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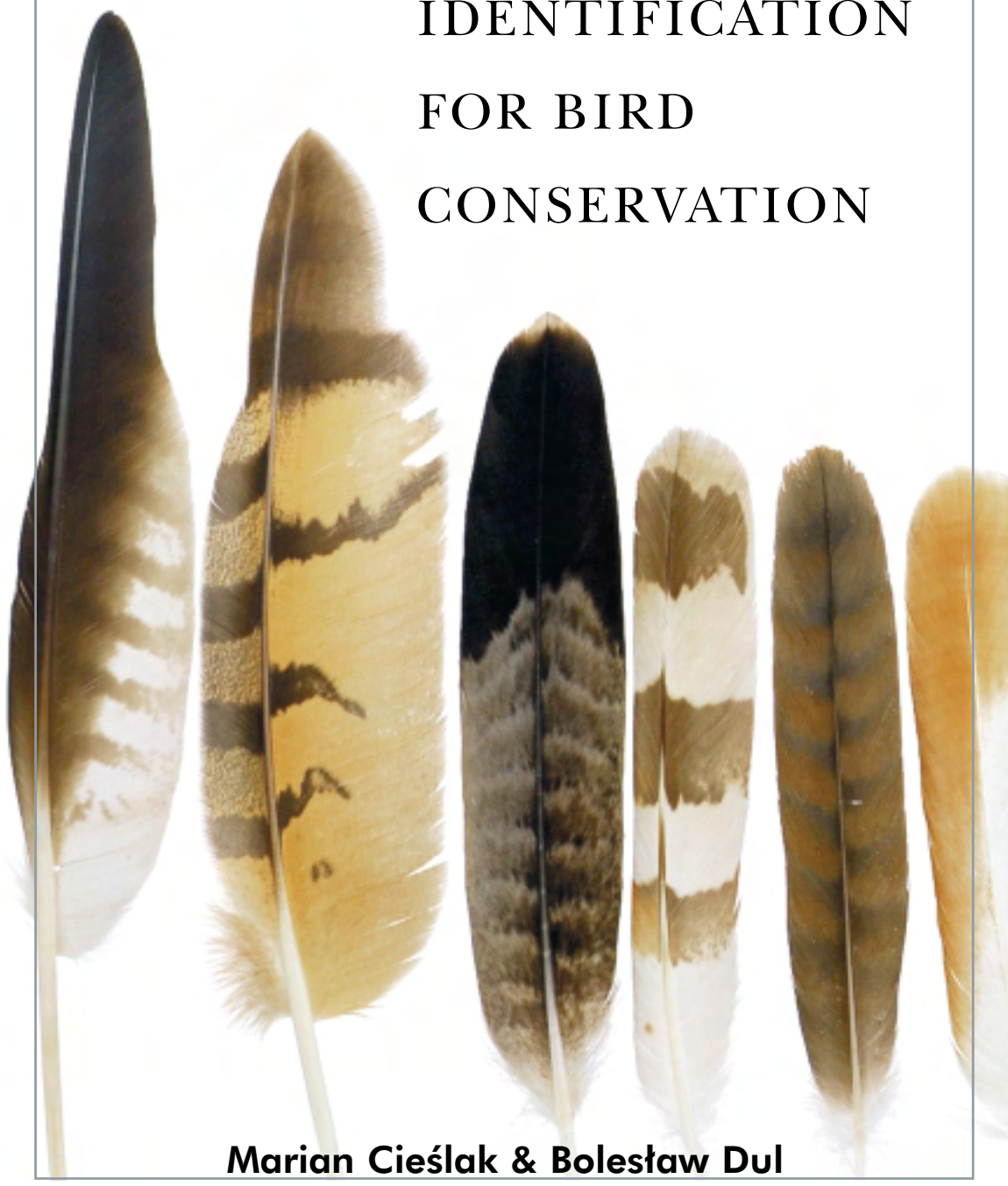
# FEATHERS

