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Managing nuisance Egyptian geese on golf courses in Cape Town

A collation and follow-up of research recently published in the [African Journal of Wildlife Research](#) shows that the reluctance of golf course managers to adopt effective solutions to control the nuisance impact of Egyptian geese is not a failure of science but rather a failure of the process of effectively mitigating a wildlife management conflict.

Egyptian geese are indigenous to South Africa and their numbers have increased in the Western Cape during the past 40 years due to an increase in the number of farm dams, the expansion of agricultural crops and the introduction of large areas of urban green space.

The author of the study, Dr Rob Little from UCT's FitzPatrick Institute of African Ornithology, said: "These increases have had negative impacts on crops in rural areas and the fouling of gardens and golf courses with goose faeces is a common complaint in urban landscapes. Golf courses are particularly attractive gathering areas for the geese because large expanses of grazing lawns are interspersed with ponds and predators are largely absent."

Control measures previously used by golf course managers in the Western Cape have included chasing the geese with dogs and remote-controlled vehicles, culling by shooting, destroying eggs and nests, and relocating geese. "Passive harassment measures with no real threat to the geese were generally least effective. Culling or relocating the geese and chasing the geese with dogs were considered the most successful control measures. However, public opposition to culling in urban areas exerted pressure on managers to consider non-lethal alternatives," said Little.

During 2012–2015 staff and students at the FitzPatrick Institute of African Ornithology investigated the perceived problem of geese on golf courses, assessed management options to alter the golf course habitats, experimentally tested altering the landscape of fear using falconry and observed related changes in the vigilance behaviour of the geese. The aim of these research projects was to understand the factors underlying the nuisance

phenomenon of the geese on golf courses and to offer effective ways to resolve the negative impacts.

Investigating the perceptions of golf course users found that the large quantities of excrement and the harassment of other bird species were the two main negative impacts associated with the geese and that the majority of golfers (87%) and non-golfers (86%) felt that the goose population required active management to reduce their numbers. Just over half of the people considered the geese to be a 'severe' problem and most people considered that the goose population should be reduced by 50% or more.

The study of the social behaviour of the geese indicated that hotspots, where geese aggregate, were identified by two habitat features. Firstly, areas close to water bodies (<100 m) to which the geese can flee if danger threatens them or their young. Secondly, large open patches of lawn greater than 1.5 ha which improve their ability to detect potential danger and provide an abundance of grass to eat. "It was therefore recommended that golf course management should shift from focusing on the geese themselves and rather to manipulating the habitat features which the geese favour," said Little.

Introducing trained raptors to further test the effects of manipulating the landscape of fear using Harris's hawks and controlled, mostly non-lethal flights towards the geese dramatically reduced the number of geese on the course by 73%. Subsequent exposure of the geese to a hawk once a week almost doubled their vigilance levels confirming that the decrease in abundance of geese was largely due to the fear of being preyed upon.

Little said: "Although the hawks were allowed to kill a small number of geese to instil a real threat of potential mortality and to retain the interest of the hawk, the decrease in abundance was significantly greater than the numbers killed, indicating that indirect effects were considerably larger than the direct effect of mortality. Furthermore, post-falconry vigilance levels were significantly lower than the levels detected during the falconry period and goose abundance increased rapidly post-falconry, returning to the numbers of geese recorded before the falconry experiment within two months."

Furthermore, because the hawks were flown from a golf cart, vigilance levels increased most in the presence of a golf cart, even when no falconry was done, suggesting that geese learnt to associate carts with the threat of predation.

Specifically, he said the ponds should be reduced in number and in size and not be adjacent to open foraging or loafing lawns. "Other modifications to the habitat may include planting vegetation or erecting goose-height fences around the ponds and fairways to reduce habitat openness, ease of movement and predator detectability. Generally, the intention should be to reduce the number of favoured sites or to have favoured sites located in the non-playing areas of the course."

Little commented: "The overall conclusion is that the geese perceive a tranquil golf courses as highly attractive, but if their perception of safety is disrupted by the introduction of a predation risk they react accordingly and reduce their use of the course."



Egyptian geese are attracted to the safe expansive lawns and ponds of golf courses.

Photo: Richard Gie

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Egyptian geese are habituated to the normal activities of golfing and golf course management.

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