

Predation by Geoffroy's Cat on Ferruginous Pygmy-Owl in *Caldén* Semiarid Forest, Argentina

Author(s): Miguel Á. Santillán, Andrea S. Costán, and Juan I. Zanón-Martínez

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blind at Klydesøreservatet (55°34.8'N, 12°31.8'E) near Copenhagen, Denmark. Two Western Marsh Harriers made several passes over the mudflats and *Phragmites* beds before my attention was drawn to a commotion of Northern Lapwings (*Vanellus vanellus*) and Black-headed Gulls harassing a harrier that had captured a Herring Gull at the end of a narrow spit (12:24 H). I observed the action through a 20–60× scope from a distance of 205 m (measured with Google Earth Pro). The harrier had the gull's neck pinned to the mud with one foot, while the gull was on its back, feebly beating its wings, and slowly kicking its legs in a running fashion. The struggling gull failed to right itself and the harrier carried it to higher ground with the aid of a strong wind (approximately 28 km/hr). At the higher site, the harrier's feet and the gull's head were obscured by a dead thistle, so I could not see how the harrier finally dispatched the gull, which continued to kick until 12:33 H. The harrier began consuming bits of muscle soon afterwards and started plucking the gull's breast at 12:48 H. It fed until 12:52 H, stepped off the gull's carcass at 12:59 H, and preened nearby on the ground until I left the area at 13:09 H. Having missed the harrier's initial strike, I do not know whether the gull was acting normally beforehand or whether it showed signs of disease or incapacitation. However, the length of time (>9 min) required for the harrier to kill the gull suggested the gull was reasonably fit.

The harrier's golden crown and throat, and the absence of pale markings on the breast and leading edge of the wing indicated that it was a juvenile. The gull was in second- or third-year plumage, with dark mottling on the upper wing coverts. Herring Gulls from nominate populations in Norway vary in weight from 795 to 1440 g (Cramp and Simmons 1983), overlapping the size range of female harriers (540–1269 g) but not males (320–667 g; Cramp and Simmons 1980).

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tory, Smithsonian Institution, P.O. Box 37012, Washington, D.C. 20013 U.S.A, and Center for Macroecology, Evolution and Climate, University of Copenhagen, 2100 Copenhagen Ø, Denmark.

LITERATURE CITED

- BRZEKIŃSKI, M. AND M. ŻMIHORSKI. 2009. Nestling diet and parental provisioning behaviour in the Marsh Harrier (*Circus aeruginosus*). *Acta Zoologica Lituanica* 19:93–98.
- CARDADOR, L., E. PLANAS, A. VAREA, AND S. MAÑOSA. 2012. Feeding behaviour and diet composition of Marsh Harriers *Circus aeruginosus* in agricultural landscapes. *Bird Study* 59:228–235.
- CLARKE, R., A. BOURGONJE, AND H. CASTELIJNS. 1993. Food niches of sympatric Marsh Harriers *Circus aeruginosus* and Hen Harriers *C. cyaneus* on the Dutch coast in winter. *Ibis* 135:424–431.
- CRAMP, S. AND K.E.L. SIMMONS. [EDS.]. 1980. Handbook of the birds of Europe, the Middle East and North Africa: the birds of the western palearctic: hawks to bustards. Vol. 2. Oxford University Press, Oxford, U.K.
- AND ———. [EDS.]. 1983. Handbook of the birds of Europe, the Middle East and North Africa: the birds of the western palearctic: waders to gulls. Vol. 3. Oxford University Press, Oxford, U.K.
- SCHIPPER, W.J.A. 1973. A comparison of prey selection in sympatric harriers (*Circus* spp.) in western Europe. *Gerfaut* 63:17–120.
- TORNBERG, R. AND S. HAAPALA. 2013. The diet of the Marsh Harrier *Circus aeruginosus* breeding on the isle of Hailuoto compared to other raptors in northern Finland. *Ornis Fennica* 90:103–116.
- UNDERHILL-DAY, J.C. 1985. The food of breeding Marsh Harriers *Circus aeruginosus* in East Anglia. *Bird Study* 32:199–206.

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PREDATION BY GEOFFROY'S CAT ON FERRUGINOUS PYGMY-OWL IN CALDÉN SEMIARID FOREST, ARGENTINA

KEY WORDS: *Ferruginous Pygmy-Owl*; *Glaucidium brasilianum*; *Geoffroy's cat*; *Leopardus geoffroyi*; *Argentina*; *predation*.