## IDENTIFICATION FOR BIRD CONSERVATION



Marian Cieślak & Bolesław Dul

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The Polish Society
for the Protection of Birds

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## IDENTIFICATION FOR BIRD CONSERVATION

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# Table of contents

## SECTION 3

# *Accipitres*
# LARGE SPECIES, BRIGHTLY PLUMAGED

The 4 species covered here resemble those from the previous section in their size. Their wingspans fall within the relatively wide range of 113–195 cm, though that of the Honey Buzzard does not overlap with those of the other species (see Table 2). Feather sizes are similar, however – e.g. Honey Buzzard tail-feathers are longer on average than those of the Osprey, while its secondaries are of more or less the same length as the Red Kite's or Osprey's (Table 8).

This section presents 4 species differing from those in Section 2 in the generally paler colour of the inner webs to the remiges and rectrices, and in clearly contrasting bars. Exceptions are Red Kite outer and middle secondaries, which resemble such feathers in species from Section 2. The distinctive barring to feathers of species from Section 3 is particularly helpful in identification, quite unlike that in Section 2 species, whose bars are less clear and conspicuous.

Ageing of single feathers is possible to juv./ad. categories only, while sexing is feasible for the Honey Buzzard alone.

**Table 7.** European populations and conservation status of species in Chapter 3. Data in columns 1 and 2 after *BirdLife International* (2004).

| Species | Breeding population (pairs) | EU25 Threat Status | EU Birds Directive Annex I | Berne Conv. Annex no. | Bonn Conv. Annex no. | CITES Appendix no. |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Red Kite *M. milvus* | 18 000 – 23 000 | declining | I | II | II | II |
| Osprey *P. haliaetus* | 5 300 – 6 300 | secure | I | II | II | II |
| Short-toed Eagle *C. gallicus* | 5 400 – 7 500 | secure | I | II | II | II |
| Honey Buzzard *P. apivorus* | 36 000 – 52 000 | secure | I | II | II | II |

# 9. RED KITE *Milvus milvus*

## Feather shape and size

Fingered parts of five outermost primaries relatively long, with ill-defined inner emargination on p5 (Plate 42), which can be absent from abraded feathers. Primaries longer and wider than in Osprey, though shafts thinner and more delicate. Inner primaries and secondaries relatively **short** and broad – of similar size to corresponding remiges in Honey Buzzard and even Common Buzzard (Table 10). Tail-feathers narrow, relatively pliable and very long, in particular outermost rectrices, which are over 10 cm longer than innermost ones (Table 8).

## Colour and pattern

**Adults**

Fingered parts of outer **primaries** black or blackish-brown, this colour also extending to emargination angle and web projection. Inner web white at edging and dark brown at shaft, with or without narrow and short (partial) barring. Outer web dark brown, without barring. Edge of inner web of inner primaries white, where central part of primary and outer web are pale brown or brown with fine bars, **wider** at shaft. **Red** tinge can occur between bars and at tip, this more noticeable on unworn feathers (and less intensive than on juv.). Shaft of outermost primaries (p10–8) **darker** at feather base than adjacent webs, but similar in colour to rest of feather. Shafts of remaining primaries same colour as on adjacent webs (Plate 41).

Webs paler **from below**, and barring less contrasting than from above. Shaft white at base, darkening to rest of feather and lacking barring there.

**Secondaries darker** than inner primaries, becoming **whitish at bases** of inner web. **6–7** complete bars to inner web, **wider** at shaft, but fading at tips of outer secondaries. Innermost secondaries brighter and with more clear white and red at base, and barred on both webs (Plates 43, 44).

Webs of **tail-feathers** characteristically red, with numerous fine and incomplete bars. Older birds show lack of barring to terminal parts of inner tail-feathers (t1–3). Outer tail-feathers darker towards tips with bars stronger and more numerous (up to 12). Shaft **dark brown** (of same colour as barring) (Plate 43). **From below,** webs paler, with traces of barring on white shaft.


