

## KLEPTOPARASITISM BY PEREGRINE FALCONS ON CARRION CROWS

### CLEPTOPARASITISMO DE HALCONES PEREGRINOS SOBRE CORNEJAS NEGRAS

Íñigo ZUBEROGOITIA\*, Agurtzane IRAETA\* & José Antonio MARTÍNEZ\*

Kleptoparasitism is a common form of obtaining food in many bird species (Brockmann & Barnard, 1979). Some individuals obtain energetic benefits robbing food from other birds which have invested time and efforts to obtain it (Thompson, 1986; Ens *et al.*, 1990). The Peregrine Falcon *Falco peregrinus* is one of the species that frequently suffers this kind of parasitism. Gulls and corvids are the main pirates obtaining food from Peregrines (see, e.g. Meinertzhagen, 1959; Ratcliffe, 1993; Estrada-Devesa *et al.*, 1997), but there are other species that have been seen stealing food from Peregrines such as Bald Eagles *Haliaeetus leucocephalus*, Ospreys *Pandion haliaetus*, Turkey Vultures *Coragyps atratus*, Buteos *Buteo* spp. and large Accipiters *Accipiter* spp. (Ratcliffe, 1983; Enderson *et al.*, 1995). However, it is not common to find Peregrines trying to rob food from other birds, especially when such birds are potential prey.

The study area was Bizkaia, a small province of 2300 km<sup>2</sup> located in the north of Spain. In this area we have monitored about 35-38 Peregrine territories since 1997. During this time we have studied the prey of Peregrines in the nests, recording 931 prey of 97 different species. Between September 2000 and August 2001 we spent 129 full days observing falcons, 150 h monitoring a radio-tagged adult female and 40 h monitoring another adult female.

At the beginning, in 1997, we found bones of a rabbit *Oryctolagus cuniculus* and a domestic hen *Gallus gallus* in one nest. These types of prey are not usually reported in the diet of Peregrines (Ratcliffe, 1993). In 2001 we found again one rabbit on a perch of this pair during winter and another during the breeding season together with six lamb remains. Because of the extreme scarcity of rabbits in the study

area (Alvarez *et al.*, 1998) and because deceased lambs, rabbits and other farm animals are allocated to rubbish dumps (the nearest one placed 1 km from the Peregrine nest), we suggest that it was there were those prey items were collected. Therefore, in order to determine how the items were collected, we set up an observation point near the rubbish dump. During two weeks we saw the adult Peregrines hunting on three occasions. They took passerines and a feral Pigeon *Columba livia*. We also saw a group of 70 carrion crows *Corvus corone* feeding at the dump. When the crows left for the mountains, a juvenile male Peregrine, which was raised in the nest close to the dump, took a stoop on the crows. He spent more than 30 min diving towards the crows but he did not obtain any prey. The next day, he tried to steal from the crows, again unsuccessfully. This time, the pursuit took 45 min. Carrion crows are strong birds that could even cause injuries to Peregrines. However, two days later, we could hear the crows screeching and we could see one of the adult Peregrines flying in the middle of the group with a piece of food.

No other similar behaviour has been reported in Bizkaia for Peregrines. However, we have observed kleptoparasitism by Mediterranean gulls *Larus cachinnans* on Peregrine Falcons carrying large prey (feral Pigeons) twice (see also Estrada-Devesa *et al.*, 1997). Nevertheless, although kleptoparasitism by Peregrines is a rare behaviour, there are some reports from other countries involving different host species. For example, a Peregrine robbed a Willow Grouse *Lagopus lagopus* killed by a Golden Eagle *Aquila chrysaetos* (Ratcliffe, 1993) and an adult female chased a Northern Harrier *Circus cyaneus*, pirating the rodent it carried (Enderson *et al.*, 1995).

\* E. M. Icarus, S. L. Oficina Técnica. Apartado 106. E-48940 Leioa, Bizkaia, Spain.  
e-mail: inigo.zuberogoitia@wanadoo.es

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