

Short communication

First record of cannibalism by an adult on a chick in the Purple Heron

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Abstract - This short note reports the first documented case of cannibalism in the Purple Heron performed by an adult bird.

Keywords: Purple Heron, cannibalism, Sardinia.

Riassunto - Prima osservazione di cannibalismo di un adulto su un pulcino nell'airone rosso.

Questa breve nota riporta il primo caso documentato di cannibalismo nell'airone rosso effettuato da un adulto.

Parole chiave: airone rosso, cannibalismo, Sardegna.

Cannibalism on chicks occurs in several species of birds, performed both by adults and among chicks. Cannibalism performed by adults on chicks of neighbours has been reported in some colonial birds (e.g. Herring Gulls *Larus argentatus* and Glaucous-winged Gulls *Larus glaucescens*), and it is often the main cause of individual breeding failure (Newton, 1998). In others (e.g. the American White Pelican *Pelecanus erythrorhynchos*), chicks were seen consuming or attempting to consume dead younger chick (Bartos *et al.*, 2013), while in raptors cannibalism has been reported in several species, mostly Accipitridae, probably because brood reduction can help the stronger young survive (Allen *et al.*, 2020). Conversely, very few studies reported cannibalism in Ardeidae species (e.g. Sovrano *et al.*, 2022). In particular, cannibalism performed by fledglings on chicks from the neighbouring nest was observed in Grey Herons *Ardea cinerea* and Night-Herons *Nycticorax nycticorax* (Litvinenko, 1982; Ri-

hel, 2006), perhaps a rare strategy to survive extreme food shortage years. Siblicide has been reported in Great Blue Heron *Ardea herodias* (Quinney, 1982) and Cattle Egret *Bubulcus ibis* (Fujioka, 1985), but cannibalism between siblings has been reported very rarely (Denis & Fortes, 2007). In the Purple Heron *Ardea purpurea* a single case of cannibalism has been reported in Camargue, and performed by a nestling on its younger sib (Walmsley, 1974), while another one has been reported indirectly in the marshes of Guadalquivir (Amat & Herrera, 1978). Here, we report the first documented case of cannibalism in this species performed by an adult bird. It was observed and photographed (Fig. 1) on 24 June 2020 at the Regional Park of Quartu and Molentargius, near Cagliari (southern Sardinia; Italy). In particular, an adult was observed in a *Tamarix* stand, where this species usually nests in Sardinia (Brichetti & Fracasso, 2018), while swallowing a chick. We presume it was one of its chicks dead in the nest, perhaps after a siblicide: an adult, probably the same, was observed and photographed at the same place while entering the *Tamarix* stand several times the previous days. In this species, egg laying occurs between April and June (peaking from mid-April to mid-May), with a significant nestling mortality recorded both in Central Italy (e.g. Massaciuccoli Lake; Brichetti & Fracasso, 2018) and Camargue (Southern France; Thomas *et al.*, 1999). Thus, although it was never recorded, it is conceivable that an adult Purple Heron feeds of a chick killed by sibs, or dead for other causes (e.g. severe weather and disease; Franchimont, 1986; Nedjah *et al.*, 2010), in the nest. Several hypotheses have been suggested to explain parent-offspring cannibalism in nature, including poor parental energy reserves, large brood sizes, and high brood densities. In this framework, cannibalism performed by adults on dead chicks could be an opportunistic behaviour especially in years in which many chicks die, since “energy from eating (some of) one’s current offspring can be redirected to other offspring, or to parental growth, survival, and ultimately to other future reproductive endeavours” (Bose, 2022). Interestingly, indirect filial cannibalism has been recently recorded in response to nest failure in the Black-Crowned Night Heron *Nycticorax nycticorax* (Brussee *et al.*, 2017).

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Fig. 1 - Photographic sequence of an adult Purple Heron swallowing a dead chick. / Sequenza fotografica di un airone rosso adulto che ingoia un nidiaceo morto. (Photo / Foto: Sergio Simbula).

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