

BIRDS AND AIRCRAFT RESEARCH NAMIBIA PROJECT (BARN-P)

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In collaboration with the Namibia Airports Company (NAC) and the National Museum of Namibia

Special points of interest:

- A Research project is under way to develop a predictive model for aircraft-wildlife collisions at Hosea Kutako and Eros Airports;
- Reporting of birdstrikes / wildlife collisions and near misses is crucial to understanding the problem;
- Be on the look-out for vultures around HKIA, and Guinea-fowl at Eros.

Get to know birds that may be a hazard to aircraft.

In every newsletter there will be a picture of bird species that may pose a risk to aircraft safety at the airports. This issue it's the White-backed Vulture (*Gyps africanus*): Picture below.



What the rains brought!

January was an exceptional rainfall month in the Windhoek area. 317 mm of rain fell, and there were only 8 days in the month where it did not rain.

So what does this mean for aircraft-wildlife collisions?

The rain does three things:

1) It triggers a boom in the growth of plants: grass, shrubs and trees produce succulent and nutritious new leaves, shoots and flowers. This in turn attracts herbivores—insects, birds and mammals.

2) It stimulates the hatching and emergence of insects that have been dormant—in eggs, cocoons or other forms - waiting for a significant rainfall event to wake them. This further attracts birds and small mammals which feed on them.

3) Water puddles inevitably form, and small dams develop as the soil saturates and cannot absorb all the rain. These puddles and dams attract frogs and aquatic insects and these, in turn, attract birds that feed on them.

All three the above phenomena were observed at Hosea Kutako International Airport during the rainy period. This kept the staff on their toes to ensure the risk of aircraft-wildlife collisions were kept to a minimum. Well done to them, as there were no serious incidents.



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Wet weather attracted storks to HKIA!

A flock of White-Storks (*Ciconia ciconia*) (right) spent a few days at Hosea Kutako. It is suspected that they were on a migratory route, and found the green grass (new growth following mowing and rains) attractive for the worms and insects it sustained. Puddles with tadpoles and water-insects may also have been an



attraction for the white storks



and a few Marabou Storks (*Leptoptilos crumeniferus*).



Did you know that radar is used in the USA to track large flocks of birds. Warnings are sent to airlines to avoid areas where flocks of birds are known to occur.

The danger of flocking birds

Recently (March 2010) there was a significant event of **birds flocking** together in the Karibib / Omaruru area. Reports by observers suggest that the flock spanned an area greater than 20km in diameter and was made up mostly of **Yellow-billed Kites** (*Milvus aegyptius*), but other birds such as **Red-footed Falcon** (*Falco vespertinus*) and **Abdim's storks** (*Ciconia abdimii*) were also seen.

The flocking birds were taking advantage of an eruption of termites (flying ants) and locusts in the area following good rains.

Needless to say, events such as these pose a major threat were they to occur at or near airports. According to airport staff, such an event occurred at Hosea Kutako International Airport a few year ago but he flock moved quite quickly without affecting air traffic.

Flocking events such as these are impossible to predict, but good early season rain and the emergence of locust swarms (or other insect activity) are early warnings to look out for.

This project (BARN-P) is monitoring reports of insect swarms and outbreaks of pests such as army worms or locusts near Hosea Kutako and Eros airports. As these are natural phenomena very little can be done to prevent them, but knowledge of their existence can warn aircraft of possible risk areas.



"thanks"

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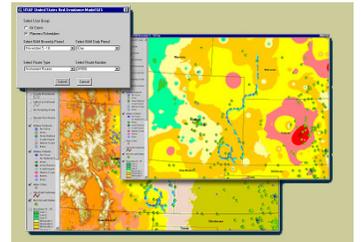
Modelling the risk of aircraft / wildlife collisions

The United States **Bird Avoidance Model** (US BAM) uses Geographic Information Systems (GIS) in conjunction with observations of sixty key species to predict the risk of "birdstrikes" for US aircraft. The BAM is also applied in the Netherlands.

The BAM considers available GIS information containing environmental and management factors, as well as observations of bird populations and migration patterns.

No evidence of the presence of a similar model for African, and hence southern African conditions could be found in literature. In addition no consideration of the risk of mammal collisions with aircraft is given in these models, as they concentrate on key local risk bird species.

This project will attempt to design a model specific to southern African conditions, and will be tested at Eros and Hosea Kutako Airports.



The US Bird Avoidance Model (US-BAM).



Bird surveys

Bird surveys continued at Hosea Kutako over the last few months. Observations are suggesting that many birds are not merely "visiting" the airport (in search of food, shelter or perching space) but are resident in particular sites as they are often seen in the same area on surveys and display territorial behavior.

The Pale Chanting Goshawk (*Meleirax canorus*) (seen in the picture to the right) is

often seen at Runway 08, perched either on the fence or on the windsock from where it forages for rodents, reptiles and insects in this area.



Another territorial bird is the **Northern Black Korhaan** (*Eupodotis afaroides*) (below) which often calls and displays from the runway verge near Runway 26.

