

## The feather of fortune in the courtship of the Raven

Seppo Keränen & Martti Soikkeli

The Raven *Corvus corax* is a common and cosmopolitan bird species that is often kept in captivity. Its behaviour is well known and has been described in detail (e.g. Lorenz 1939, Gwinner 1964, J. Tierpsychol., 3 and 21). In this paper we report a feather display of the Raven apparently not observed before.

The author Keränen, a nature photographer, has spent over 300 winter days in a hide watching Ravens at feeding places for eagles in Finland. In late March 1974, in Karstula, central Finland, he observed and photographed the male of an established pair, after landing, displaying one to two of its median under wing coverts to the female, which was standing close by (Figs 1 and 2). During the display, which lasted a few minutes, the birds did not move much but the male uttered a variable sound. During most of the time the male's eyes were covered by the nictitating membrane (Fig. 1). Once the male picked up some white pig hairs and presented them to the female (Fig. 2).

This feather display was observed on three different occasions, but it was not possible to determine whether more than one pair was concerned. In each case it was an established pair.

The question thus arises: Was this exhibition of wing coverts a real display for communication or just a disorder of the feathers after landing? It is possible that wing coverts may turn forwards in the air turbulence during landing and remain visible when the wing is folded.

A freshly shot male Raven was studied by Mr. Ari Karhilahti, a taxidermist at the Zoological Museum of the University of Turku. He found that the shaft of some median wing coverts is curved through more than 90° (Fig. 3). For this reason the shaft is inserted into the skin and front tendon of the wing along the direction of the tendon (Fig. 4), not perpendicularly to the tendon as is usual in birds. When the wing is folded and the tendon relaxed and curved backwards, median wing coverts (especially the 4th, 5th, and 6th) can turn forwards and become visible.

On morphological grounds and because the wing

coverts were exhibited on both wings simultaneously, we conclude that the exhibition of the wing coverts by the Raven is not an accidental disorder of the feathers, but a real though apparently rare display, involving both morphological and behavioural adaptation for communication.

*Epilogue* — The Finnish author and folklore collector Samuli Paulaharju writes in his book 'Sompio' (1939) that in Lappish folklore the Raven is a bird of ill omen. But below the Raven's wing is hidden a mysterious feather of fortune. If a trapper is able to shoot a Raven and pull out just that feather, he will get a big catch. Have we found the feather of fortune?

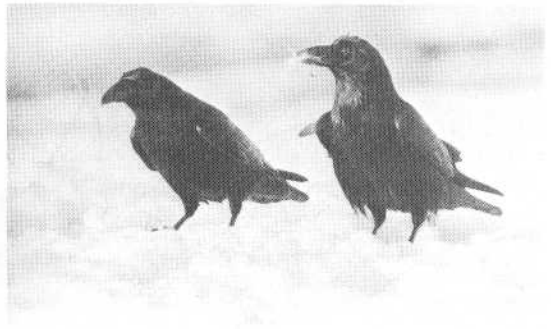


Fig. 2. A male Raven displaying its median wing coverts and some white pig hairs to the female.

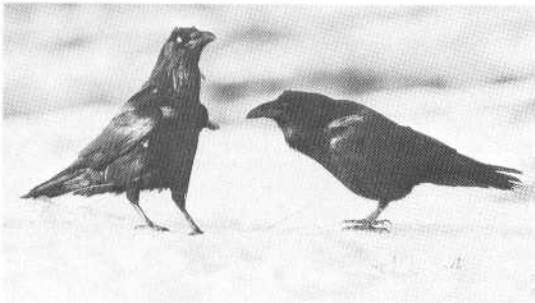


Fig. 1. A male Raven displaying its median under wing coverts to the female.

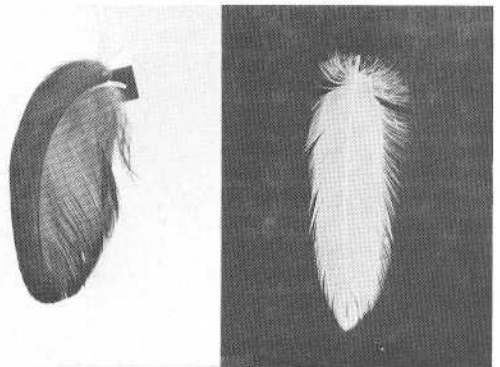


Fig. 3. The curved fifth median under wing covert from the left wing of a male Raven (left) and the right median wing covert of an Osprey.

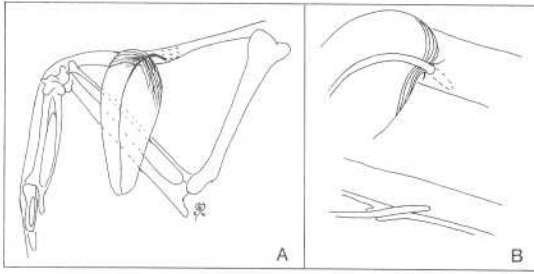


Fig. 4. Location of a curved median under wing covert on the wing (A) and the way it is inserted into the skin and front tendon (B) (drawing by A. Karhilahti).

