

Monitoring European Rollers in Sub-Saharan Africa

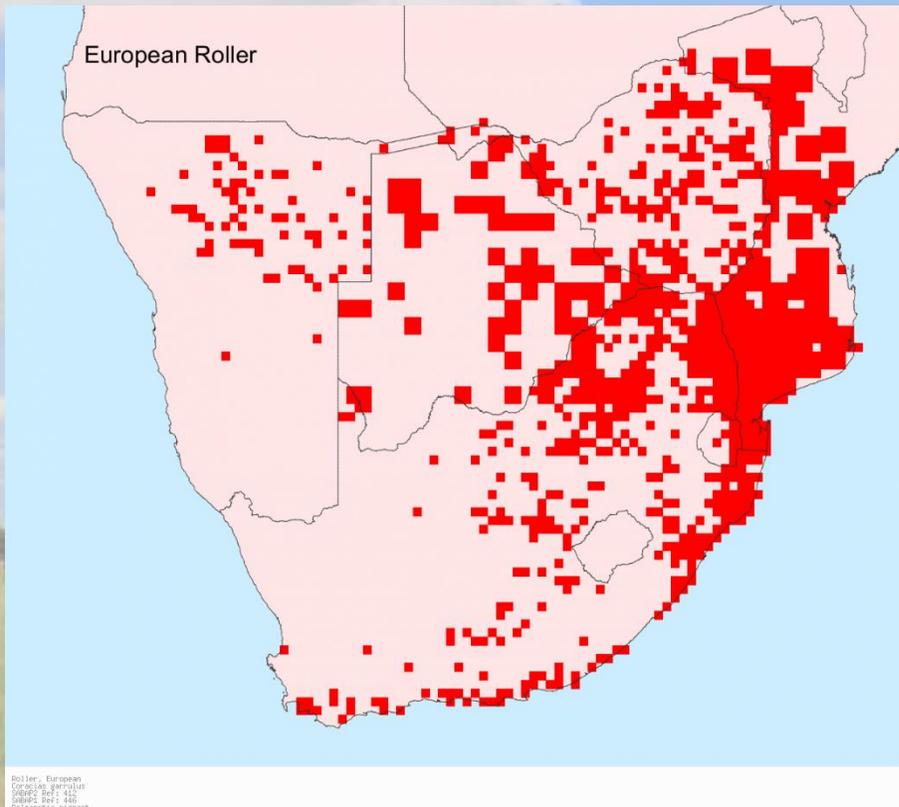
Linda van den Heever



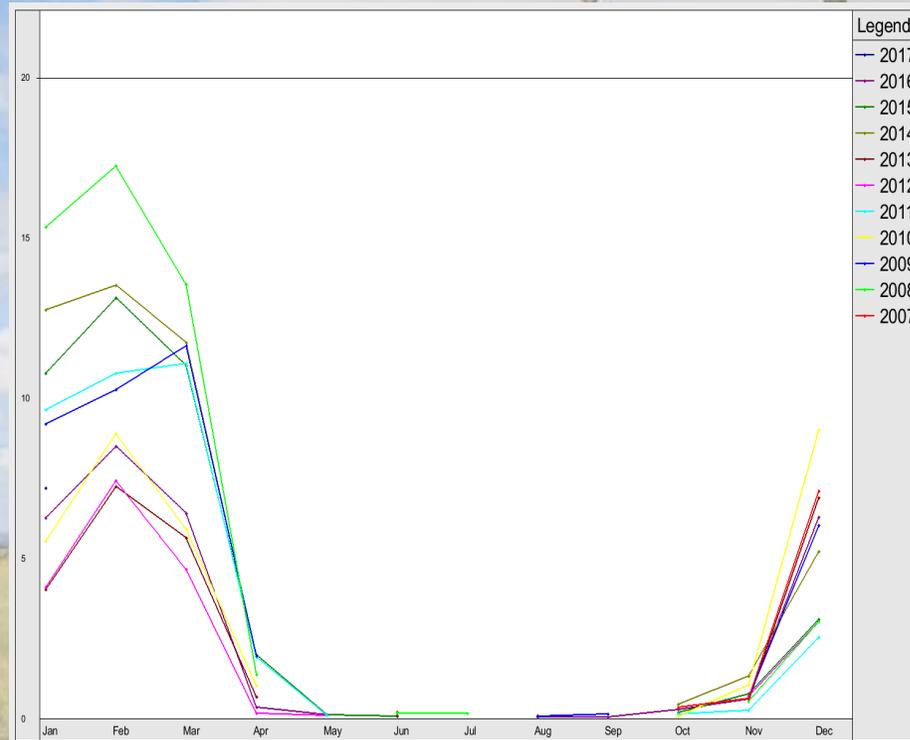
Current knowledge

Although research on European Rollers in sub-Saharan Africa is limited, there is not a complete knowledge gap, and a number of focussed studies have been conducted over the years through various research institutions.

