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USM LOOKS AT OWLS AS BIOLOGICAL AGENTS FOR PEST CONTROL OF MICE, CONSERVATION AND RICHNESS IN BIODIVERSITY

PENANG, 20 January 2016 – Researchers at Universiti Sains Malaysia (USM) are actively looking at the capabilities of owls (Tyto alba javanica) for the purpose of pest control such as mice, and also for conservation activities as well as increasing the biological diversity in urban and farming areas throughout Malaysia, including at the USM Main Campus.

According to an expert on pest control from the USM School of Biological Sciences, Dr. Hasber bin Salim, efforts to use owls have been initiated in the country as far back as in the seventies especially in the control of mice in agricultural areas such as at the paddy fields and palm oil plantations, and have yielded great success; however, its implementation has been given less focus in suburban and urban areas around Malaysia.

"In the olden days, owls were normally feared by society, with their frightful appearances and looking ghastly as they fly with their white wings, so they were called by other names (Malay: burung pungguk) as they can be cute-looking too when little and are loyal to their mate."

In the west, this adorable bird reflects the richness in biodiversity and has been given 5-star treatment in conservation activities to maintain its population in specified areas and also to become biological pest control agents as how it has been in the United Kingdom and other European countries," said Hasber.

The 36-year old lecturer who joined USM in 2014 has been widely involved in the research on owls, from the time he started service as a researcher in R&D at Felda Global Ventures (FGV) in early 2004 and while pursuing his studies in Universiti Putra Malaysia (UPM) at the Doctoral level.

Among the research and projects which he has been involved in were those on the efforts for the conservation of owls in palm oil plantations which were under threat as a result of indiscriminate use of poison to get rid of the mice population.

He was also among the team of research experts from FGV and UPM who have succeeded in introducing owls in palm oil plantations at Felda Sahabat in Sabah for pest control purposes.

Through the research team known as the Barn Owl Research Group USM, which was established together with senior researchers having various expertise, the team has recently succeeded in acquiring funds amounting to RM175,000 under the Research University (RU) Grant, for their efforts to introduce owls as biological agents in the control of mice as vermin and to symbolise the richness in biodiversity at the USM Minden campus grounds in Penang, which is widely known as the 'University in a Garden'.

"Currently we are rearing owls, which were acquired when they were less than a month old after they hatched at their natural habitat areas, which were agricultural grounds and were then taken to the laboratories or the USM Owl Aviary, to familiarise them with the new diet of mice which can be found here, and also to look for a suitable mate as owls are very loyal to their mates, and the loss of a mate could result in the death of the other," explained Hasber.

This training process would normally take 2-6 months, until the owl is ready to be let loose around the campus.

He shared an example, where an owl was brought to an event on the use of owls to hunt for mice, which became depressed and had to be closely cared when its mate died.

The owl named 'Rina' is now given close attention by Hasber and a Doctoral candidate, Mohd. Safwan Mohd Saufi to ensure she continues living, by means such as taking her for walks around the campus, and she now seems to be livelier and it is hoped that a mate could be found for her in the near future.

Owls would fly out of their nest after sunset while during the daytime, they would remain in their nest; they are capable of preying on their victims within an area between 5 to 50 hectares.

"Two things need to be prepared for the owls to hunt for mice in the field; first is to find a suitable mate for them from the aviary and next, to adapt them to the species of mice where they would be placed, which is in a wooden-and-fibreglass nest, as their home in the field," explained Hasber.

Owls have been said to feed 100% on mice compared to other animals such as snakes, which have been used in the agricultural sector, as they could only feed on mice numbering between 100 – 200 a year, whereas owls could hunt for 2-3 mice each night, and with a pair of owls and a nest of owl chicks could feed on around 1,500 mice annually.

Added Hasber, the success of this project as reported in the media recently has provided an avenue for owls to be used in the extermination of mice, likewise in areas such as in Penang, where even the use of 50 mousetraps each night will not be enough.

"This is one example where the capabilities of our researchers are evident in dealing with the problem of controlling pests such as mice, with the use of owls as biological agents and raising the capacity for wider usage not only in the rural and agricultural areas, but also in urban localities or 'concrete jungles' where owls normally would not be present, due to the lack of trees and natural foliage for them to built their nests," he said as he stroked Rina's feathers affectionately.

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