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LONGEVITY AND RING WEAR IN SHORT-CLAWED LARKS *CERTHILAUDA CHUANA*

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Short-clawed Larks *Certhilauda chuana* are endemic to southern Africa. They have a disjunct distribution comprised of a large western population and a smaller, isolated eastern population (Herremans 1997). The former's stronghold is the rural areas of south-eastern Botswana and the adjacent North West Province of South Africa but scattered, localised populations are known from the extreme western Limpopo Province and the Northern Cape. The eastern population is by and large restricted to the Polokwane Plateau in the central Limpopo Province. Although the species is globally listed as Least Concern according to IUCN criteria, it is listed as Near-threatened in South Africa, mainly as a result of its highly localised distribution (Barnes 2000).

In an attempt to improve our knowledge of the species, I initiated a study of the breeding ecology of the eastern population in the Polokwane Nature Reserve in the early 2000's (Engelbrecht 2005). To define parental roles, investigate mate/site fidelity and dispersal, nestlings and adults were fitted with 3.0 mm aluminium rings as well as a unique set of colour rings for subsequent identification of individuals. Resightings and recaptures of some of these birds continue to improve our knowledge of the species and some are rewriting the record books. In this paper, I report on some noteworthy recaptures and resightings, and provide reasons why I believe aluminium rings are not suitable for larks.

To date, 91 Short-clawed Larks have been ringed in the Polokwane Nature Reserve. A summary of the noteworthy recaptures or resightings of Short-clawed Larks between 2002 and 2014 are provided in Table 1. The minimum age, i.e. elapsed time between primary ringing and recapture/resighting, is presented as y-m-d in the text.

Table 1. Selected recaptures/resightings of Short-clawed Larks *Certhilauda chuana* in the Polokwane Nature Reserve between 2002 and 2014.

Ring #	Sex	Age	Ringed	Retrap/ resighted	Minimum age (yy-mm-dd)	Distance (m)
BE16417	0	1	31-10-2003	26-03-2004	00-04-25	380
BE16426	3	1	03-03-2004	06-05-2004	00-02-23	0
BE16436	2	4	06-05-2004	02-11-2007	03-05-28	640
BB86319	2	4	19-11-2011	30-11-2014	03-00-11	0
BE16474 BB86324 BC09975	1	4	24-05-2005	30-11-2014	09-06-06	0

BE16417: This bird was one in a clutch of two that hatched on 22 October 2003. It was its parents' first breeding attempt of the season and they successfully fledged another three siblings during the 2003/04 breeding season. **BE16417** remained in its natal territory throughout summer and was retrapped 380 m from its nest on 26 March 2004. As there was another territory between the recapture site and its natal territory, I believe it may have started dispersing from its natal territory when it was recaptured. At the time of capture, the bird was moulting its primaries with P6 about half grown and it had completed moult of the body feathers into its adult plumage. This complete post-fledging moult is typical of larks and, although unusual amongst passerines, it is not unique (Donald 2004; De Juana *et al.* 2004). The post-fledging moult starts about 4–6 weeks after fledging so this recapture provided valuable information about the duration of the post-fledging moult of larks. The wing length upon recapture was 88 mm, suggesting the bird would likely have been a female (Engelbrecht 2005).

BE16426: This bird was one of a clutch of three, of which two survived to fledge. It was recaptured nearly three months later in its natal territory at which time its post-fledging body moult was nearly

completed but primary moult hadn't commenced yet. Upon recapture this bird was heavily infested with ticks - I counted 12 on its head!

BE16436: A female ringed as an adult and recaptured nearly three and a half years later just over 600 m from the first capture site in the territory of another male (Fig. 1A & B). Short-clawed Larks are monogamous during the breeding season but the pair bond dissolves after the breeding season resulting in females dispersing from the territory during the non-breeding season (Engelbrecht 2005). Females then disperse over varying distances. One female I followed closely simply moved to the neighbouring territory in the following breeding season. These and other recapture records of females not mentioned here, support the findings of Herremans (1997) and Engelbrecht (2005) that Short-clawed Larks have limited dispersal abilities and that females probably only disperse over relatively short distances over successive years.

BB86319: This recapture record is included as it is the only record of a female returning to a territory she has bred in before. This female was first captured as a breeding female during the 2011/12 breeding season. In this season she was mated with the male discussed below and together they fledged five nestlings that season. She was then replaced by another female in the 2012/13 breeding seasons, but returned to the same territory in the 2013/14 breeding season when the pair once again fledged at least four nestlings. She was once again controlled on 30 November 2014 in the same territory while attending a nest with a single nestling. This was the pair's third breeding attempt of the 2014/15 breeding season. The previous two attempts of the 2014/15 breeding season failed during the incubation period. This is the first record of a female Short-clawed Lark remaining in the same territory over two consecutive breeding seasons.

BE16474, BB86324 & BC09975: All these rings belong to the same individual but as a result of excessive wear the old rings were removed and replaced with new rings. To avoid confusion with the three ring numbers in the text that follows, I will refer to this bird as Mokgalaje, which is the Tswana word for "old man". Mokgalaje was first ringed as **BE16474** on 24 May 2005 as an adult male in the south-eastern corner of the Polokwane Nature Reserve (Fig. 1C).