Distribution of European Rollers in southern Africa, SABAP 2



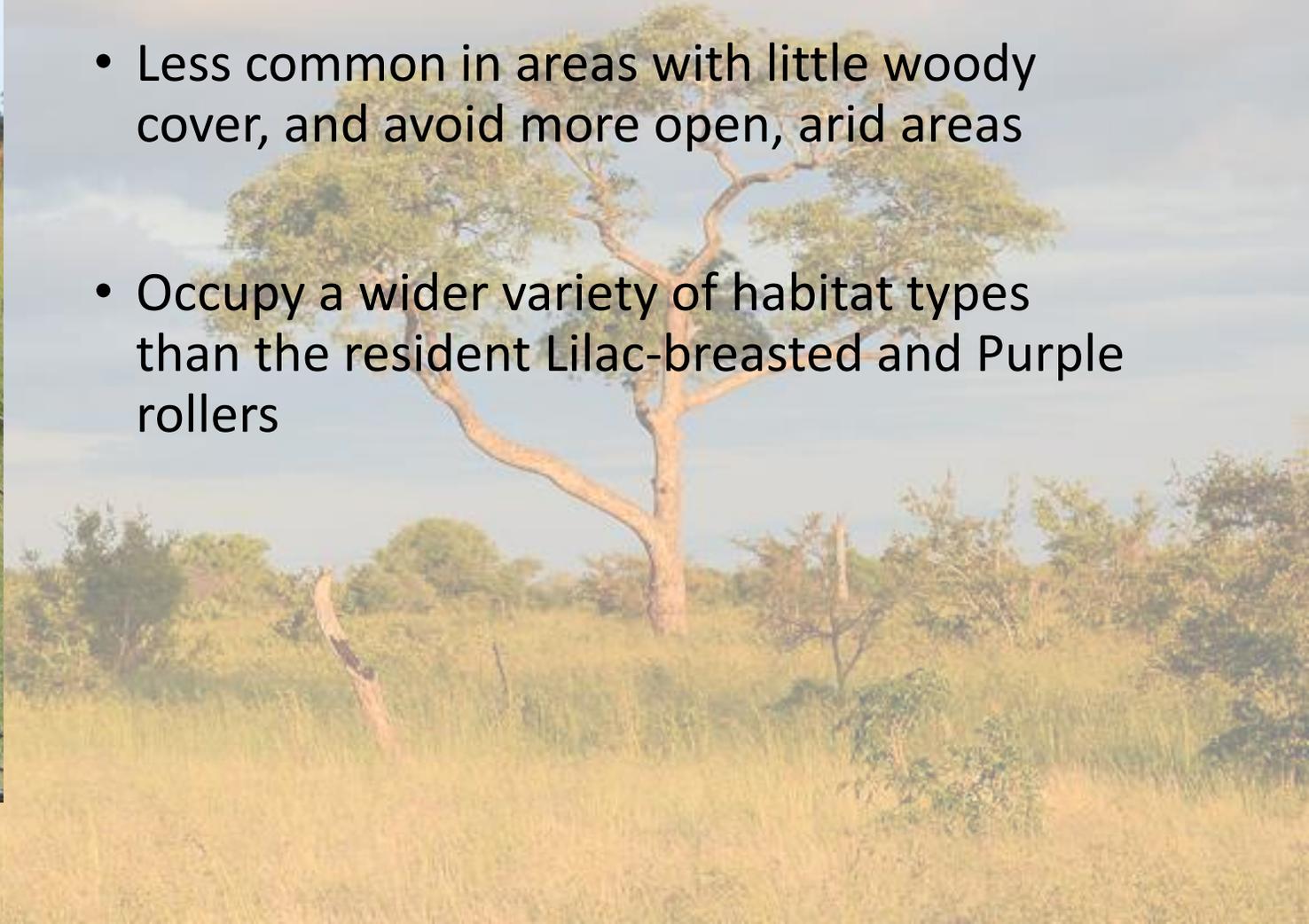
Reporting rates for European Rollers, SABAP 2



