

Prophylaxis and veterinary cases in captive breeding for the reintroduction of lesser kestrels (*Falco naumanni*) in Bulgaria

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Introduction

With the return of the lesser kestrel (*Falco naumanni*) as a nesting species in Bulgaria, the cases of injured individuals for one reason or another have become more frequent. In order for the lesser kestrels to be released, they need to undergo proper medical treatment. This requires the veterinary specialists to have knowledge of the conditions under which the animals are raised – the captive breeding programme, their habits, feeding preferences, physiology and anatomy. On the other hand, one must be familiar with operating techniques and medications in order to be able to properly manage the animals' condition.

Methods

When performing an examination of a lesser kestrel, a series of actions were followed in order to detect any deviations from the normal. During 2009-2022, the prophylactic examination involved checking the bird's feathers for breakage – they were placed in specific vests on purpose (photo below), and not in transportation boxes. Inspected were the feet for pododermatitis and overgrown talons. The eyes were checked for plaques and corneal disorders, and the beak - for overgrowth or cracking. The oral cavity was inspected for plaques and foreign objects.

In the case of broken feathers, they were removed in order to stimulate the growth of new ones. This was accompanied by the application of an anti-inflammatory agent (Dexamethasone). In case of pododermatitis, an incision was made and subsequent washing was done with NaCl, accompanied by the local application of an antibiotic (Tetracycline), in addition to the application of an anti-inflammatory agent. In the case of overgrown talons, trimming was done with special cutters and filing with rounded and flat files. Enrofloxacin and vitamins were applied topically for eye inflammation. In cases of distortion, growth or breakage of the beak, coping was performed using specific files and a mini drill with special tips for shaping and straightening the beak. In the presence of plaques in the oral cavity, Granofurin was applied locally in combination with Metronidazole and fluid therapy. When kestrels came in the Wildlife Rehabilitation and Breeding Centre (WRBC) – Green Balkans, they were always treated prophylactically for endo- and ectoparasites.

Activities promoting the health of lesser kestrels breeding in the WRBC included cleaning and disinfection of cages, replacement of artificial grass and repair of perches during the prophylactic examinations (twice a year). Giving chicken necks as part of the menu contributed to the natural filing of the birds' beaks. Yearly, fecal samples were taken and the lesser kestrel breeding group was tested for parasites.



