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DOES HALDANE'S RULE APPLY TO HYBRID CUT-THROAT X RED-HEADED FINCHES?

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Interspecific breeding is a relatively common phenomenon in the family Estrildidae, sometimes resulting in fertile offspring (Payne 2010). Although the majority of records are from birds in captivity, there are some records of interspecific hybrids in natural populations. One such example is the somewhat enigmatic Cut-throat Finch *Amadina fasciata* x Red-headed Finch *Amadina erythrocephala* hybrid. Townsley and Townsley (2007) reported a male hybrid in their garden in Gaborone in 2007. In response to these authors' sighting, Tarboton (2007) mentions at least three sightings of these hybrids (all males) between 1995 and 2007, and suggested that hybrids of this species pair may be more common than reported in the literature. In addition to these records, the SAFRING database has a single record of a male hybrid ringed by Neil Thomson on 10 April 2009 north of Tsumeb in Namibia.

On Saturday 9 August 2014, we observed a male Cut-throat x Red-headed Finch hybrid at a feeder in our garden in Polokwane (S23°53', E29°28'). The bird had the typical red throat-band of a male Cut-throat Finch, but it also had some red on the head which is diagnostic of Red-headed Finch males (Fig 1). The pale, scalloped underparts, pale edges to the coverts and reduced barring on its back resembled that of the Red-headed Finch (Fig 2). It had the

Fig 1 - A male Cut-throat x Red-headed Finch hybrid. (Polokwane, 9 August 2014).

chestnut belly and well-developed barring on the upper tail coverts typical of the Cut-throat Finch (Fig 3). Although its bill did not have the "Roman nose" shape of Red-headed Finches, it was noticeably heavier than that of Cut-throat Finches, a feature also alluded to by Tarboton (2007).

Since this initial sighting, we have observed hybrid males on at least three different occasions (27 September 2014, 4 October 2014 and 19 October 2014), all resembling the one described above. It is interesting that all wild hybrids of these two species reported to date were males. This raises the question whether hybrid females slip underneath the radar by being recorded as "pure" Cut-throat or Red-headed Finches? It is not surprising that the more distinctive hybrid

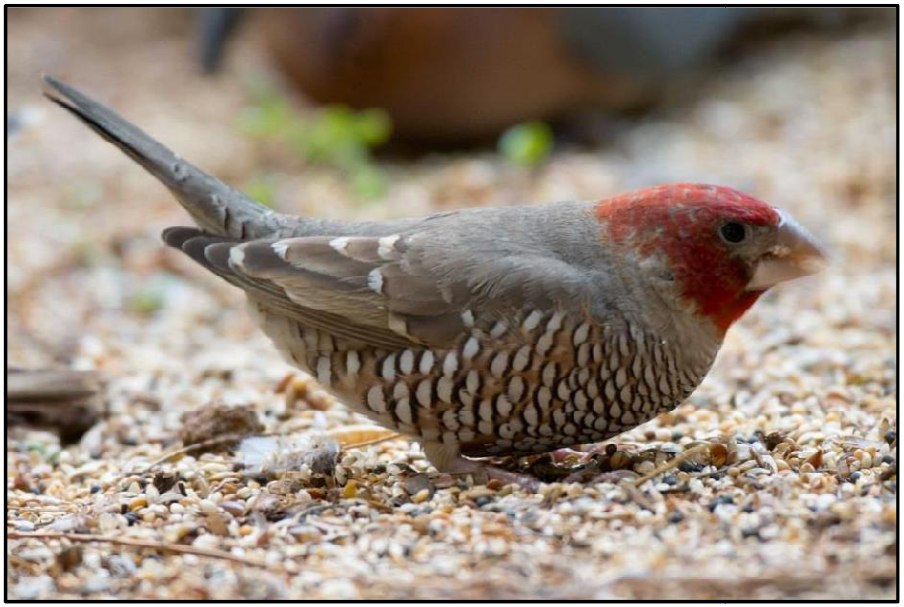

Fig 2 - A male Red-headed Finch *Amadina erythrocephala*. (Polokwane, August 2014).

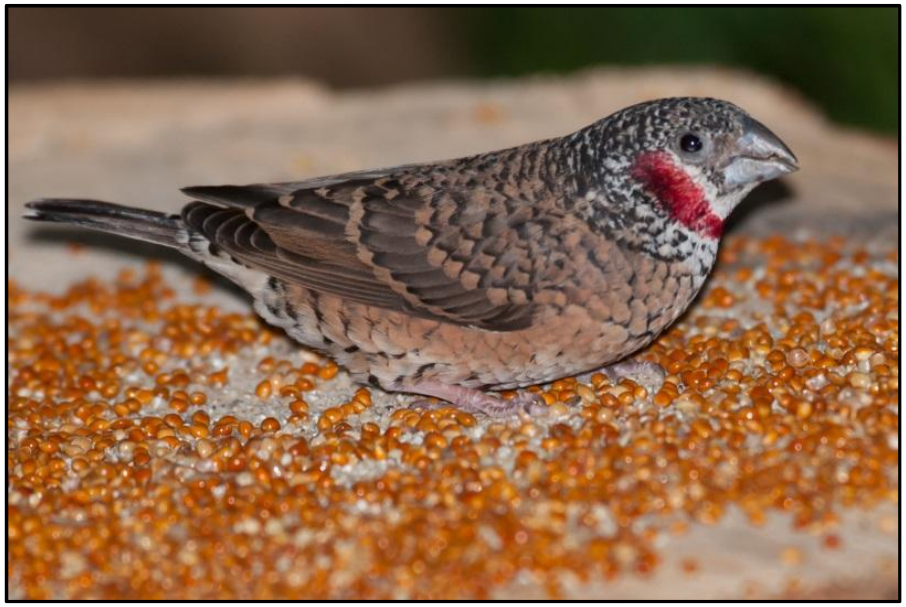

Fig 3 - A male Cut-throat Finch *Amadina fasciata.* (Polokwane, August 2014).

males are easier to notice than the much drabber females. Although there are clear differences with regard to the plumage features of females of the two species, it may be less evident in a hybrid. This may explain the absence of records of female hybrids of this species pair. We certainly have not seen any suspicious looking females at our feeder, but we admit that noticing a hybrid female between 20–30 *Amadina* finches at a feeder may be tricky.

Another possible reason for the apparent absence or rarity of female hybrids of this species pair may be attributed to Haldane's Rule (Haldane 1922). This rule states: "When in the offspring of two different animal races [species] one sex is absent, rare, or sterile, that sex is the heterozygous [heterogametic] sex." According to Haldane's Rule female hybrid birds (i.e. the heterogametic sex) generally exhibit lower viability and fertility and are therefore less likely to breed compared to male hybrids. It is therefore possible that the apparent absence/rarity of female hybrids of this species pair in natural populations may be due to lower survival of the females. Ironically, the answer may be provided by bird breeders who have these two species in captivity as they may shed light on what hybrid females look like, and whether hybrid females are fertile or have lower viability.

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