Habitat preference

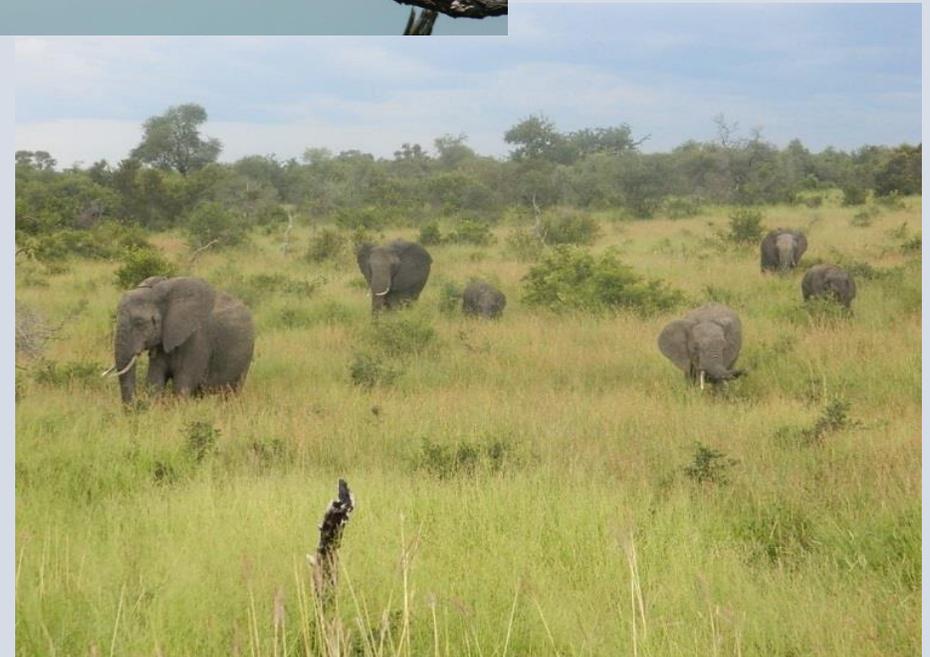


- Most common in open, broad-leaved and *Acacia* woodlands with grassy clearings
- Less common in areas with little woody cover, and avoid more open, arid areas
- Occupy a wider variety of habitat types than the resident Lilac-breasted and Purple rollers





Rollers share their preferred habitat with a wide variety of other bush dwellers, frequently enduring temperatures in excess of 40°C.





