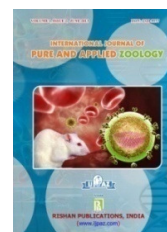




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RESEARCH ARTICLE

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EMU BIRD – POTENTIAL THREAT TO THE BIODIVERSITY AND AGRICULTURE PRODUCTIVITY OF WESTERN GHATS, SOUTHERN INDIA

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ABSTRACT

The collapse of emu farming industry in Tamilnadu, southern India made the owners to release the birds in wild. Especially emu were freed near a village Goundanputhur near the Western Ghats, known for its immense floral and faunal diversity. The invasion of emus in this region will cause severe damage to the diversity. Moreover the region is known for its agriculture wealth. If there is no room for the emu farming in Tamilnadu in future, it is better to cull the remaining birds to save unique agriculture and biodiversity and the state government has to finish the job without much ado.

Keywords: Emu farming, Western Ghats, Nilgiri biosphere reserve, southern India, diversity.

INTRODUCTION

Recent news about the collapse of emu farming industry in Tamilnadu, Southern India was dismayed several investors. Unfortunately some of the birds were released in the agricultural farm and the adjacent forest of Western Ghats. Number of wildlife biologist was struck first by the point how the central and state governments allowed such a large number of non-native birds (Erode-Salem district alone the staggering number varying from 7000-12000) to be imported to India without any quarantine formalities, probably because the quarantine system must have been devised before Caxton! The one thing which is sure is that the emus were not smuggled stealthily into India.

Globally several reports are available about the havoc caused by this kind of alien or non-native or exotic species. It was reported that invasive alien species are one of the dangerous threats to the native biodiversity of any region or habitat. Well acclaimed reports pointed out that the exotic species are responsible for the decline or extinction of several endemic species throughout the world (*e.g.* the introduction of zebra mussels led to the extinction of several native aquatic species of North America) (Ricciardi, 2004; Clout and Williams, 2010).

The sudden, unnoticed and uncontrolled proliferation of the exotic species suppressed and eliminated the growth and existence of native plants and animals which might denature the ecological services provided by the native system

and that leads to economical and social setbacks at the regional level (Ricciardi 2004; Clout and Williams, 2010). Apart from undoing the natural diversity, exotic species turned a menace to aquaculture, agriculture, horticulture, poultry and apiculture too. For instance, South Africa's native diversity faced grave consequences after the introduction of acacia plants which caused immeasurable economic and biodiversity loss to the region (Clout and Williams, 2010). In India the introduction of water hyacinth as an ornamental plant in Kolkata, by British before Independence emerged as a potential threat. In every nook and corner of Indian wetlands one can see the deleterious impacts of these plants in aquatic system and fish production. Likewise in the terrestrial system the *lantana camara*, *parthenium*, and *eucalyptus* have done much damage is done by the hyacinth in the aquatic system. In the same way the animals introduced in some habitats caused havoc to the native diversity. For instance it was reported that the predatory brown tree snake *Boiga irregularis* was introduced into Guam (western Pacific Ocean, southernmost of the Mariana Islands) during the early 1950s which resulted in the extinction of several native vertebrate species including some birds (Gurevitch and Dianna, 2004). Moreover a study in USA revealed that 68 bird species are declined due to alien invasion. But ironically in India we do not have any sound studies or recommendation regarding exotic species and their impacts on our native diversity (Gurevitch and Dianna, 2004).

In the case of emu, the knowledge is limited in India. People understand that it is an omnivore bird of Australia. People are under the misapprehension that if they rear the bird they will become multi-millionaire over night. Accidentally or deliberately the other facts about emus are not elaborated either by the government or by the companies.

According to the illustrated encyclopedia of wildlife (1989), emu prefers to live in open area and plains rather than the rain forest of Australia. It is distributed widely throughout Australia where ever water is abundant and often prefers to live close to urban centers. In the beginning there were several races of emu distributed in Australia but all the races except the existing one were wiped out during the late 18th century by the colonists who hunted the birds for their flesh. The existing species is highly adapted to the

climatic and other ecological conditions in the consecutive centuries.

In due course of time emus in Australia turned to be detrimental to agriculture (encyclopedia of wildlife, (1989). They cause unbearable damage to cereal crops pushing the farmers on the edge of existence. Obviously farmers retaliated violently against the birds which resulted in mass killing of emus. Astonishingly in November, 1932 a battalion of soldiers of royal Artillery used machine guns to eradicate the emus in nearby farm lands of the towns of Campion and Walgoolan and they killed nearly 20,000 individuals. The government enjoyed its success in eradicating the birds only for few days. After that the remaining emus adopted a defensive strategy by splitting up into small groups and easily eluded from guns and thus beset the soldiers and registered their perspicacity and naturally the population redeemed shortly. Obviously it was a bootless military campaign against the emus and since from that period the emu in the mainland of Australia flourished. To overcome this emu nuisance the farmers protected their farms by fencing their cultivated land by emu-proof curtain. Incredibly the curtain extends for thousands of kilometers across western part of Australia. From the above statements of wildlife encyclopedia one can easily understand the notorious history of emu to agricultural crops and their potentiality for greater damage.

After the fall of emu farming industry in Tamilnadu, several farm owners ran helter-skelter and abandoned their birds in their farms and a few released the birds in the wild. Ironically some of the birds were released in nearby agricultural lands by the owners. For instance, in Goundanputhur village near Gobichettipalayam of Tamilnadu, people found a number of emus in one fine morning in and around their settlement. A few birds were caught by the people for consumption (Figure 1). But no one knows how many of the birds have eluded to wild *i.e.* adjacent forest areas of Western Ghats One of the Global hot spots. It is better for the farmers and forest department to get ready for 'emu war' in the near future as the birds have a kind of notorious past in their own native land! Moreover, as an exotic species, naturally it will flourish in the wild in an alarming way. According to the exotic species management experts, when an invasive species does enter in the wild and when it is detected it is essential to

set up well-organized emergency management procedures to minimize the risk of wide spreading and subsequently there will be a need for eradication campaigns (Clout and Williams, 2010). It is worth to mention here that emu birds

are released near the foot hills of Western Ghats, in The Nilgiri biosphere reserve, which supports 3300 species of flowering plants with 132 endemic species, 175 species of orchid (8 endemic), and around 600 species of fauna.



Figure 1. Local people with hunted emu in Goundanputhur village of Tamilnadu Southern India (Courtesy to Hindu).

Conclusions

It won't be an exaggeration to conclude that emu is one more bee on the bonnet of our agriculture and biodiversity of this region. If there is no room for the emu farming in Tamilnadu in future, it is better to cull the remaining birds to save unique agriculture and biodiversity and the state government has to finish the job without much ado.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest associated with this article.

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