The Ferruginous Pygmy-Owl (*Glaucidium brasilianum*) has a broad geographic distribution, occurring from the southwestern United States to Central America and South America (Holt et al. 1999, Proudfoot and Johnson 2000). It is

found in a variety of habitats from tropical and subtropical dry forest to semiarid open forest; it nests in natural cavities and is active diurnally (Proudfoot and Johnson 2000). Predation of Ferruginous Pygmy-Owl nestlings by raccoons

(*Procyon lotor*) and fledglings by raptors (Harris's Hawk [*Parabuteo unicinctus*], Cooper's Hawk [*Accipiter cooperii*] and Great Horned Owl [*Bubo virginianus*]) and possibly also by bobcat (*Lynx rufus*) and ocelot (*Leopardus pardalis*) has been documented in North America (Proudfoot and Johnson 2000). Here we present the first predation record of Ferruginous Pygmy-Owl by Geoffroy's cat (*Leopardus geoffroyi*).

From 2010 to 2012, we examined the diet of Geoffroy's cat in Parque Luro Nature Reserve (36°55'S, 64°16'W) in east-central La Pampa province, Argentina. Parque Luro Nature Reserve is within the Espinal phytogeographic province; it includes *caldén* semiarid forest, sand grassland and salt deposits (Cabrera 1994). The reserve is dominated by the *caldén* tree (*Prosopis caldenia*) and has an area of 7600 ha. The *caldén* forest provides adequate food and nesting cavities, and has abundant Ferruginous Pygmy-Owls, which are commonly seen on the reserve (Campioni et al. 2013).

We analyzed a total of 87 Geoffroy's cat scats. Prey were primarily rodent species and Eared Doves (*Zenaidura macroura*). However, we also found the bill of a fledgling or subadult Ferruginous Pygmy-Owl in a scat, evidence that this small owl is prey of Geoffroy's cat. There are no previous reports of Ferruginous Pygmy-Owl predation by Geoffroy's cat in South America (Wilson and Mittermeier 2009, Pereira et al. 2012). Information on the food habits of Geoffroy's cat is limited, but its diet appears to consist largely of small rodents and birds (Sunquist and Sunquist 2002). Liébana (2008) reported predation of American Kestrel (*Falco sparverius*) nestlings from nest boxes by Geoffroy's cat in Parque Luro Nature Reserve, which is further evidence that Geoffroy's cat occasionally preys on cavity-nesting raptors.

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(CONICET), Avenida Uruguay 151, (6300) Santa Rosa, Argentina and Centro para el Estudio y Conservación de Aves Rapaces en Argentina (CECARA), Departamento de Recursos Naturales, Facultad de Ciencias Exactas y Naturales, Universidad Nacional de La Pampa, Avenida Uruguay 151, (6300) Santa Rosa, Argentina.

LITERATURE CITED

- CABRERA, A.L. 1994. Regiones fitogeográficas Argentinas. Enciclopedia Argentina de agricultura y jardinería. Tomo II. Editorial Acme S.A.C.I., Buenos Aires. Primera Reimpresión, Tomo II, Fascículo I, Editorial Acme, Buenos Aires, Argentina.
- CAMPIONI, L., J.H. SARASOLA, M.Á. SANTILLÁN, AND M.M. REYES. 2013. Breeding season habitat selection by Ferruginous Pygmy-Owl, *Glaucidium brasilianum*, in central Argentina. *Bird Study* 60:35–43.
- HOLT, D.W., R. BERKLEY, C. DEPPE, P.L. ENRÍQUES-ROCHA, P.D. OLSEN, J.L. PETERSEN, J.L. RANGEL-SALAZAR, K.P. SEGARS, AND K.L. WOOD. 1999. Species accounts for Strigidae (true owls). Pages 76–243 in J. del Hoyo, A. Elliott, and J. Sargatal [Eds.], Handbook of the birds of the world, Vol. 5. Barn-owls to hummingbirds. Lynx Edicions, Barcelona, Spain.
- LIÉBANA, M.S. 2008. Ecología reproductiva del halconcito Colorado (*Falco sparverius*) en nidos artificiales en el bosque semiárido del centro de Argentina. Tesis de Grado. Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Mar del Plata, Mar del Plata, provincia de Buenos Aires, Argentina.
- PEREIRA, J.A., G. APRIL, AND L. NÚÑEZ. 2012. Felinos de Sudamérica. Londaiz Laborde Ediciones, Buenos Aires, Argentina.
- PROUDFOOT, G.A. AND R.R. JOHNSON. 2000. Ferruginous Pygmy-Owl (*Glaucidium brasilianum*). In A. Poole [Ed.], The birds of North America online, No. 498. Cornell Lab of Ornithology, Ithaca, NY U.S.A. <http://bna.birds.cornell.edu/bna/species/498> (last accessed 29 January 2014).
- SUNQUIST, M. AND F. SUNQUIST. 2002. Wild cats of the world. The University of Chicago Press, Chicago, IL U.S.A.
- WILSON, D.E. AND R.A. MITTERMEIER. 2009. Handbook of the mammals of the world. Vol. 1. Carnivores. Lynx Edicions, Barcelona, Spain.

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