

## **POWER LINE MONITORING AT VULTURE COLONIES**

It is a known fact that during periods of poor weather (rain, mist and fog), vultures are often unable to return to the cliff sides to roost and will therefore seek out alternative roosts, often in the form of electricity structures located within the immediate vicinity of the colony. It is structures like these, located on higher topographic relief that vultures favour most often, presumably because they provide a suitable substrate on which to roost, offer a vantage point of the surrounding terrain and less energy is used by the birds to get airborne again. In addition, juveniles are inexperienced and are generally less adept at flying and perching on structures, resulting in mortality.

VulPro has, on several occasions during colony monitoring, found large numbers of vulture mortalities (as a result of both electrocution and collision) under the power lines that are located within the immediate vicinity of the colonies. Long-term, quantitative information on vulture:power line impacts at vulture colonies is unfortunately deficient and as a result, the scale of the problem cannot be determined or compared on a spatial or temporal basis. It was decided at the Vulture Seminar held in November 2014 that a standardized power line survey method is needed in order to collect accurate, representative data on direct bird-power line interaction rates at a number of fixed, strategically selected, long-term monitoring sites.

The following power line monitoring protocol is proposed:

The fieldwork will comprise of ground surveys, conducted annually (although quarterly surveys would be preferable), along the Eskom servitude of each identified power line, and ideally involving at least two monitors.

On each survey, the following data and material will be collected:

- i. The location, identity and number of all electrocution and/or collision casualties found –
  - (a) GPS coordinates, position relative to the power line and the nearest pole/pylon, position relative to the servitude, nearest pole/pylon number
  - (b) Notes on surrounding topography, vegetation type, cover and land-use
  - (c) Pylon type and configuration, presence or absence of bird flappers and/or insulating material
  - (d) Species, age and sex, and number of birds in obvious multiple electrocutions and/or collisions
  - (e) Approximate age and composition of remains – e.g. fresh, intact carcass, or old (bones and primary feathers only)
  - (f) Photograph of each mortality (indicating injuries and position of the carcass in relation to the power line)
  - (g) Photograph of powerline structure with presence or absence of mitigation measures
  
- ii. The location, timing, identity and number of sightings of vultures roosting on the power line infrastructure –
  - (a) GPS coordinates
  - (b) Time of day
  - (c) Position of the bird relative to power line infrastructure (e.g. insulators) and the nearest pole/pylon number
  - (d) Notes on surrounding topography, vegetation type, land-use
  - (e) Pylon type and configuration, presence or absence of bird flappers and/or insulating material
  - (f) Number of birds, species, age and sex (whenever possible) and behaviour of the birds in each sighting (e.g. sunning)
  - (g) Include a photograph

- (h) Note other signs indicating previous vulture (or any bird) use, i.e. heavy white wash, collection of pellets, etc.

**All collision and electrocution remains (whole carcasses, bones, flight feathers, but excluding body feathers) found must be cleared away to prevent duplication in subsequent surveys. The details of all mortalities must be submitted to VulPro for entry into a Mortality Register. In addition, negative data (i.e. surveys that yield no records of mortality) must also be submitted to VulPro.**