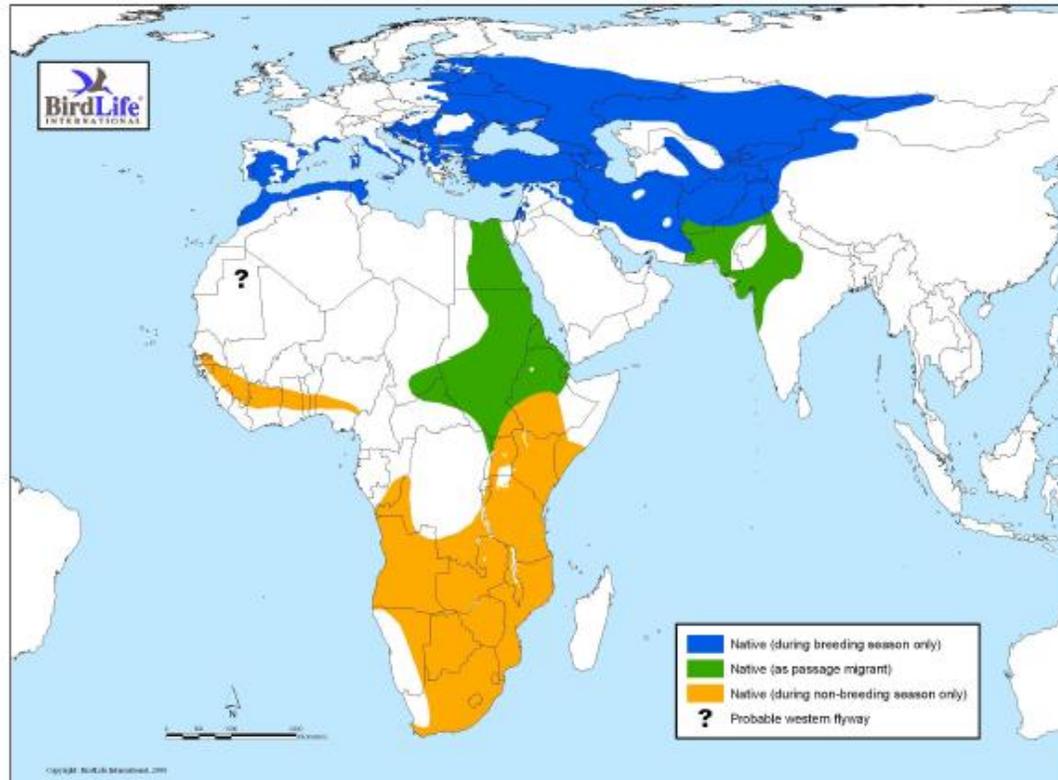
Foraging and food

- Sit-and-wait technique
- Aerial hawking
- Predominantly insects, including beetles, grasshoppers, locusts, crickets, termites, butterflies
- Also small invertebrates and small mammals such as young mice.

Movements

Map 1. The geographical distribution of the European Roller (BirdLife International 2008)

European Roller (*Coracias garrulus*) distribution



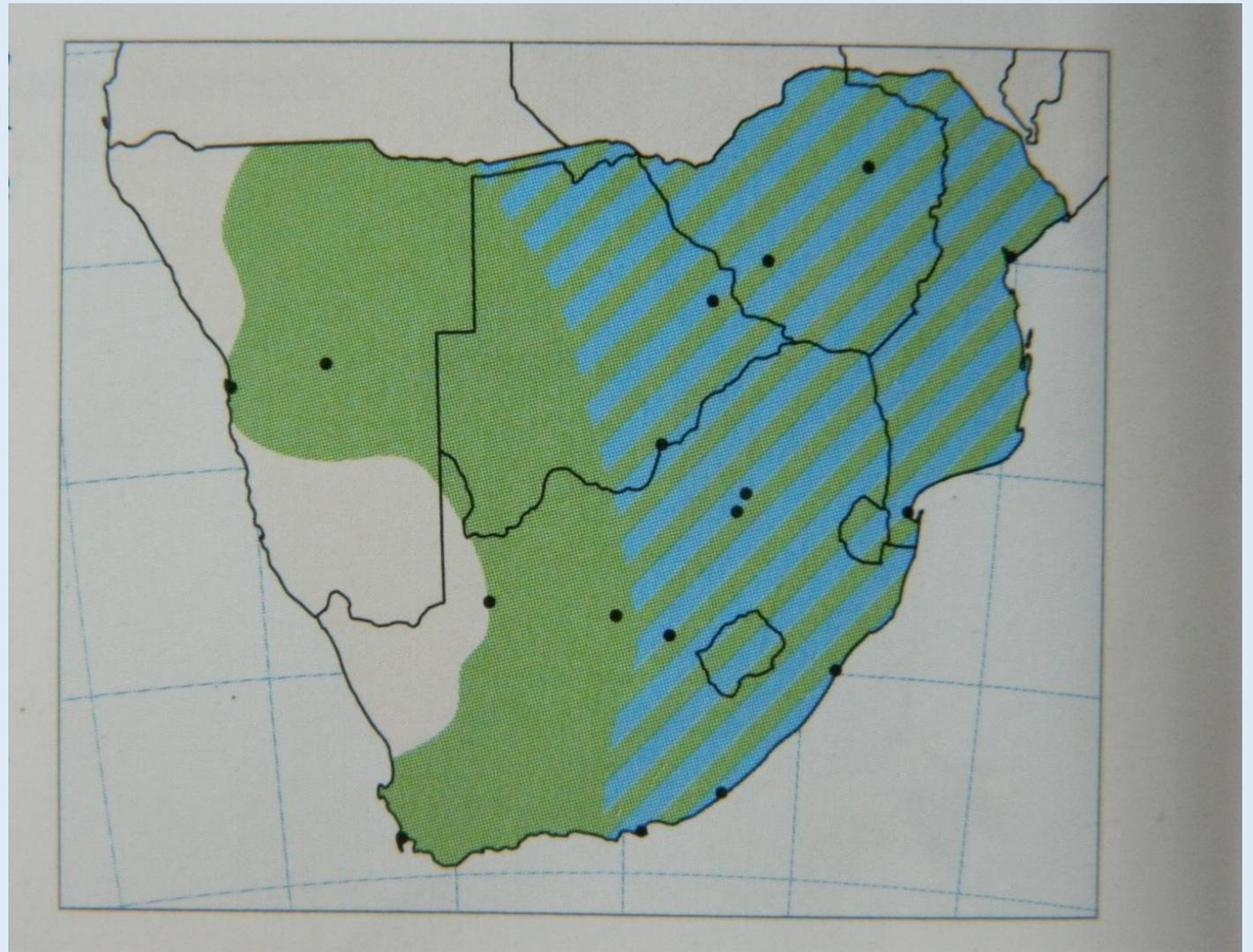
- Entire global population spend their non-breeding season in sub-Saharan Africa.
- BirdLife International map (2008). Satellite tracking and geologgers expanding knowledge:
 - stop-over sites,
 - migration routes followed by different populations,
 - non-breeding areas used – vital for informing conservation actions.
- Birds cross Mediterranean area in August / September, reach far north of southern Africa by October, South Africa from Late December/January. Numbers peak in February. Rapid departure during March/ April.



