



Cormorant. Adult (23-III).

IDENTIFICATION

80-100 cm. Black plumage, with bluish tinge on underparts; bill grey and yellow; black legs; on **breeding** plumage with a white patch on flanks.

SIMILAR SPECIES

This species is unmistakable in Aragon.

SEXING

Plumage of both sexes alike. Size can be useful in extreme birds: **male** with wing longer than 352 mm; bill depth (taken in middle) higher than 16 mm. **Female** with wing shorter than 345 mm; bill depth (taken in middle) shorter than 15 mm.

AGEING

This species is a scarce **breeder** in Aragon, so only **winter** plumage is described with 4 age groups: **Juvenile** with brown feathers tipped glossy blue on upperparts; feathers of upperparts and wing coverts rather narrow and pointed; underparts generally whitish, with some brown streaking; scapulars and outermost primaries with pointed tips; iris grey brown to blue green.

2nd year autumn/3rd year spring with feathers on crown and nape dark-bluish edged brown; upperparts with glossy feathers but some **juvenile** brown feathers may be retained; underparts strongly mottled due to emergence of subadult-type feathers, all tinged dark on tips; retained outermost primaries (about 4 to 6) worn and pale; iris emerald as in **adult**.

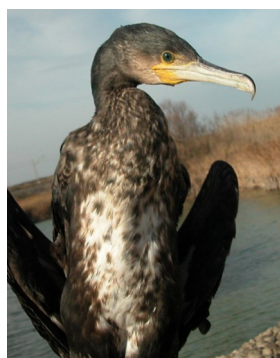
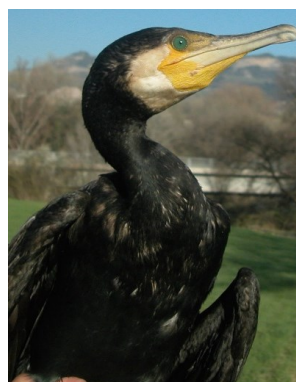
3rd year autumn/4th year spring only in birds which have retained the **juvenile** outermost primary (10th primary); some birds with brown feathers remaining on neck.

AGEING

Adult with upperparts black glossed metallic blue or purple; feathers of upperparts and wing coverts rather broad and rounded; underparts with black feathers; scapulars and outer primaries with rounded tips; iris emerald green.

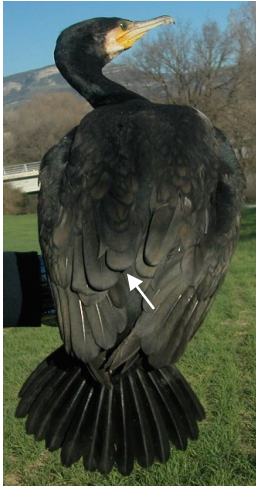


Cormorant. Ageing. Pattern of head and iris colour: top adult; bottom juvenile.



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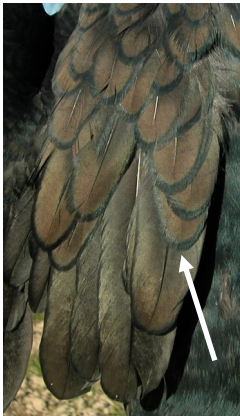
Cormorant. Ageing. Pattern of underparts: top left adult; top right 2nd year; left juvenile.



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Cormorant. Ageing. Pattern of upperparts: top left adult; top right 2nd year; left juvenile.



Cormorant. Ageing. Pattern of scapulars: left adult, right juvenile.



Cormorant. Ageing. Pattern and moult of primaries. From top to bottom: adult, 4th year spring, 3rd year spring, juvenile.

