

Release and Readoption of a Rescued Nestling Bonelli's Eagle (*Aquila fasciata*)

Source: Journal of Raptor Research, 49(1):103-105.

Published By: The Raptor Research Foundation

DOI: <http://dx.doi.org/10.3356/JRR-13-00089.1>

URL: <http://www.bioone.org/doi/full/10.3356/JRR-13-00089.1>

BioOne (www.bioone.org) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

J. Raptor Res. 49(1):103–105

© 2015 The Raptor Research Foundation, Inc.

RELEASE AND READOPTION OF A RESCUED NESTLING BONELLI'S EAGLE (*AQUILA FASCIATA*)

KEY WORDS: *Bonelli's Eagle*; *Aquila fasciata*; *CITES*; *illegal trade*; *nestling*; *rehabilitation*.

Currently, 95% of the entire Italian population of Bonelli's Eagle (*Aquila fasciata*), numbering 28–30 pairs, breeds in Sicily, southern Italy (Di Vittorio et al. 2012, López-López et al. 2012). Accordingly, the species is currently classified as Critically Endangered in Italy.

In Sicily, an illegal trade in raptors, involving mostly young taken from nests for falconry and other illegal trafficking operations, was uncovered in 2010. The trade specifically targeted Bonelli's Eagles, Lanner Falcons (*Falco biarmicus*) and Egyptian Vultures (*Neophron percnopterus*).

An investigation conducted by the Corpo Forestale dello Stato, Divisione Investigativa CITES (Rome, Italy) regarding violations of CITES (Convention on International Trade in Endangered Species) led to the confiscation of a large number of raptors, including at least eight Bonelli's Eagles.

Between 7 and 9 May 2013, two Bonelli's Eagle nestlings (around 45 d old, about 20 d before fledging) were removed illegally from their nest in southern Sicily. The theft was discovered during routine monitoring by the Coordinamento Tutela Rapaci Sicilia, a regional volunteer group. Because of the timely report of the theft and the investigation, the two eaglets were recovered, one alive and one dead, from a falconry facility in northern Italy on 31 May. The fact that the nest site was still attended by the adults, the great abundance of wild rabbits (*Oryctolagus cuniculus*) in the nest area, and the behaviour of the young (intolerant of human presence and capable of killing prey at the rehabilitation center) made it possible for us to consider attempting the technique of readoption by the natural parents.

This technique has been rarely applied after such a lengthy separation of the adult and young (González et al. 1986). However, the conditions present suggested that success was likely and a successful readoption would maximize the change of survival for the young eagle.

Then, on 29 June, when the young eagle was approximately 95 d old, we marked it with an aluminum leg band (I.S.P.R.A: Istituto Superiore Protezione Ricerca Ambiente, the bird banding agency which oversees the activities of ringing in Italy), by bleaching several feathers on both wings (using hydrogen peroxide), and by attaching a tail-mount radiotag (10 g TW-3 Biotrack VHF; Biotrack Ltd., Wareham, Dorset, U.K.). We devised a plan to recover the young in case of an aggressive reaction by the parents. Then, at 04:00 H, we placed the young on a ledge of the nesting cliff and secured it to a block of wood by means of two leather strips attached to jesses so that it could not fly. We established two observation points at a minimum distance of 700 m and observed the nest area. Because the adult female was in the nest and showed no aggression, we released the young 3 hr after placing it on the cliff. The young eagle immediately flew away and we subsequently located it by telemetry in a valley 1 km away from the release area. After 20 min, the adults approached the young. In the afternoon, 11 hr after the release, we observed all three individuals roosting together at a distance of about 3 m from each other. In the following days, we verified that the young slept in the nesting cliff with the adults and we observed the young, in apparent good physical condition, moving to hunting areas with adults. Our field observations confirmed that the young was properly provisioned. In the following days (about 1 mo after the release), the young eagle's movements increased and we found it repeatedly as far as 9 km from the release site.

The young eagle's apparent health and its increasing ability to explore the surroundings indicated that the readoption method was successful. In fact, both adults and the young behaved similarly to naturally fledged eagles.