**Plate 41** Primaries of adult Red Kite *M. milvus*.


**Plate 42** Primaries of juvenile Red Kite *M. milvus*.

**Juveniles**
Juvenile wing-feathers recall those of adults, though are narrower and more pointed, p5 without emargination (cf. Plates 41 and 42). Pale wing-feather edges with prominent red tinge (can be worn-out on abraded feathers). Quite wide bars on outer secondaries, concentrated near tips. Central and sub-central secondaries with more obvious subterminal band (Plate 44).

## Feather variability

Concerns presence and extent of barring and intensity of red colour, which is stronger on young birds (Plate 45).

## Possible confusion

- Primaries – larger Buzzards, outer primaries – Black Kite, Golden Eagle.
- Secondaries – all species from section 2, dark individuals of Common Buzzard and Long-legged Buzzard.
- Tail-feathers – rusty tinged tail-feathers of females Marsh Harrier and Long-legged Buzzard.


**Plate 43** Secondaries of juvenile and tail-feathers of adult Red Kite *M. milvus*.

**Plate 44** Comparison of feathers from juvenile and adult Red Kites *M. milvus* – in pairs, adult feathers on right.


**Plate 45** Variability to feathers of Red Kite *M. milvus*.

# 10. OSPREY *Pandion haliaetus*

## Feather shape and size

Outer primaries slim, with **long and sharp** fingers. Stem relatively **long**. P:7–9 with shallow inner emargination and with open emargination angle (only at near-right-angle on p10) (Plate 46).
Long outer primaries (especially p10) have thick, **though and flexible** shafts. Inner primaries relatively shorter, more delicate and of clearly thinner shafts. Secondaries narrow and delicate for bird of this size (narrower than, but of similar length to Common Buzzard's). Tail-feathers quite narrow, length similar or slightly greater than in Common Buzzard, rather shorter than in Honey Buzzard (Table 8).

## Colour and pattern

**Adults**
Fingered parts of outer **primaries blackish brown**, without barring. Inner webs dark brown at shafts and white at edges, showing 5–7 brown bars. **No barring** on 2–3 outer primaries – where only irregular tiny dots can occur. Outer webs dark brown, **lacking any barring**. Shaft colouration as of **adjacent webs**. Inner primaries brown with more or less conspicuous bars on inner webs only (Plate 46).
**From below,** webs paler, and barring less contrasting than from above. Shaft white, darker at fingered part, no barring (Plate 63).
**Secondaries** coloured as inner primaries, sometimes with traces of barring to outer webs. Amount of white and barring gradually reduces towards body. Inner secondaries sometimes uniformly brown (Plate 47).
**Tail-feathers** with narrow and pale tips, with **6–7 bars** running across both webs. Bars darker and broader towards tips. Inner webs darker at tips, outer webs brown. Outermost tail-feathers paler, central ones dark with no barring or very weak bars. Shaft paler than on adjacent feathers, normally without barring (Plate 47). **From below,** webs paler, and bars less contrasting.


