

SHORT TERM REHABILITATION OF A WILD EUROPEAN BEE-EATER

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In early September 2006, a group of weak and disoriented European bee-eaters (*Merops apiaster*) were observed sitting on the ground (Fig 1) at the Al Wabra Wildlife Preservation (AWWP) following an unexpected thunderstorm. The birds flew off as they were disturbed, however, the following morning a single bird was found in the same place looking weak and unable to fly. It was captured and handed in to the Veterinary Department at AWWP.

The European bee-eater is a migratory bird in Qatar. They breed in Europe- mainly in the south, but breeding colonies have been observed as far north as southern Scandinavia. They are excellent flyers catching insects on the wing and even swooping to take water in flight. The nest is typically excavated in a sand bank or soft limestone cliff by the breeding pair. Bee-eaters are heat loving birds that often spend hours sunning themselves in the morning before they start hunting insects (del Hoyo et al. 2001).

Most wild birds that are easily captured from the ground are often suffering from dehydration, hypothermia and hypoglycaemia (Asterino 1996). This was evidently the case with this bee-eater which on examination was found to be fatigued, able to hop but unable to fly. No signs of trauma or infection were apparent and the bird weighed 44g, which is the lower end of the range of 44 – 78 grams for the species (del Hoyo et al. 2001). Based on palpation the body-condition seemed fair to average. The bird was showing immature plumage, with reduced colour intensity and worn primary and tail feathers. The faeces were very dark with traces of blood - a sign of short term starvation in small birds with a high metabolism (Dorrestein 2000).

Our hypothesis is that the bird found at Al Wabra was a young bird, easily recognized by the irregular green mottled colours on the upper side, on migration towards southern tropical Africa where the species spend the winter. We also suspect that it had been travelling with other young birds and perhaps some adults when they where caught in the thunderstorm. The high metabolism of these insect-eating birds predisposed this young bee-eater to hypothermia with resulting hypoglycaemia and possibly dehydration as it was unable to feed or drink on the ground. The following morning the weak bird quickly became exhausted in an attempt to fly and was subsequently found by personnel at Al Wabra.

In an effort to correct the above-mentioned deficits, a total volume of 1.5 ml of a warmed fluid mixture was injected subcutaneously to provide energy, electrolytes and correct acidosis. The fluid mixture contained equal parts of glucose 5%, Ringer's Lactate and amino acid (VOLAMIN® – Merial GmbH, D-85399 Hallbergmoos, Germany) Bee-eaters ingest high energy prey items in the form of insects (Fry 1984) and due to their preferred diet, Bee-eaters have higher blood glucose values than other Coraciiformes (Dutton 2003). Consequently, they could be expected to suffer from hypoglycaemia more profoundly than other species. In view of this an additional 2ml volume of glucose 5% infusion was fed orally to the bird using a syringe. Enrofloxacin antibiotic (Baytril 2.5% - Bayer) was injected subcutaneously once daily to counter infection. The bird was initially kept in a smaller padded ventilated box and subsequently transferred to a suspended mesh cage that was exposed to sunlight. Since ambient day temperatures were more than 40 degrees, artificial means of heating the bird were not used.

An hour after fluid therapy a commercial bird feed ("Neonate Formula®"-Harrisons Bird Foods, USA) containing 26% crude protein and 14% crude fat was mixed, at about a ratio of 40:1 with water, to form a thick paste that was heated to approximately 40 degrees before feeding. 2 ml of this paste was administered orally with a plastic syringe with a 4.5 cm long soft silicon tube attached. The idea was to provide balanced elemental foods to minimise energy spent on digestion and absorption. This formula was fed two more times in the day at intervals of 2-3 hours. In spite of offering mealworms and water *ad libitum* in the cage, the bird showed little inclination to eat on its own. Therefore, 2-3 mealworms were hand fed along with the Harrison's formula and water was given directly. Efforts were made to stimulate the bird by handling and touching the throat.

By the first evening the bird showed signs of improvement and was attempting to fly. The next morning, the bird was found to be much more energetic, showing greatly improved escape reflexes. A group of bee-eaters was observed flying around the farm and a decision was made to release the bird in a large room and allow it to fly away if it was able to. A final feeding of the formula orally together with mealworms and subcutaneous injections of the fluid mix and antibiotic were given. The same morning after a few hours of exposure to sunlight, the bird was taken out of its cage and allowed to fly. The bee-eater showed perfect coordination, avoiding obstacles in the room as it flew out of the door and into the distance. For us at Al Wabra it was truly a small but colourful success story.



Fig.1: Group of European bee-eaters (*Merops apiaster*). (© Catrin Hammer)

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Fig.2: Close up look to a young European bee-eater (*Merops apiaster*). (©Catrin Hammer)