Although fostering and cross-fostering have been widely used for several raptor species in captivity and under natural conditions (e.g., Bustamante and Hiraldo 1990, Di Vittorio et al. 2006, Penteriani et al. 2008), to our knowledge, readoption by natural parents had not been attempted with a young Bonelli's Eagle of this age and had not been done with a raptor seized for falconry and held for a relatively long time in captivity (i.e., a falconry facility or wildlife rehabilitation center). Therefore, we consider that the readoption technique may be useful for releasing other young illegally taken from their nests. In similar cases, we recommend avoiding both a long stay in a rehabilitation center and excessive contact with humans, which may decrease the chances of successful reintegration into the wild. In addition, the ability of young raptors to capture prey and feed themselves, as well as their flight capacity, should be assessed before release.

We thank F. Sergio, P. López-López, V. Penteriani, M. Ferrer, D. Campobello, F. Mamone Di Capria, I. Severoni, and G. Giardina for their support in the development of this project. Special thanks to the Divisione Investigativa Corpo Forestale dello Stato, Rome, for the investigation and police intervention—**Massimiliano Di Vittorio (email address: divittoriomassimiliano@gmail.com)**, **Ecologia Applicata Italia, Via Jenner 70, 00151 Rome, Italy** and **Coordinamento Tutela Rapaci Sicilia, Sicily, Italy**; **Salvatore Greci, Giovanni La Grua, and Carmelo Bucalo, Coordinamento Tutela Rapaci Sicilia, Sicily, Italy** and **Angelo Scuderi, Coordinamento Tutela Rapaci Sicilia, Sicily, Italy** and **LIPU, Lega Italiana Protezione, Uccelli, Italy**; **Francesco Palazzolo, Coordinamento Tutela Rapaci Sicilia, Sicily, Italy**; **Edoardo Di Trapani, Coordinamento Tutela Rapaci Sicilia, Sicily** and **Cooperativa Silene, via Dondes Regio 8/a 90127 Palermo, Sicily, Italy**; **Giuseppe Rannisi, Coordinamento Tutela Rapaci Sicilia, Sicily, Italy** and **LIPU, Lega Italiana Protezione, Uccelli, Italy**; **Gabriele Giacalone, Coordinamento Tutela Rapaci Sicilia, Sicily** and **Cooperativa Silene, via Dondes Regio 8/a 90127 Palermo, Sicily, Italy**; **Andrea Ciaccio, Coordinamento Tutela Rapaci Sicilia, Sicily, Italy**; **Marco Fiori, Divisione Investigativa CITES, Corpo Forestale dello Stato, Rome, Italy**; **Massimiliano Rocco, Traffic Europe WWF, Via Po 25c, Rome, Italy**.

LITERATURE CITED

- BUSTAMANTE, J. AND F. HIRALDO. 1990. Adoptions of fledglings by Black and Red kites. *Animal Behaviour* 39: 804–806.
- DI VITTORIO, M., S. FALCONE, N. DILIBERTO, G. CORTONE, AND B. MASSA. 2006. Successful fostering of a captive-born Egyptian Vulture (*Neophron percnopterus*) in Sicily. *Journal of Raptor Research* 40:247–248.

- , P. LÓPEZ LÓPEZ, AND M. SARÀ. 2012. Habitat preference of Bonelli's Eagle (*Aquila fasciata*) in Sicily. *Bird Study* 59:207–217.
- GONZÁLEZ, J.L., B. HEREDIA, L.M. GONZÁLEZ, AND N. ALONSO. 1986. Adoption of a juvenile by breeding Spanish Imperial Eagles during the postfledging period. *Raptor Research* 20:77–78.
- LÓPEZ LÓPEZ, P., M. SARÀ, AND M. DI VITTORIO. 2012. Living on the edge: assessing the extinction risk of critically endangered Bonelli's Eagle in Italy. *PLoS ONE* 7:e37862 doi: 10.371/journal.pone.0037862:1-10.
- PENTERIANI, V. AND M. DELMAR DELGADO. 2008. Brood-switching in Eagle Owl *Bubo bubo* fledglings. *Ibis* 150:816–819.

Received 15 November 2013; accepted 10 September 2014