**Plate 46** Primaries of adult Osprey *P. haliaetus* (p5 and p8 – worn feathers).


**Plate 47** Secondaries and tail-feathers of adult Osprey *P. haliaetus*.

**Plate 48** White feather tips of juvenile Osprey *P. haliaetus*.

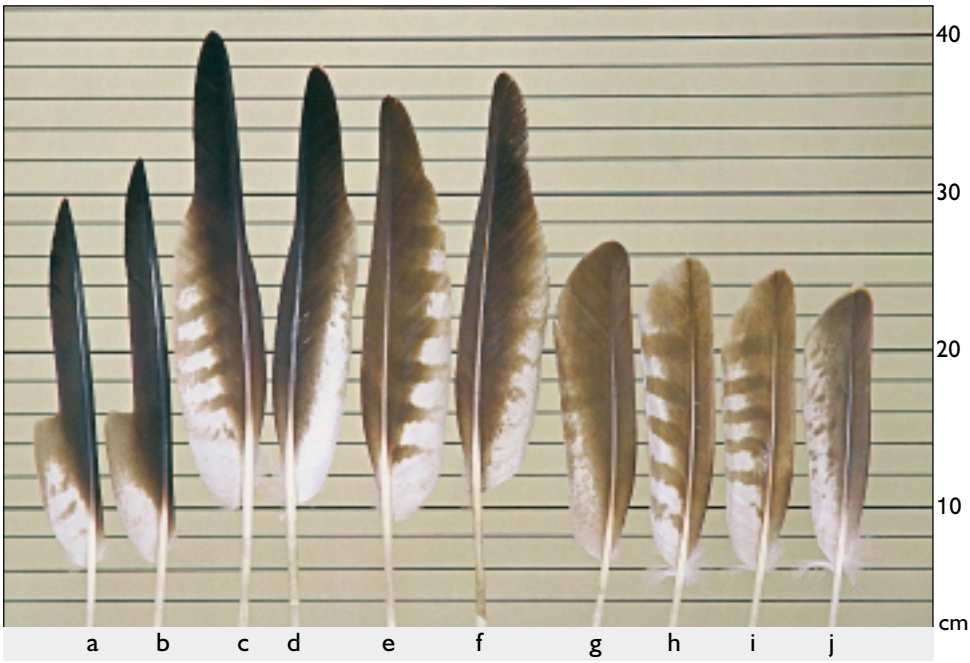


**Plate 49** Variability to primaries of Osprey *P. haliaetus*: d, j – juvenile.

**Juveniles**
Remiges and rectrices usually more contrasting, with obvious light-beige edges at tips (Plate 48). Barring on outer primaries spreads much further on juv. than on ad., even **up to p10.** Worn-out juv. feathers (bleached, with worn edges) difficult to tell from ad.

## Feather variability

Mainly concerns intensity or absence of barring on remiges (Plates 49, 50). There is often a high degree of abrasion, and worn or bleached feathers can differ markedly in colouration from fresh ones (Plate 46). Melanistic form can occur (Clark 1998, 1999).

## Possible confusion

Relates mostly to individuals with weak or no barring:
- Outer primaries – juvenile Golden Eagle, juvenile Black Kite,
- Secondaries – Buzzards, Goshawk, Black Kite, Booted Eagle, females Harriers,
- Tail-feathers – Common and Long-legged Buzzard, females and central tail-feathers Harriers.


**Plate 50** Variability to secondaries and tail-feathers in Osprey *P. haliaetus*.

# SPECIES INDEX

(...) species mentioned only in the context of comparisons with the species presented in Sections 1–14
**bold print** – species listed in Annex I to the Birds Directive
numbers in bold prints – pages of full discriptions of species

## Scientific names

## Names in English

**These are 12 tail-feathers of the same species**

**And this photo shows the inner primaries of 12 different species**

**This example may even come as something of a shock to professional ornithologists.** On the other hand, it illustrates just how neglected the field of ornithological diagnostics on the basis of single feathers is – notwithstanding its importance in efficient bird protection.

**But don't panic!** You are now holding a tool that will show you how to look at a feather in such a way that all the most important information necessary for species identification is obtained, and in many cases also details of the sex and age of the feather's former owner. And it is reliable identification of feathers from the species listed in Annex I to the EU Birds Directive that will help make their efficient protection possible.

**This guide book has been prepared, in order to meet the above needs, by two experienced experts/enthusiasts:**

**Marian Cieślak**, PhD (forester, landscape ecologist and current coordinator of nature protection projects with Poland's Ecofund Fundation) has been studying the feathers of birds of prey and owls for many years, as well as the relevant relationships with species ecology.

**Bolesław Dul**, M.D.PhD (doctor of medicine and cardiologist) has been fascinated by birds and their feathers since childhood. In his opinion, feathers are works of art inspired by nature.

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