Now over 10 years later we have a good understanding of their biology, what they eat, where they forage, when they breed and their preferred habitats. For example, we now know that they breed almost exclusively in Mopane woodlands, and during their breeding season feed mainly on grass seeds. There is a large variety of grasses that grow in Mopane woodlands that are rich in nutrients. During the dry season, their diet is more varied; they will feed on different types of fruit and also on dry seeds on the ground. Our studies have also shown that the lovebirds are not the only species that use nest holes in Mopane woodlands; we have learned that other species such as the Grey-headed Sparrow, Brown-headed Parrots and Rollers (another type of bird) also use them. This understanding provides a chance to explore just how much suitable areas are still available and determine the critical actions needed for their conservation.

In 2015, in partnership with the World Parrot Trust’s Africa Programme and with financial support from the Isdell Family Foundation and the British Ecological Society, range wide surveys were initiated. Starting in the core of their range in Zambia, a month-long survey expedition found that the lovebirds were largely restricted to protected areas, notably the Lower Zambezi National Park and the North and South Luangwa National Parks and had disappeared from much of the Zambezi valley area.

Detailed assessments of woodland structure revealed that Lilian’s lovebirds have very specific habitat requirements and are strongly associated with a type of woodland referred to as “Cathedral” Mopane. These are forests that have large Mopane trees that are widely spaced out. The roost/breeding cavities can be between 6 and 20 meters above the ground.

We suspect that areas suitable for breeding and roosting are those which have a sufficient number of natural cavities in close proximity to each other. These roosting/breeding sites are spread out in clusters across the woodlands. At each cluster there are 4 – 8 roosts; in the dry season up to 5 birds use one roost cavity, while in the wet (breeding) season most nests will have only two birds.

This work has led to two recently published papers describing their habitat requirements and the impact of disturbance by people and elephants on the woodland structure (see further reading sidebar on Page 21).
Sadly, these large trees are also the target for timber and charcoal production. Throughout our travels in Zambia we noticed these large Mopanes being cleared out by both legal loggers (with concession permits), and illegal loggers and charcoal burners. The methods that the illegal loggers used to clear trees were most worrying. We observed on many occasions the trees being burned at the root, which leaves no chance of any future coppicing (new growth).

After the findings in Zambia, we realized the importance of doing a general survey in the other countries where the species occurs (Mozambique & Zimbabwe), to better understand how much habitat is still available for the species. In 2018 surveys were initiated in Mozambique, targeting areas where they have been recorded in the past and it is thought suitable habitat still exists. As we had a better understanding of the birds and were confident of our model, we did not think we needed much time to locate the birds in Mozambique.

However, after four days of looking for the lovebirds, we saw nothing. Again, we observed large areas of Cathedral Mopane woodland that were cleared, with shrubs now growing in its place.

Much of this clearing was from legal concessions, and when illegal harvesting is added to this the results are most disturbing. Finally, on the fifth day we sighted our first lovebirds in the Salasha area in Mozambique in a habitat that was similar to where they occur in Malawi and in Zambia. The lovebirds were, interestingly, often seen in the busy fishing village coming down to the ground to feed. The area is also within a protected area, however the fishing villages are within the park. This lovebird population is possibly the only one that is living close to people.

A second sighting was along the Caborra Bossa dam where there have been historic sightings, but the area was found to be owned by a private fishing company and was difficult to explore. We are hoping to build partnerships with our Mozambique counterparts so that we can have access to this area and do some detailed surveys.

A re-connaisance was also made to Zimbabwe where a collaboration was formed with a local NGO. Surveys in Zimbabwe will commence in September 2019 meaning we will have covered the Lilian’s Lovebird’s full historical range. We already know that in Zimbabwe the lovebirds are restricted to protected areas as well (Mana Pools NP).

Data collected to date have been fed into the development of computer models being developed in collaboration with the University of Edinburgh Department of Geosciences. These models use satellite images of land cover to determine the distribution of suitable habitat both in the past and under future scenarios. Preliminary results already show clearly that across their range, Lilian’s Lovebirds are facing their biggest threat from habitat loss caused by both legal and illegal harvesting of Mopane woodland. Mopane is one of a few indigenous trees in this region that form natural cavities to host cavity dwellers. Thus the removal of large/old growth Mopane is surely threatening other species that are cavity dwellers.

The status of Lilian’s Lovebirds is much more critical than previously recognized and it is important that the governments of the four countries come together and agree on a plan to conserve this habitat. This year will see the start of a new long-term project to explore how the loss of natural nest-holes can be mitigated through the use of nest boxes. The initiative is funded by the International Foundation for Science and the World Parrot Trust, and will be the first of its kind for any lovebird species. Clusters of nest boxes will be installed in Malawi (and later possibly Zambia) to help establish new breeding areas. As well as boosting populations of Lilian’s lovebirds it will inform conservation approaches for other threatened lovebirds in the region including Black-checked Lovebirds.

Even though Lilian’s Lovebird populations are in danger from the continued clearing of their critical breeding and roosting trees, there are solutions that can be put into practice to help mitigate the threat. Ongoing work with governments and local partner organisations will see the species’ protection and hopefully, the recovery of their wild populations.

Upper left: The author and a ranger walk to a roost site. Lower left: Lunchtime in the field. Upper right: The team measures habitat in Mozambique. Lower right: Evidence of illegal logging. Photos © Upper left: Dirk Van del Abeele, others Hemant Tripathi.

Thank You to our Supporters

This project has involved a large number of collaborators who have been integral to its success including the Strunden Papageien Stiftung (SPS), Wildlife and Environmental Society of Malawi (WESM), Pamela and Neville Isdell and the Isdell Family Foundation; BirdLife Zambia, the University of KwaZulu Natal, The FitzPatrick Institute of African Vertebrate Biology at the University of Cape Town, Department of Geosciences at the University of Edinburgh, University of the Copperbelt, Museums of Malawi, Rufford Small Grants, BirdLife Zimbabwe, Mwambashi River Lodge, Munyamadzi Game Reserve, British Ecological Society, International Foundation for Science, Malawi University of Science and Technology.

Lilian’s Lovebird (Agapornis lilianae)

World population: unknown

IUCN Red List: Near Threatened

CITES: Appendix II

Further reading:


Appendix II

IUCN Red List: Near Threatened

Lilian’s Lovebird


Tripathi, H.G., Mzumara, M.R., Perrin, Colleen T. Downs. (2018) A re-connaisance was also made to Zimbabwe where a collaboration was formed with a local NGO. Surveys in Zimbabwe will commence in September 2019 meaning we will have covered the Lilian’s Lovebird’s full historical range. We already know that in Zimbabwe the lovebirds are restricted to protected areas as well (Mana Pools NP).

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