The successful release of wild-caught birds used in laboratory experiments

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Researchers on occasion bring wild caught birds into the laboratory to be used in various studies. Some of these studies may be non-invasive (Downs 2000; Symes & Downs 2001; Downs & Brookes in prep.) while others use invasive techniques to examine various aspects of bird physiology (Downs & Brown in press). Once the research is completed, birds are either released or euthanased.

Euthanasia has been recognised as drawing more and more public attention, and should only be used as a last alternative (Beaver *et al.* 2001). Releasing the birds at the site of capture is obviously the preferred option, but very little data exists on the success of these releases and the integration of these birds back into the natural populations from where they came.

Other problems with releasing captive held birds include the possibility of introducing diseases into wild populations, territoriality disputes, timing of release with respect to the local movement patterns of the species, food availability, and others.

Lotz & Underhill (1998) recorded a single recapture of a Lesser Doublecollared Sunbird *Nectarina chalybea* held in captivity for a year. The bird was recaptured 3 months later and had travelled a distance of 25 km. They were uncertain as to the exact capture site of each of the13 birds released, so all birds were released at a single site. Their record is significant as it seems to be the first report of a laboratory held bird successfully being released in South Africa.

Over the course of the last seven years, various species of birds have been brought into the Animal House at the School of Botany and Zoology, University of Natal. All birds have been housed under permit of the KwaZulu-Natal Wildlife Services. All experimental protocols were approved by the Animal Ethics sub-committee of the University of Natal.

Between December 1993 and June 1996, various species of Sunbirds (Malachites *Nectarina famosa*, Whitebellied *Nectarina tala-*

Table 1. Details of re-sightings of laboratory housed birds released back into the wild.

Ring number	Species	Date ringed	No. of sightings	Most recent sighting	Time lapsed	Distance (km)
CV06775	Gurney's Sugarbird	12 Sep 1994	2	2 May 1995	0y 7m 20d	0
4A07225	Speckled Mousebird	24 May 1997	1*	25 Oct 1997	0y 5m 1d	2
GA05926	Cape White-eye	23 Aug 2000	1*	18 Dec 2000	0y 3m 26d	135
GA05942	Cape White-eye	25 Aug 2000	8	27 Dec 2000	0y 4m 3d	0
GA05931	Cape White-eye	24 Aug 2000	2	11 Nov 2000	0y 2m 18d	0
GA05937	Cape White-eye	24 Aug 2000	1	13 Sep 2000	0y 0m 20d	0
GA05940	Cape White-eye	24 Aug 2000	1	22 Sep 2000	0y 0m 29d	0
GA05941	Cape White-eye	24 Aug 2000	1	22 Sep 2000	0y 0m 29d	0

* denotes a bird recovered

tala, Black *Nectarina amethystina*), and Gurney's Sugarbirds *Promerops gurneyi* were utilised in experiments examining the nectar preferences of southern African Sunbirds (Downs 1997; Downs 2000; Mbatha & Downs in press). In total, 13 sunbirds and 2 sugarbirds were released after being held for up to eight months. Twenty-one Bronze Mannikins *Spermestes cululatus* were released in May 1995 after being held for a few months. In 1997 nine Speckled Mousebirds *Colius striatus* were released after being held for six months in a study of fruit size preference, feeding method, energy intake and handling time (Symes & Downs 2001). During the summer of 1999/2000, six male Malachite Sunbirds were housed in a study of thermal biology. Mini-transmitters were surgically-inserted and later removed (Downs & Brown in press; Downs in press). During 2000, 20 Cape White-eyes *Zosterops pallidus* were housed for a study of food preference, digestive efficiency and handling times (Downs & Brookes in prep).

All birds were released, mostly at their capture site, upon completion of the studies. Six of the Cape White-eyes were colour ringed upon release in order to facilitate sightings at the release site. Eight birds of various species were resighted and/or recovered after release (Table 1).

The first record of a released bird's success was Gurney's Sugarbird CV06775 which was resighted over 7 months after release at the site of release. This bird had been held in captivity for 8 months and 1 day. The bird was seen at the site of release and was in good health. Speckled Mousebird 4A07225 was released 2 km away from the site of capture, yet was recovered in the yard next door to the site of capture 5 months and 1 day after release. The most interesting recovery so far is that of Cape White-eye GA05926 which was released at the site of capture in Pietermaritzburg. This bird was recovered 3 months and 26 days later in Ladysmith, a direct distance of 135 km. This is to date the 3rd furthest movement recorded for the species (SAFRING).

A total of 73 birds of eight species have been released since 1994. Of these, 11% have so far been sighted or recovered. The monitoring of two sites where eight Cape White-eyes were released yielded resightings on six of these birds, ranging from 20 days to over 4 months. We feel this very high percentage, along with the excellent condition of most of the birds, justifies the release of birds utilised in laboratory experiments. We recommend more researchers release birds when studies are complete, and suggest that some sort of follow up is needed to assess the re-integration of these birds into the natural populations.

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