

Congreso internacional *online* sobre la conservación del cernícalo primilla



RESULTS OF DOUBLE CLUTCHING OF FALCONIFORMES IN CAPTIVITY - LESSER KESTREL (*Falco naumanni*) AND SAKER FALCON (*Falco cherrug*)

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- ³ Life for Lesser Kestrel Project LIFE19 NAT/BG/001017
- ⁴ Saker Falcon Reintroduction in Bulgaria Project



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Socio coordinador:





The Wildlife Rehabilitation and Breeding Centre Green Balkans, based in Stara Zagora, is the organisation aiming to re-establish news populations of locally extinct species in their former Bulgarian ranges - Lesser kestrels and Saker falcons amongst others. There are breed and release projects currently being implemented for both falcon species. The breeding aviaries in the Centre have special adaptations specific to the species. Their offsprings are being released in the wild after veterinary examination via adaptation aviaries.



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Three different breeding techniques were adopted with the Lesser kestrels and Saker falcons. Natural egg incubation with no human intervention was allowed during most breeding seasons. The sequential retrieval involves the removal of eggs soon after they are laid, which could stimulate the female to lay more eggs in an attempt to complete a clutch. It was trialled, but deemed unsuccessful, as it did not lead to a higher egg number in Lesser kestrels, and caused stress and consecutively infertility in Saker falcons. Many species of birds, which only produce one clutch of eggs per season, are able to lay a second clutch if the first nesting attempt fails. This ability to recycle is exploited within many captive breeding programs. In order to maximise egg production, the laying of a second clutch was encouraged by taking away the eggs laid in the first clutch in two breeding seasons of the kestrels, and in three Saker falcon breeding seasons.



The Lesser kestrel results include a total of 361 reared chicks from the beginning of the breeding programme in 2011 to the current moment. From the bred in the WRBC birds 284 are released in Levka and Stara Zagora. Below are the summarized results comparing the methods of natural incubation, including egg pulling trials between 2011-2021, and double clutching conducted in 2017 and 2021.

	Average Clutch size - number of eggs laid by a female	Average Brood size - number of hatchlings per nest	Average Success rate - proportion of pairs with at least one successfully reared chick in relation to the total number of breeding pairs
Natural incubation	4.40	2.55	0.66
Double clutching	8.50	6.67	1.00

The Saker falcon results include a total of 114 reared chicks from the beginning of the breeding programme in 2011 to the current moment. From the bred in the WRBC birds 80 are released in Bulgaria. Below are the summarized results comparing the methods of natural incubation, including egg pulling trials between 2011-2021, and double clutching conducted in 2017, 2020 and 2021.

	Average Clutch size - number of eggs laid by a female	Average Brood size - number of hatchlings per nest	Average Success rate - proportion of pairs with at least one successfully reared chick in relation to the total number of breeding pairs
Natural incubation	3.95	1.79	0.30
Double clutching	8.98	1.88	0.75

In conclusion, the summarized results from the ten years of duration for both the Lesser kestrel and Saker falcon breeding programmes show higher clutch size, brood size, and a higher success rate when the method of double clutching is utilized, when compared to the results of the pairs undergone only natural incubation. Indicating it can be a useful technique in ex-situ breeding of the two falcon species as it ultimately results in higher number of released in the wild birds. The method is also beneficial for providing greater freedom in rearranging and pairing up chicks with breeding pairs, also leading to better outcomes.





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