### Selostus: Onnenhöyhen korpin soitimessa

Tekijöistä S. Keränen havaitsi ja valokuvasi v. 1974 Karstulassa kotkien ruokintapaikalla korppiparin, jonka koiras kosiskeli naarasta näkyvin, eteenpäin käännetyin siiven alapeitinhöyhenin (kuvat 1 ja 2). Ele esiintyi kaikkiaan ainakin kolme kertaa ja kesti kerrallaan muutamia minuutteja. Eleen aikana linnut liikkuivat vain vähän ja koiraan vilkkuloimi oli ajoittain silmän peittona (kuva 1). Kerran koiras esitteli naaraalle maasta nokkaise-maansa vaaleaa siankarvatulloa (kuva 2).

Onko kysymys tilapäisestä höyhenten epäjärjestyksestä vai soitimeen kuuluvasta todellisesta eleestä?

Kuollutta koiraskorppia tutkittaessa ilmeni, että sen keskimmäisistä alapeitinhöyhenistä osa on erikoisesti käyrästynyt jopa yli 90° (kuva 3). Tämän vuoksi niiden kynä ei kiinnity siiven nahkaan ja etureunan jänteeseen kohtisuorasti jänteeseen nähden kuten yleensä linnuilla, vaan jänteeseen nähden samansuuntaisesti siiven kärjen suunnalta (kuva 4). Kun siipi on laskostettuna ja jänne löysällä mutkalla taaksepäin, alapeitinhöyhenet voivat kääntyä eteenpäin näkyville.

Tekijät päättelivät, että kyseessä on mitä todennäköisimmin kommunikointiin sopeutunut rakenne ja käyttäytyminen. Tätä päätelmää tukee myös havainto, että alapeitinhöyhenet olivat samanaikaisesti näkyvillä linnun molemmissa siivissä.

Kirjassaan 'Sompio' (1939) kertoo Samuli Paulaharju, että Lapin kansanperinteessä korppi oli pahan ennuslintu (J. Peltonen, Suomen Luonto 39(2):62–67, 1980). Oli korpissa hyvääkin. Sen siiven alla oli piilossa onnenhöyhen. Jos korpin ampui ja osasi nyhtäistä oikean höyhenen, pyyntimies sai hyvät saaliit. Olemmeko löytäneet onnenhöyhenen?

*Authors' addresses: Seppo Keränen, Kuninkaanlahdenkatu 8 A 8, SF-28100 Pori, and Martti Soikkeli, Dept. of Biology, Univ. of Turku, SF-20500 Turku, Finland*

## Strange objects in an Eider *Somateria mollissima* nest

Lars v. Haartman & Mikael v. Numers

Foreign objects are relatively often found in nests of diving ducks. Eggs of foreign species and stones are common, human artifacts rare. We have found such objects in clutches of the two most common diving ducks in the archipelago of SW Finland, the Eider and the Tufted Duck *Aythya fuligula*.

On 17 May 1982 a case was observed which would clearly belong to the Guinness Book of Avian Records, if such a book were written. On the islet Kojukari, W of the island Livo in the parish of Askainen, an Eider female was found incubating an empty pot of greenish

glass with a metal lid (see Figure). The pot had contained Piltti baby food. Its volume was roughly estimated to be twice that of an Eider egg. Not a single real egg was present in the nest. Nest-down was abundant. When we returned to the islet on 11 June the female was still incubating the pot. By then, she had incubated it for at least 26 days, which is about a normal period for the species (L. v. Haartman, O. Hildén, P. Linkola, P. Suomalainen, R. Tenovuo, 1963–72, Pohjolan linnut värikuvin, Otava, Helsinki). As most Eider clutches were finished before mid May, it is, however, likely that the normal incubation period had already been exceeded.

We can only guess at what had happened. A joke seems to be out of the question. Everything indicated that the family who owned a small summer house on the islet were nature lovers. The house was quite unobtrusively fitted into the milieu, and the entire islet was kept very neat. Waste products and reeds washed ashore by the waves had been raked together in a large heap, on which several ducks, among them our Eider female and a Grey Lag Goose *Anser anser* had placed their nests. The pot had evidently been present in the litter. No harm had been done to any of the bird nests, which included 9 more Eider nests and the goose nest. At our second visit 5 of the Eider clutches and the goose clutch had hatched, and not a single plundered nest was found.

The most puzzling thing is that the Eider had no eggs of her own. Did she not lay any? Or had the nest been plundered, e.g. by a Hooded Crow *Corvus corone cornix*, which had left only the pot?



The Eider nest, containing a glass pot. Photo MvN.