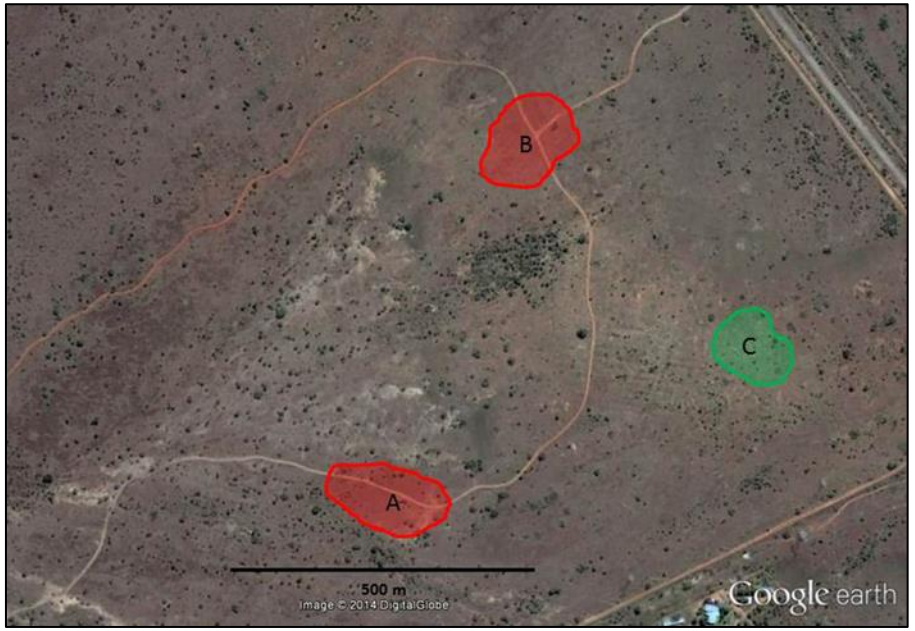

Fig. 1.A. Territory occupied by a female Short-clawed Lark (SAFRING number BE16436) in the 2003/04 breeding season; **B.** Territory occupied by the same female in the 2007/08 breeding season; **C.** Territory occupied by Mokgalaje (see text) from the 2004/05 breeding season until the present.

Given the timing of the capture, one can safely assume that Mokgalaje was the resident male in this territory during the 2004/05 breeding season. As this territory was occupied by another male (**BE16409**) in the 2003/04 breeding season and Short-clawed Lark males defend year-round territories over successive years (Engelbrecht 2005), it is likely that the 2004/05 breeding season was the first year Mokgalaje occupied and defended a territory.

Fig. 2. Mokgalaje, a male Short-clawed Lark in the Polokwane Nature Reserve when he was controlled in 2011. On 30 November 2014 this bird was still in its territory and is now possibly the oldest African lark on record.

Although he was resighted several times after his initial capture, I controlled it again on 27 November 2011, 6y-6m-5d after its first capture (Fig. 2). At the time this represented the second oldest (i.e. minimum age) record of a lark in the SAFRING database. The ring was badly worn but the inscription was still legible and I decided to replace the worn ring with **BB86324**. In the 2011/12, 2013/14 and 2014/15 breeding seasons, Mokgalaje and **BB86319** mentioned above were a breeding pair (Fig. 3). Once again, Mokgalaje was resighted a few times after this ring was fitted until I controlled it once again on 26 January 2014 while doing parental care studies in his territory. After only 2y-2m-0d, this ring was already showing unacceptable signs of wear (Fig. 4). As a precautionary measure I decided to remove this ring as well and replaced it with ring number **BC09975**. On this day the time elapsed between Mokgalaje's initial control on 24 May 2005 and 26 January 2014 was 8y-8m-6d. This meant Mokgalaje was now the lark with the greatest minimum age in the SAFRING database and as far as can be established of an African lark, beating the previous record of a Dune Lark set between 1993 and 2000 (SAFRING number **F34468**: 7y-2m-29d). Mokgalaje was again controlled on 30 November 2014: 9y-6m-6d after he was first ringed! This places Mokgalaje amongst one of the oldest larks on record in the world.

Fig. 3. Mokgalaje (right) and his mate (SAFRING number BB86319) of the 2011/12 and 2013/14 breeding seasons photographed here at one of their nests (Polokwane Nature Reserve, November 2011).

The oldest lark on record I could trace is that of a Crested Lark *Galerida cristata* in Germany found dead 11y-7m after it was first ringed (Fransson *et al.* 2010). The EURING database has one other lark older than Mokgalaje: a Skylark *Alauda arvensis* from the Czech Republic (10y-0m) (Fransson *et al.* 2010). This means that Mokgalaje may well be the third oldest lark on record in the world.

Fig. 4. At just over 2 years old, this aluminium ring already showed wear.

It is evident from the above that ring wear can be considerable in larks, even over a relatively short period. I have a record of another male Short-clawed Lark I recaptured in 2012 but the ring was completely worn and polished and the inscription was illegible. Unfortunately valuable recapture data was lost by not being able to "track" this bird. The excessive wear shown by aluminium rings on Short-clawed Larks, and perhaps other larks, is not surprising as larks forage on the ground and the ring is subjected to abrasion by the substrate and vegetation. Furthermore, it is now evident that larks can potentially live much longer than the generally accepted 4–6 years and ring wear on soft material such as aluminium may become a problem as pointed out above. I must add that not all aluminium rings show such rapid wear. Many of the older aluminium rings are still clearly readable 6–8 years after the bird was ringed. I find the more recent batches of aluminium rings are considerably softer than earlier aluminium rings and in my opinion of inferior quality.Ringers should therefore carefully consider the type of ring used when ringing larks and other ground-dwelling birds such as pipits and cisticolas. Aluminium rings are recommended and generally used by ringers as it is considerably cheaper compared to the more durable stainless steel rings. Ironically, the cheaper cost of the aluminium rings may actually come at a price as we could lose valuable data such as mentioned above through the use of rings that will fail to stand the test of time. As Nuttal (2001) states: "If possible, rather invest in a longer-lasting ring material, which ultimately will pay higher dividends from the point of view of longer-term research objectives". In conclusion, I urge ringers to consider using a more durable ring for relatively long-lived, mainly ground-living species such as larks and pipits.

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