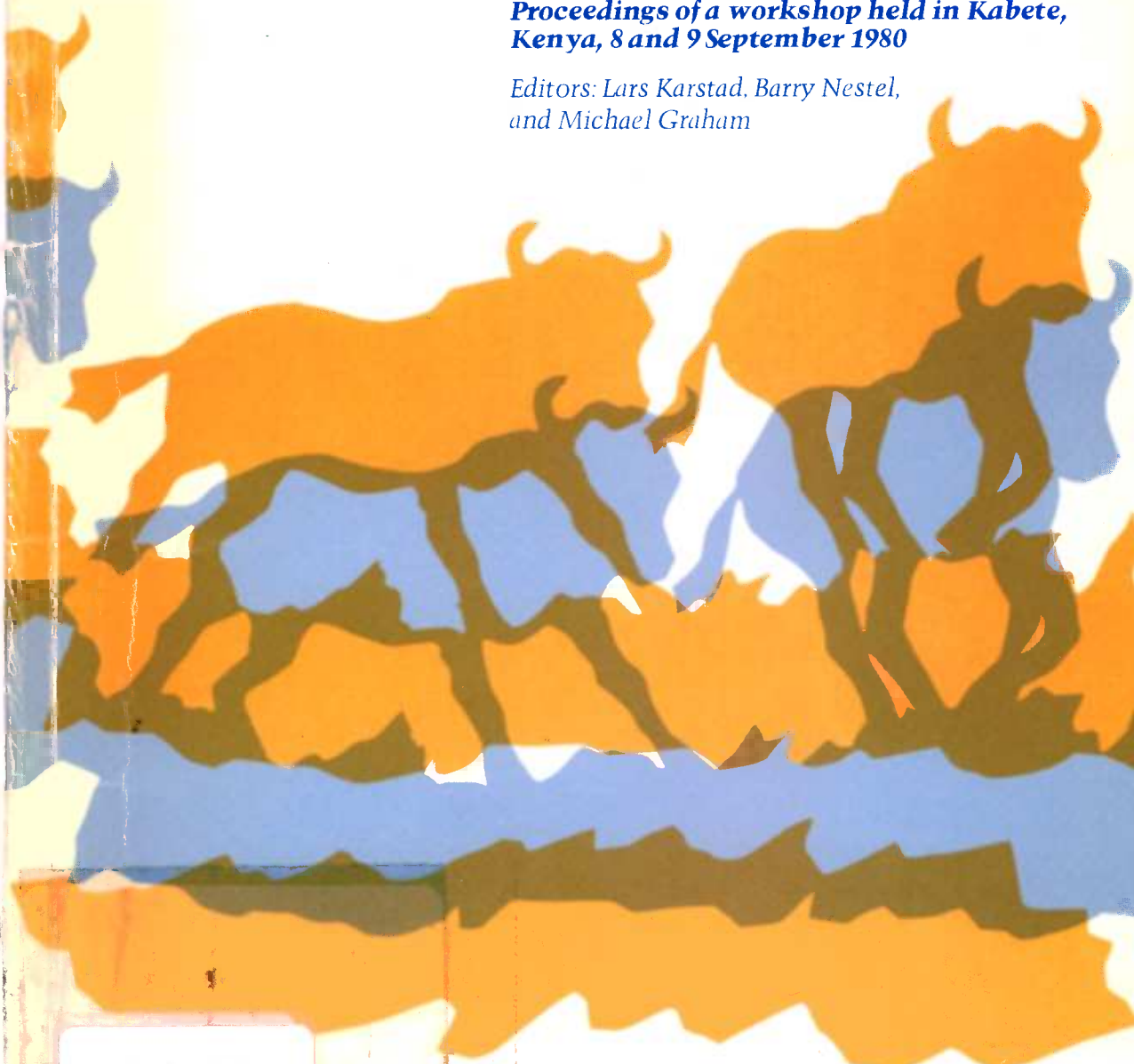


Wildlife Disease Research and Economic Development

*Proceedings of a workshop held in Kabete,
Kenya, 8 and 9 September 1980*

*Editors: Lars Karstad, Barry Nestel,
and Michael Graham*



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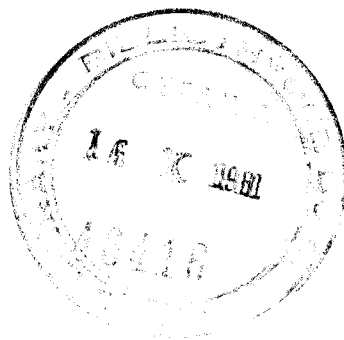
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The Value of Research Findings to the Research Director