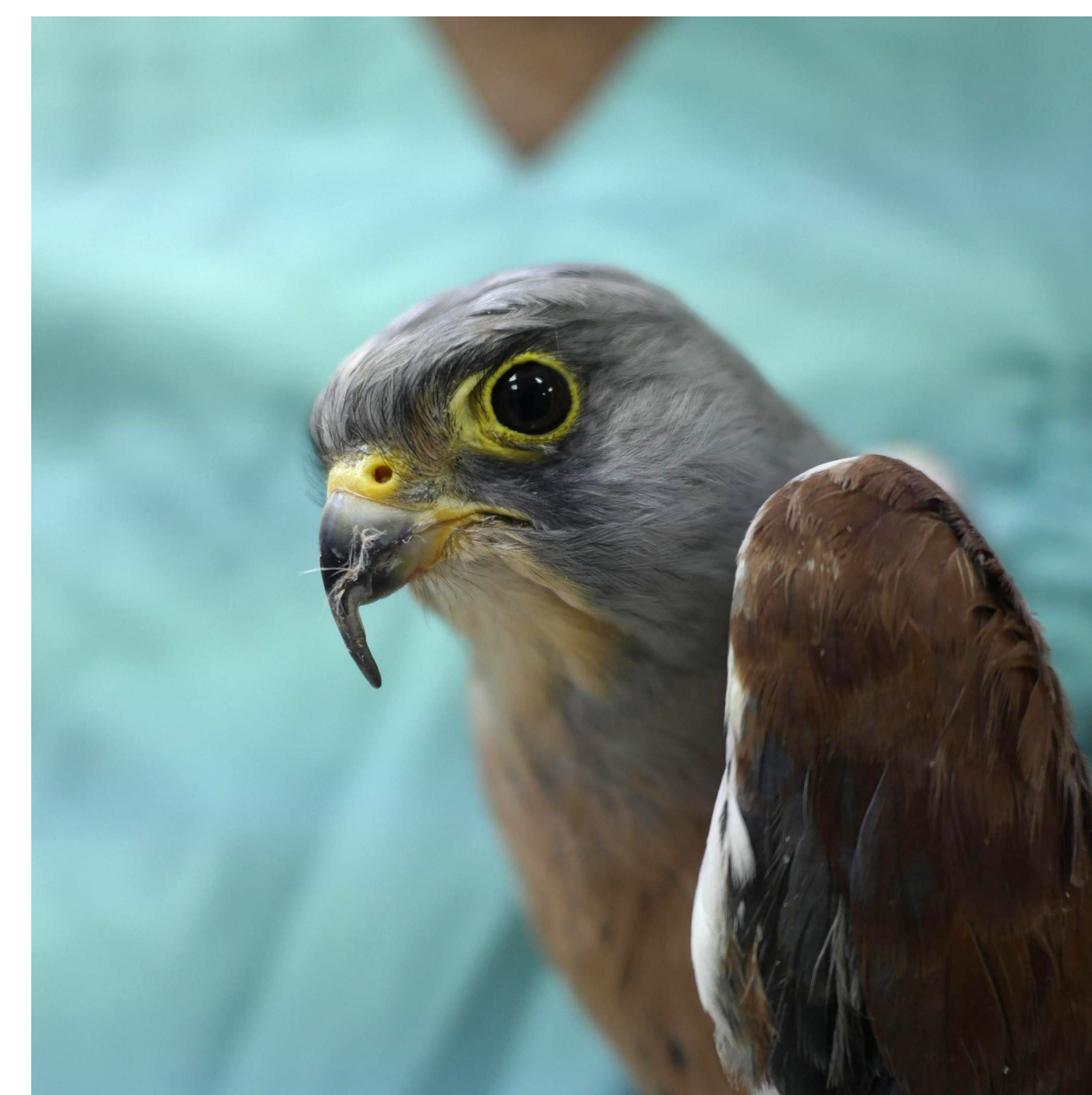
Results & Conclusions

Causes of death of wild lesser kestrels (<i>Falco naumanni</i>)	N
Fallen in engine oil	1
Electrocution	1
Fights with little owls (<i>Athene noctua</i>)	8
Fights with a goshawks (<i>Accipiter gentilis</i>)	3
Fights between female birds for a nesting site	6

Causes of death of captive lesser kestrels (<i>Falco naumanni</i>)	N
Fights between female birds for a nesting site	2
Trapping in under-roof constructions	6

Establishing causes of death and illness in both wild and captive lesser kestrels contributed to the knowledge of the species and to improving its management in Bulgaria. The applied methods for veterinary prophylaxis have led to a low mortality rate due to illnesses and parasites. Recorded were cases of lack of nutrition components – low manganese level which led to distortion of the feet of some hatchlings (n=6), and low selenium level which has led to muscle weakness of others (n=4). Both have been ratified with the use of food supplements. There have been cases of leg amputation due to necrosis from getting tangled in loose artificial grass (n=3). The prophylactic exams performed twice a year provided a window for the Green Balkans team to enter the cages and do timely repairs, which prevented further incidents.

Prophylactic veterinary interventions led to improving the quality of life and survival rate of captive-bred lesser kestrels in Bulgaria. The knowledge of the medical condition of the breeding pairs aided in treating injured wild lesser kestrels coming in from the newly-formed colonies in Bulgaria.



References

Petrov, R., Andonova, Y., Klisurova, H. (2020) First aid and *ex-situ* protection of species of European conservation importance. Handbook for volunteer associates, interns and trainees. Green Balkans NGO