance of the cause of Anthrax as well as their disdain for these "white collars from Santiago."

When the inoculated animals got sick their doubts began to vanish and when the last one died they were convinced. The sheep dying exactly as they had seen so many die almost daily caused the administrator to become almost panicky. He offered a peso apiece for vulture heads and started a regular campaign to kill every stray dog found in the pastures. The panic spread to the neighboring farms when they too, really understood that the vultures had been spreading the disease among their animals.—DILLMAN S. BULLOCK, *El Vergel, Angol, Chile*.

**Red-wing Nesting in Bird House.**—A large number of birds now often build their nests in bird houses or nest boxes provided by man, for example: bluebirds (*Sialia* species), Purple Martins (*Progne subis*), Tree Swallows (*Iridoprocne bicolor*), House Wrens (*Troglodytes aëdon*), Wood Ducks (*Aix sponsa*), and Golden-eyes (*Bucephala clangula*). These are all birds which otherwise nest in cavities in trees or other places. The House Sparrow (*Passer domesticus*), however, which frequently nests in bird houses, often builds nests in the open in trees or on other suitable supports, thus indicating its original habits. To my knowledge, however, the Red-wing (*Agelaius phoeniceus*) has not previously been reported to have nested in a bird house. A recent visitor to The Saskatchewan Museum of Natural History, Mr. A. E. Collett, of Regina, reported that in May, 1955, at Last Mountain Lake (Sask.) an adult male Red-wing was seen frequenting the platform of a wooden bird house, which had been set up the previous fall. A female Red-wing was observed carrying nest material into the box, and on May 24, eggs were seen in the box. Some time later in the month young Red-wings, which had evidently fledged from the nest in the box, were seen flying about in its vicinity. About June 28, another brood of Red-wings was heard in the box, and the male was still in attendance.

This bird house measured about 12 by 8 by 10 inches and had a flat red roof. The sides were painted green, and a 6-inch platform at the front had orange trim. The opening was about 3 inches square. The house was fastened to the top of a cedar post some 6 feet high, located about 15 feet from the edge of the water and about an equal distance from a cottage.

Supposedly the same male had previously held a territory in this area and had nested in the low vegetation at the edge of the water. The utilization of an artificial nest-site may perhaps be regarded as further evidence of the adaptability of the Red-wing. Its nests have been found on the ground as well as several feet up in trees, and in some areas the species nests commonly in alfalfa fields in upland habitat far from water. The possibility of Red-wings nesting in boxes had previously occurred to me owing mainly to an observation made of a closely related species in captivity. W. T. Page reported in 1906 for *Agelaius humeralis* (a South American blackbird): "Their one fault perhaps is an inordinate interest in the interiors of nesting receptacles." (*Bird Notes*, 5: 203-6.) Furthermore, part of the courtship behavior of the male Red-wing consists of crawling through dense clumps of vegetation, often followed by the female. The use of nest-boxes by Red-wings would provide an opportunity for detailed observations of nesting activities.—ROBERT W. NERO, *Saskatchewan Museum of Natural History, Regina, Saskatchewan, Canada*.