S. Chema¹

Wild animals have been implicated as carriers and disseminators of diseases for a very long time. However, only recently have we, in Kenya, felt we were making some progress in defining the true roles of wild animals in the epidemiology of diseases such as foot-and-mouth disease, rinderpest, and East Coast fever. The research director often finds himself in the position of an officer who cannot always be at the battlefield. He does not receive day-to-day bulletins of successes and failures in research on all fronts; therefore, workshops such as this are extremely informative and useful.

Wild animals have often been used as a scapegoat for the variety of disease problems that from time to time beset domestic animals. Some of the complaints against game have been justified (malignant catarrhal fever and corridor disease). Many others have been speculative and unfounded. Research is essential to provide plausible and satisfactory answers to these questions. Earlier we were told that the buffalo is the only wild animal found, so far, to be a frequent carrier of foot-and-mouth disease in Kenya, but we were also cautioned against over-emphasizing its role as a reservoir for infection of cattle because transmission trials from carrier buffalo to susceptible cattle have all been unsuccessful. We learned that while rinderpest was at first a great killer of wild ruminants and pigs, it has ceased to be so, and, in the face of an adequate program of vaccination of cattle, rinderpest in wildlife has disappeared. It was pointed out that it may in fact be the domestic animals that are the menace to wildlife. Although it is no longer visible as a killer disease, rinderpest may not be gone because recent serologic surveys have found antibodies to rinderpest virus in healthy wild animals. We must therefore be on the watch for wild strains of rinderpest virus persisting in wildlife populations. We wonder if these mild strains might sometimes revert to virulence.

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Malignant catarrhal fever (MCF) is now quite well defined. However, unfortunately, we have not yet achieved our goal of protecting the Masai cattle from contracting this disease from wildebeest.

Rabies, on the other hand, is an example of a problem that, in Kenya, requires much more definition. Research is needed to determine if there is a significant wildlife reservoir, to identify the most important species involved, and to learn, by the experimental approach, the responses of these wild animals to infection with rabies virus — especially their ability to transmit the virus. All of this information must be provided by the researchers before we can make a more rational approach to rabies control. With rabies we must keep in mind the possibility that the rabid wild animal may be only the indicator species, while the important long-term reservoir may be an animal in which the virus does not produce such dramatic effects.

Our researchers who work on the diseases of wild animals have cautioned us to be specific, not to blame all wildlife for the sins of a single species. For example, of the several wild ruminant species examined in areas where bovine petechial fever occurs, only the bushbuck was found to carry the rickettsial agent. Even then, we have no proof that bushbucks serve as reservoirs for infection of cattle. Our knowledge is far from complete.

In theileriosis (East Coast fever), only the buffalo, among wild animals, has been found to carry a *Theileria* pathogenic for cattle. Researchers have been hopeful that the wild ruminants that have learned to cope with their theilerial parasites may provide clues to methods for immunizing our cattle against ECF.

Research on trypanotolerant wild animals also may guide us to a solution to the problem of trypanosomiasis in domestic ruminants. What we are saying is that we would like to learn the secrets of how the wild animals have learned to tolerate the parasites that are so destructive in our domestic animals. I have a suspicion that one of the other speakers is going to say: Why bother? Why not just raise the

wild animals instead of cattle, sheep, and goats? I am sure most people will watch his progress with great interest.

Research on echinococcosis in Turkana has given us more hope that a control program may succeed. The apparent absence of a sylvatic cycle in Turkana should simplify, somewhat, a very difficult and complex disease control problem.

In conclusion, let me say that research on diseases of wild animals is regarded as a valuable and necessary adjunct to our other veterinary research programs. Because it crosses government organiza-

tional lines, we could argue that a joint research effort, perhaps in a jointly supported research facility, should be developed to serve the interests of both the Ministry of Livestock Development and the Ministry of Environment and Natural Resources. The attendance of a number of people from both Ministries, as well as the papers presented by workers from a variety of outside laboratories or organizations, are evidence of a healthy multifaceted approach to problems facing the cohabitation of wild and domestic animals. It is an approach that I intend to promote and encourage in all our research programs.