00720 Great Cormorant (*Phalacrocorax carbo*)

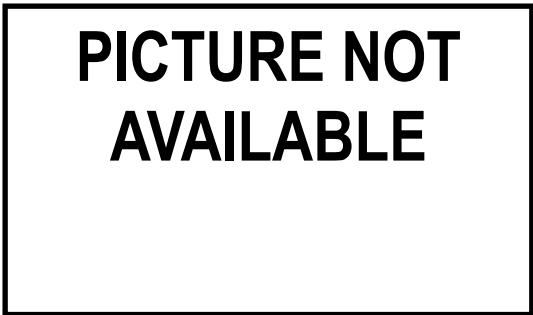
MOULT

Complete **postbreeding** moult, usually starting in July and finished in December; **adult** birds have a **prebreeding** moult changing body feathers since January till April. Extent of **postjuvenile** moult varies greatly usually including only body feathers; in summer of **2nd year** (sometimes before) starts moult of flight feathers, wich is arrested in autumn retaining 4 to 6 outer primaries and some tail feathers; these unmoulted **juvenile** feathers are changed in summer of **3rd year**; some birds may retain the outermost primary (10th primary) till **4th year**.

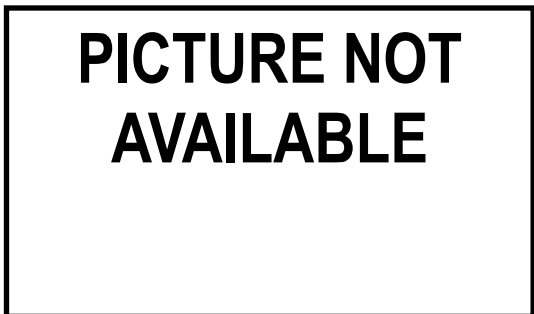
PHENOLOGY

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII

- Summer visitor ■ Resident
- Wintering ■ On passage



Cormorant. 3rd year autumn ().



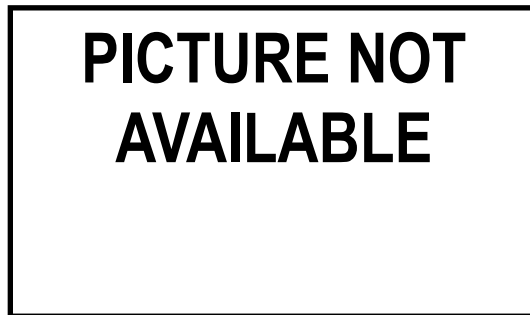
Cormorant. 2nd year autumn ().



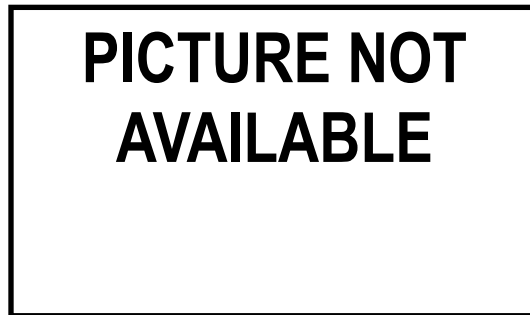
Cormorant. Juvenile (22-I).



Cormorant. Adult: head pattern and iris colour (23-III).



Cormorant. 3rd year autumn: head pattern and iris colour ().



Cormorant. 2nd year autumn: head pattern and iris colour ().

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Cormorant. Juvenile: head pattern and iris colour (22-I).



Cormorant. Nape pattern: left adult (23-III); right 4th year spring (06-III).



Cormorant. Crown pattern: left adult (23-III); right 4th year spring (06-III).



Cormorant. Nape pattern: left 3rd year spring (06-III); right juvenile (22-I).



Cormorant. Crown pattern: left 3rd year spring (06-III); right juvenile (22-I).



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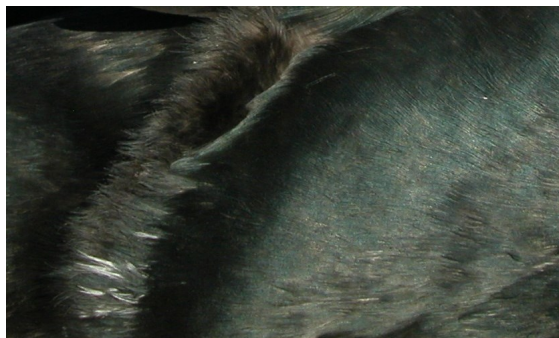
Cormorant. Underparts pattern: left adult (23-III); right 4th year spring ().

