

Cooperative kleptoparasitism in a pair of Egyptian Vultures *Neophron percnopterus* in northern Spain

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<http://dx.doi.org/10.4314/vulnew.v73i1.5>

Kleptoparasitism describes the stealing of already procured food by individuals of one species from individuals of another (Brockmann & Barnard 1979). Cooperative hunting is defined by Ellis *et al.* (1993) as hunting with a clear division of labour and the orderly sharing of spoils with enhanced success, with coordinative signals sometimes present. In true cooperative hunting, a group consists of at least two members that are a stable social unit, and their cooperation should benefit the group rather than just the individual. However, when employed by raptors, separate roles are sometimes evident, but sharing of prey is limited (Eakle *et al.* 2014).

Herein, we describe cooperative kleptoparasitism by a pair of Egyptian Vultures *Neophron*

percnopterus robbing a Griffon Vulture *Gyps fulvus* at Matute Griffon colony, La Rioja, Northern Spain 42° 17' 53''N, 02° 47' 46''W. This cliff hosted twenty three breeding pairs in of Griffon Vultures 2007.

On 24 May 2008, at 16h30 UTC, an adult Griffon arrived at a nest and started feeding a fully-grown, nearly fledged, nestling by regurgitating food onto the nest after the chick's food begging behaviour (Mundy *et al.* 1992). The nest was centred in a cave suitable for Griffons to breed, with narrow ledges at the extremes suitable for an Egyptian Vulture to perch, but not sufficient for the larger sized Griffon. The nestling started feeding on its own when the Egyptian Vulture pair appeared on the ledge with one bird at each side. These Egyptian Vultures were

unmarked, but because there was only a single nesting pair on Matute colony since 1984 (Lopo & Ceballos 1990, Perea *et al.* 1990, Camiña 2008), we believe that these birds were the resident breeding pair. The juvenile Griffon was aware of the pair, turning its head right and left alternately whilst standing over the regurgitated meat. After five minutes one of the Egyptian Vultures slowly approached the young Griffon and tried to snatch some food. The juvenile opened its wings and extended its neck while vocalising with screeches and loud chatters. Then, the Egyptian Vulture moved back and waited. As the Griffon threatened the first bird, its mate moved forward trying to reach the food as well. Then the juvenile Griffon turned toward the second Egyptian Vulture and displayed the same harassing behaviour as seen toward the first one. Both the Egyptian and the Griffon Vultures alternated these forward (aggressive) and backward (defensive) movements for at least 15 minutes. The juvenile moved to one of the narrow ledges and almost fell, providing one Egyptian Vulture the opportunity to take a small amount of food. The nestling recovered its original position and the Egyptian

Vulture pair left the ledge with the robbed food at 16h55.

We concluded this behaviour to be ‘cooperative kleptoparasitism’ by the pair of adult Egyptian Vultures. It is similar to what happens with colonial seabirds. Kleptoparasitism seems widespread among raptors such as eagles (Brockman & Barnard 1979, Brown 1980, Love 1983, Berkelman *et al.* 1999), kites (Giacomo & Guerreri 2008) and even Bearded and Egyptian Vultures at feeding or nesting sites (Pascual & Santiago 1991, Margalida & Heredia 2002, Margalida & Bertran 2003, Bertran & Margalida 2004, pers. Obs.). However, we have not found previous references to theft in a cooperative context for vultures (Mundy *et al.* 1992, Donázar 1993). Here both mates coordinated their movements by performing an alternate approach at the Griffon defending the food. This behaviour by Egyptian Vultures has been rarely observed, probably because the scattered and territorial distribution of the species. Kleptoparasitism by Egyptian Vultures would be opportunistic and limited to the end of the Griffons’ breeding season when fledglings spend time alone at the nest while parents are foraging (Pascual & Santiago 1991). The cost for the Griffon Vulture is relatively

low, as the total amount of food an Egyptian Vulture can take within its crop and beak is small. Theft is much more likely to be successful when performed cooperatively because of the Egyptian Vulture's small size compared to all other sympatric vultures.

Acknowledgements

I appreciate the support of the Government of La Rioja that funded the Third Egyptian Vulture Population Breeding census in the region in 2008.

Key words: Griffon Vulture; *Gyps fulvus*; cooperative hunting.

References

- Bednarz, J.C. & Hayden, T.J. 1987. (Abstract) Cooperative hunting in Harris' Hawks. In Anon. Annual meeting of the Raptor Research Foundation, Inc. Raptor Research Foundation, Inc, Boise, Idaho. Pages 20
- Brockman, H.J. & Barnard, C. J. 1979. Kleptoparasitism in birds. *Animal Behaviour* 27: 487-514.
- Camiña, A. 2008. The Egyptian Vulture *Neophron percnopterus* in La Rioja 2008 [in Spanish]. Regional Government of La Rioja.
- De Juana, E. 1980. Atlas Ornitológico de La Rioja. Instituto de Estudios Riojanos. Logroño.
- Dekker, D. & Taylor, R. 2005. A change in foraging success and cooperative hunting by a breeding pair of Peregrine Falcons and their fledglings. *Journal of Raptor Research* 39: 386–395.
- Donázar, J.A. 1993. Los Buitres Ibéricos. J.M. Reyero Ed, Madrid.
- Eakle, W.L., Lishka, J. J., Kirven, M. N. & Hawley, J. 2014. Cooperative kleptoparasitism by a pair of bald eagles at lake Conoma, California. *Journal of Raptor Research* 48: 89-91.
- Ellis, D.H., Bednarz, J.C., Smith, D.G. & Fleming, S.P. 1993. Social foraging classes in raptorial birds. *BioScience* 43:14–21.

- Lopo, L. & Ceballos, O. 1990. Censo de rapaces rupícolas en La Rioja. In Spanish. [Cliff nesting raptor census in La Rioja]. *Zubía* 8:13-22.
- Lopo, L., Arizaleta, J.A., Zaldivar, C. & Garnica, R. 1989. El Buitre leonado en La Rioja II: Censo de las colonias de cría. Año 1984. *Zubía* 4: 115-123.
- Margalida, A. & Heredia, R. 2002. Interspecific interaction between Lammergeier *Gypaetus barbatus* and Black Vulture *Aegypius monachus*: predation or kleptoparasitism? *Sandgrouse* 24: 138-139
- Margalida, A. & Bertran, J. 2003. Interspecific and intraspecific kleptoparasitic interactions of the bearded vulture (*Gypaetus barbatus*) at nesting areas. *Journal of Raptor Research* 37: 157-160.
- Mundy, P., Butchardt, D., Ledger, J. & Piper, S. 1992. *The Vultures of Africa*. Academic Press, London.
- Pascual, J. & Santiago, J.M. 1991. Egyptian vultures steal food from nestling griffon vultures. *Journal of Raptor Research* 25: 96-97.
- Perea, J.L., Morales, M. & Velasco, Y.T. 1990. El Alimoche (*Neophron percnopterus*) en España. Población, distribución, problemática y conservación. Colección Técnica ICONA. Ministerio de Agricultura Pesca y Alimentación. Madrid
