The Role of Lagomorphs in Southern Africa's Biodiversity

By Monique Goosen, SCBH

Dictionary Meaning: *Definitions from Oxford*

- Noun: The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

South Africa proudly hosts the highest number of lagomorphic species in Africa, boasting nine species, including subspecies. The functioning of our diverse ecosystems is intricately tied to the presence of lagomorphs.

Functions of Lagomorphs:

1. Keeping Flora in Check: Lagomorphs are more than just animals at the bottom of the food chain.

In areas devoid of lagomorphs, many indigenous plant species face extinction, giving way to invasive species. This imbalance results in ecological disasters, affecting bird species, bees, and mammals due to changes in hiding places and the absence of flowers. Lagomorphs play a crucial role in eradicating certain weed and thorn species through grazing, while their excreted dung contains seeds altered enough to facilitate easy germination.

In the Southern Cape, where Hewitt's Red Rock Rabbits reside, the invasive Lantana, threatening Bitou Bush and other Fynbos, is kept in check. Hewitt's Red Rock Rabbits tunnel into Lantana to feed on its sweet root with natural rheumatic treatment, effectively killing the plant. Similar to moles, rabbits contribute to soil aeration. The specific geography of tunneling lagomorphs, found in areas with scarce and endangered fynbos species, ensures the continued existence of this rare flora. Indigenous species are selective foragers, preserving plant life by taking only a few leaves from each plant.

Unfortunately, the opposite can be said of Domestic Feral Rabbits, as detailed in the "Feral Factor" document.

2. Fertilizers of the Fields:

Lagomorphic species leave average to 250 nutrient-rich droppings per day, often referred to as "cocopuffs," boasting the second richest cold manure on earth (elephants have the richest). Cold manure can be directly applied to plants without causing burning nitrates. Without lagomorphs leaving manure, vegetation would deplete from a lack of nutrients, fundamentally altering the entire ecosystem. Lagomorphs leave droppings under natural bushes, enhancing their growth and enabling many wild animals to feed off them.

Plants like Boegoe, Cancerbush, and grass thrive in areas with Riverine Rabbits in the Karoo, stabilizing the ground, especially topsoil in windy areas.

In simple terms, Lagomorphs prevent the transition of landscapes into deserts. Farms where farmers have eliminated lagomorphs tend to be drier, with fewer plants and significant topsoil loss, impacting the entire ecosystem. No lagomorphs mean no ecosystem.

3. Food: Many predators depend on lagomorphs for sustenance. The balance between lagomorphs and rodents is crucial for birds of prey, especially. If lagomorphs were to disappear in an area, birds of prey would suffer, as rodents offer only a limited

food supply. The absence of lagomorphs could lead to the departure of birds of prey from the area, allowing rodents and other creatures to proliferate. This has been observed on farms where lagomorphs have been eradicated.

Rabbits are used to feed birds of prey in specific breeding programs, such as the endangered Bearded Vultures in KZN Natal. In the wild, Beared Vulture parents catch one of the four indigenous lagomorph species to feed their young, providing the correct textured food for their survival. Many predators, including mammals, teach their young to hunt using lagomorphs as prey. The removal of lagomorphs from nature would lead to the collapse of the entire fauna and ecosystem.

While this might not sound dire to those not focused on nature, there would be an immediate decline in nature and tourism. A scarcity of animals and vegetation in popular parks like Kruger Park or Addo Elephant Park would cause a significant drop in tourists. Tourists might opt for safaris in other countries like Botswana, Kenya, or Tanzania. Considering the impact of the tourism decline after Covid, imagine the difficulty of regaining those tourists due to a permanently changed ecosystem, deforestation, and deserts everywhere. The consequences are evident in areas of the Karoo and Northern Cape where many hares succumbed to RHD in the surge of September/October/November 2022. The recovery is slow, with over 1000 hares dead in this area, and the remaining ones only having an average of 2 leverets per season, totaling 4 per year. It's not only drought causing barren land; it's the lack of nutrients in the soil preventing plants from growing.

Conclusion:

To preserve our diverse ecosystems, we must ensure the longevity of our indigenous lagomorphic species. RHD poses a real threat, and its control and monitoring require the active, hands-on dedication of a national governing body that understands lagomorphs and their habits across all viable industries.