

Table S1: Mass-specific values for resting metabolic rate (RMR) and evaporative water loss (EWL) related to thermoregulation at the air temperature ( $T_a$ ) range we tested African cuckoo (*Cuculus gularis*; cuckoo), lilac-breasted roller (*Coracias caudatus*; roller), and Burchell's starling (*Lamprotornis australis*; starling). Minimum values represent lowest value for each individual at  $T_a < 35^\circ\text{C}$ , or the upper critical limit of thermoneutrality ( $T_{uc}$ ) for each species. Maximum values were obtained at the highest  $T_a$  tested; when  $n < 3$ , we also show average values at the second highest  $T_a$  tested. We also indicate mean values for the highest  $T_a$  ( $n \geq 3$ ), i.e.  $T_a = 46^\circ\text{C}$ , shared by the three species.

<b>Physiological variable</b>	<b>Cuckoo</b>	<b>Roller</b>	<b>starling</b>
<i>Resting metabolic rate (RMR)</i>			
Minimum RMR (mW g <sup>-1</sup> )	5.85 ± 1.79 (5)	8.91 ± 1.11 (6)	10.76 ± 1.98 (5)
Maximum RMR (mW g <sup>-1</sup> )	25.37 (1) 8.62 (1)	10.55 ± 3.61 (3) 11.32 (2)	14.15 ± 3.45 (3) 16.39 (2)
<i>Evaporative water loss (EWL)</i>			
Minimum EWL (mg g <sup>-1</sup> h <sup>-1</sup> )	4.45 ± 1.45 (6)	8.28 ± 2.82 (6)	8.92 ± 5.67 (5)
EWL slope (mg g <sup>-1</sup> h <sup>-1</sup> °C <sup>-1</sup> )	2.10	4.03	2.07
Maximum EWL (mg g <sup>-1</sup> h <sup>-1</sup> )	30.09 (1) 27.14 (1)	52.91 ± 8.95 (3) 57.36 (	30.19 ± 3.36 (3) 42.41 (2)