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# THIRTY YEARS OF MORTALITY ASSESSMENT IN WHOOPING CRANE REINTRODUCTIONS: PATTERNS AND IMPLICATIONS

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## THIRTY YEARS OF MORTALITY ASSESSMENT IN WHOOPING CRANE REINTRODUCTIONS: PATTERNS AND IMPLICATIONS

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**Abstract:** We reviewed postmortem data to identify primary causes of mortality in reintroduced whooping cranes (*Grus americana*) and assess their potential for mitigation in future reintroduction efforts. In total, 240 cases from 3 populations were reviewed for causes of death, including the Rocky Mountain migratory population ( $n = 24$ , release dates 1975-1989), the Florida resident population ( $n = 186$ , 1993-2005), and the Wisconsin migratory population ( $n = 30$ , 2001-ongoing). Traumatic injury was the leading cause of mortality among the reintroduced whooping cranes, most commonly from predation ( $n = 120$  or 50%, range 8-58% per project) or collision with fixed structures such as electrical power lines or fences ( $n = 22$  or 9%, range 3-46%). Disease of infectious etiology (including confirmed cases of bacterial, viral, fungal and parasitic infection) was the second leading cause of mortality ( $n = 19$  or 8%, range 3-17%). The data were limited by the large number of undetermined causes of death due to scavenging and decomposition of carcasses ( $n = 64$  or 27%, 8-40%). Molting and poor roosting behavior or habitat quality may have increased the risk of predation in these populations. Preventive measures for power line collisions (marking devices) are impractical except at significant roost or migration stopover sites. Health evaluations of release candidates should continue in order to minimize losses from endemic or emerging diseases and prevent the introduction of novel pathogens into native ecosystems.

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