K

eny's Maasai Mara National Reserve is unequivocally rated as one of the world's premier wildlife destinations. Every year between July and September, approximately 1.2 million grunting wildebeest cross over into the Mara from the Serengeti National Park in Tanzania. The wildebeest provide an unparalleled culinary feast to crocodiles, lions and a myriad of other predators that prowl the Mara's magical plains. However for one group of animals, the wildebeest migration in the Mara becomes a prolonged period of festivity – these are the vultures – nature's unsung heroes.

I'd like to think of them however as Africa's most efficient clean-up crew. Five of the eight species of vultures that occur in East Africa are found in the Mara. These are Lappet-faced, African White-backed, Ruppell's, White-headed and Hooded. The importance of vultures as recyclers of nutrients cannot be overemphasized. Dr David Houston's epic study on vultures in the Gol Mountains during the 1970s (Tanzania), showed that vultures account for clearing up nearly 70% of all the dead animals in the Mara-Serengeti complex.

Without vultures, the stench from dead and rotting carcasses would be unbearable, not to mention the loss of revenue from tourism and other ecosystem services.

Sadly, vulture populations are declining rapidly in East Africa. We can now count populations of the Bearded and the Egyptian Vultures on our finger tips while those of other vulture species have declined by as much as 60% over the last two decades. In February 2008, we conducted nearly 2,500 km of raptor surveys in northern Tanzania and observed Gyps vultures (African White-backed and Ruppell's) only in protected areas west of Arusha. The same trends are being mirrored in Kenya where vultures are mainly confined to either protected or designated conservation areas. Deliberate poisoning of predators by livestock farmers and pastoralists that invariably result in poisoning of vultures has mainly accounted for the decline in vulture populations. The Mara-Serengeti complex is one of the last remaining frontiers for vultures in East Africa. It is imperative therefore that we ensure that vulture populations do not go extinct in East Africa for this would have dire ecological and economic consequences.

In collaboration with Princeton University, The Peregrine Fund and National Museums of Kenya is facilitating the study of Corinne Kendall who is conducting her PhD studies on the effects of land-use changes on vulture populations. Corinne’s study is building on The Peregrine Fund’s ongoing vulture research in Kenya’s Masai Mara and forms part of a long-term Vulture Research Project aimed at understanding vulture population dynamics and ecological requirements. Since early July, Corinne has attached 10 cellular units on four African White-backed, three Ruppell’s and three Lappet-faced Vultures, all trapped and released in the Masai Mara. These units, manufactured in South Africa, use cell phone technology to send GPS coordinates on the whereabouts of tagged vultures. We are already seeing some fascinating movement patterns and Corinne will provide regular updates on vulture movements. To complement this “cutting-edge” technologi-

We are ignorant about is how far they travel in search for food, how each species competes for food, what areas they cross...
In our study, we are attaching numbered wing-tags on vultures to obtain cost-effective data from tourists and vulture enthusiasts who report their vulture sightings which are then plotted on a map to build on movement patterns. We have so far wing-tagged nearly 80 vultures.

Many people have asked me "what is the relevance of all this"? The answer is two-pronged. Firstly, vulture populations are highly threatened in East Africa (or globally for that matter) and they need our immediate conservation action to help reverse their declining trends. These conservation actions must be based on sound science (as opposed to "thumb-suck" - a common term used in scientific circles that illustrate recommendations based on pure guesswork and hunches). In order to develop highly effective conservation strategies, it is important to understand the basic ecological requirements of threatened species.

So while we know what vultures feed on and where they nest, what we are ignorant about is how far they travel in search for food, how each species competes for food, what areas they cross, what are the threats in these areas, which are important roosting areas and what do they do when they are not breeding. By answering these questions, we will have obtained sufficient information that will help towards developing strategies to help ensure their survival. Secondly, by increasing the profile of vultures in East Africa through scientific research, we are helping to increase public understanding about the need to conserve these very special birds and their habitats. We are already observing changes in people's attitudes. For example, park rangers and tour bus drivers are now stopping to talk to us to let us know that they have observed an orange-tagged vulture. This is incredibly gratifying but a lot of groundwork still remains. In the future, we plan to organise a vulture workshop to inform stakeholders about our research as well as to spread the conservation message at grass-root level about the importance of protecting vultures.

Dr Munir Virani
Directs the Africa and South Asia programs for The Peregrine Fund, a US conservation organization dedicated to conserving birds of prey worldwide. He is also a Research Associate with the Ornithology Section of the National Museums of Kenya.

Acknowledgements
Sincere thanks to Kevin Markman, Donald Kendall, Paul Kirui, Simon Thomsett, Laila Baha-el-din, Wilson and the staff of Ilkeliani for their help during the vulture trapping process. Thanks to the Narok County Council and especially Mr Sindiyo and Mr Minis for their support of the vulture project.

This article is reproduced with kind permission from The Peregrine Fund.