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Cormorant. Underparts pattern: left 2nd year autumn (); right juvenile (22-I).



Cormorant. Adult: flank pattern (23-III).



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Cormorant. Upperparts pattern: left adult (23-III); right 3rd year autumn ().

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Cormorant. 3rd year autumn: flank pattern ().

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Cormorant. 2nd year autumn: flank pattern ().

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Cormorant. Upperparts pattern: left 2nd year autumn (); right juvenile (22-I).

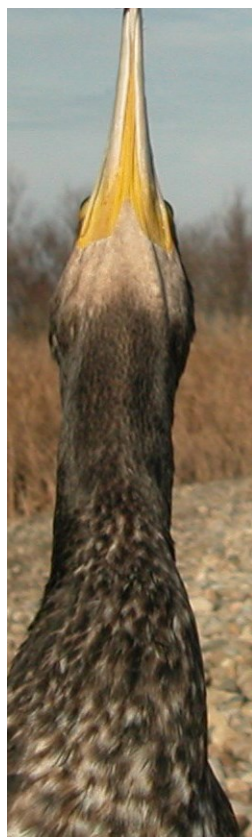


Cormorant. Juvenile: flank pattern (22-I).

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Cormorant. Pattern of chin and neck: left adult (23-III); right 4th year spring (06-III).



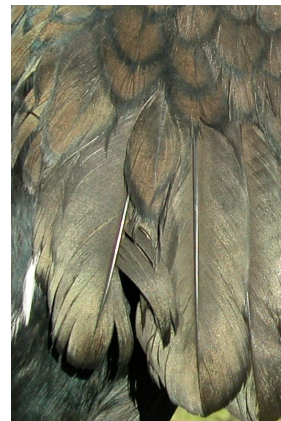
Cormorant. Pattern of chin and neck: left 3rd year spring (06-III); right juvenile (22-I).



Cormorant. Tail pattern: left adult (23-III); right 4th year spring (06-III).



Cormorant. Tail pattern: left 3rd year spring (06-III); right juvenile (22-I).



Cormorant. Pattern of scapulars: left adult (23-III); right 4th year spring (06-III).

00720 Great Cormorant (*Phalacrocorax carbo*)



Cormorant. Pattern of scapulars: left 3rd year spring (06-III); right juvenile (22-I).



Cormorant. Pattern of primary coverts. From top to bottom: adult (23-III); 4th year spring (06-III); 3rd year spring (06-III); juvenile (22-I).



Cormorant. Adult: pattern of primaries (23-III).



Cormorant. 4th year spring: pattern of primaries (06-III).

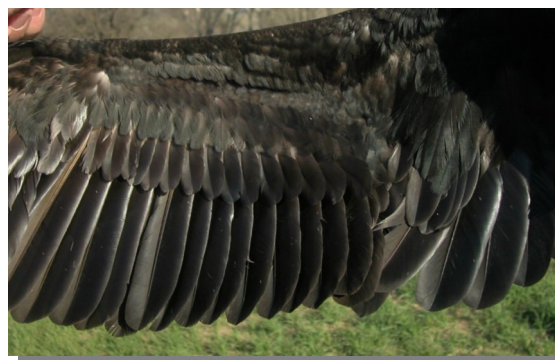
00720 Great Cormorant (*Phalacrocorax carbo*)



Cormorant. 3rd year spring: pattern of primaries (06-III).



Cormorant. Juvenile: pattern of primaries (22-I).



Cormorant. Adult: pattern of secondaries (23-III).



Cormorant. 4th year spring: pattern of secondaries (06-III).



Cormorant. 3rd year spring: pattern of secondaries (06-III).



Cormorant. Juvenile: pattern of secondaries (22-I).



Cormorant. Adult: pattern of wing (23-III).



Cormorant. 4th year spring: pattern of wing (06-III).



Cormorant. 3rd year spring: pattern of wing (06-III).



Cormorant. Juvenile: pattern of wing (22-l).