

# Risks Posed by H5N1 HPAI to Texas Species of Wild Turkeys and Montezuma Quails

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This paper presents the results of a synthesis of epidemiological analysis of data presented in research published by The Borderlands Institute, Sul Ross State University, The Centers for Disease Control and Prevention, and the National Institutes for Health in order to assess the risks posed by the presently highly lethal strain of H5N1 HPAI to the habitats and populations of Texas Wild Turkeys in the Davis Mountain Preserve, the Oasis Ranch Preserve, & the Trans-Pecos Ecoregion and to perform a similar risk assessment for Montezuma Quails and their habitat in the Elephant Mountain Wildlife Management Area. The paper will present a risk assessment profile for each species of wild turkey and their particular roosting sites and present the same for the Montezuma Quail. The paper will then propose risk mitigation strategies based on the severity of the risk profile for each species of bird.

*Keywords:* H5N1, HPAI, avian influenza, bird flu, wild turkeys, Montezuma quail, Davis Mountain Preserve, Trans-Pecos Ecoregion, Elephant Mountain (WMA)

## Texas Wild Turkeys & Montezuma Quail

This paper presents the results of a synthesis of epidemiological analysis of data presented in research published by The Borderlands Institute, Sul Ross State University, The Centers for Disease Control and Prevention, and the National Institutes for Health in order to assess the risks posed by the presently highly lethal strain of H5N1 HPAI to the habitats and populations of Texas Wild Turkeys in the Davis Mountain Preserve, the Oasis Ranch Preserve, & the Trans-Pecos Ecoregion.

Subsequently, this paper will report the results of a similar risk assessment for Montezuma Quails and their habitat in the Elephant Mountain Wildlife Management Area. The paper will present a risk assessment profile for each species of wild turkey and their particular roosting sites and present the same for the Montezuma Quail. The paper will then propose risk mitigation strategies based on the severity of the risk profile for each species of bird cross-referenced with their specific habitats.

## The Risk Posed by Present Strain of HPAI H5N1


Migratory waterfowl are now the primary epizootic vector for HPAI/H5N1 viral incubation and dispersal. The primary vector for transmission is feces contamination from migrating bird viral hosts shedding the virus as migrate south along the North American Central Flyway—a route which lies directly in the path of the roosting sites of Texas' wild turkeys & the foraging holes of Montezuma Quail. The spectre of viral-loaded feces cross-contamination makes the food sources of both Texas' turkeys' and quails' dangerous fomites for lethal H5N1 viral infection.

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