Coracias garrulus garrulus



Coracias garrulus semenowi

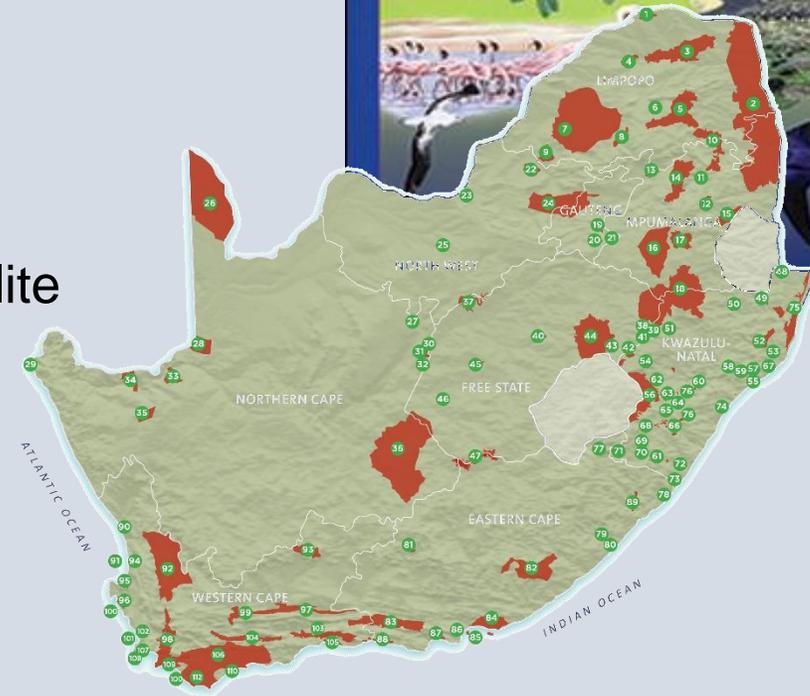
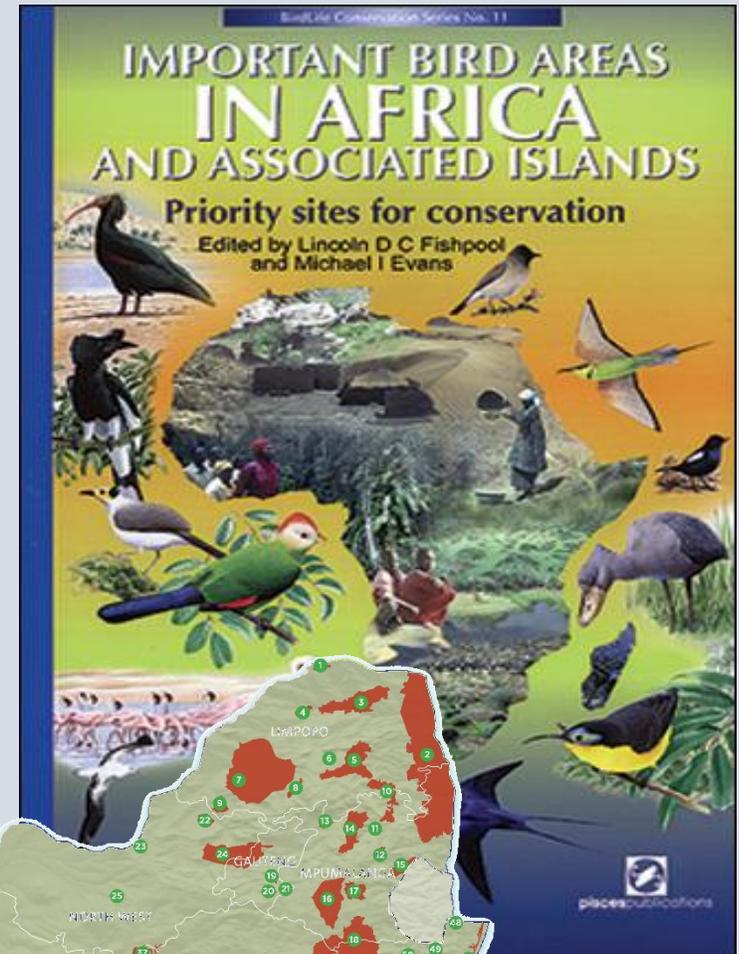


 *Coracias garrulus semenowi*

 *Coracias garrulous garrulus*

Important Bird and Biodiversity Areas (IBAs) in Africa

- Africa has a fairly well-developed network of Important Bird and Biodiversity Areas.
- Over 1230 IBAs are distributed across 58 countries, covering over 2 million km.
- Equivalent to 7% of regional land cover.
- Unfortunately over 44% of these have no legal protection.
- Flyway routes and key stop-over sites from satellite telemetry – overlay with IBA maps to ascertain whether sufficient protection exists.





January 2015, Kruger National Park



January 2016, Kruger National Park

Threats

- No significant threats have been documented conclusively.
- Habitat loss.
- Drought.
- Site fidelity is thought to be low.
- Long-term effects of global warming unknown.

Establishing a European Roller Monitoring programme in Africa

Information gaps:

- Population status
- Population trends over time
- Threats on migration routes and non-breeding areas
- Flyway routes followed by different populations and subspecies
- No long-term studies exist to monitor changes over time



Main aims

- Long-term **research and monitoring programme** within African range states in order to clarify the current population status of European Rollers and monitor long-term population trends.
- Identify and mitigate potential **threats** to the species along the migration routes and on the African non-breeding grounds.
- Identify the **main flyway routes** and vital stop-over sites and ascertain whether or not they fall within a protected area network.
- **Collaborate** with relevant local and international organisations in developing strategies to aid the conservation of the species in Africa.
- Draw up an **International Species Action Plan** for the European Roller on the African **non-breeding grounds**.
- Use the European Roller as a **flagship species** for promoting the monitoring and conservation of migrant birds in general.

Current monitoring in South Africa

- Established in South Africa in 2013.
- Bimonthly 100km transect monitored in the Kruger National Park.
- Densities of birds recorded will be used to estimate the population status of rollers in South Africa.
- Trends in population numbers over time will be tracked, which may be linked either to annual changes in weather patterns/rainfall, and more long-term to climate change.
- Habitat preferences are recorded.
- Con-specific Lilac-breasted and Purple Roller numbers are also monitored to gauge possible competition between species during the summer months.
- Results of past 4 years research is to be analysed after this season's monitoring.

Other possibilities

- MSc study:
 - Comparing SABAP1 and SABAP2, different ecozones, intraspecific competition.
- Birdlasser – Create “cause” focused on roller watch.
- Involving local bird clubs in monitoring all IBAs where rollers occur.
- Annual European Roller count day.

Conclusion

- Establishment of a long-term, active monitoring network in Africa will provide valuable information that could inform practical conservation actions, where necessary, on the non-breeding grounds.
- Closer collaboration with the European Roller conservation network on the breeding grounds will be hugely beneficial both in terms of sharing information and experience, and working together towards achieving common goals
- A sub-Saharan European Roller monitoring programme could contribute significantly towards the development of a flyway-scale action plan



Thank you

