

# Field identification of Asian *Gyps* vultures

There are four species of vultures in the genus *Gyps* that occur sympatrically in Asia: White-rumped Vulture *G. bengalensis*, Long-billed Vulture *G. indicus*, Eurasian Griffon *G. fulvus* and Himalayan Griffon *G. himalayensis*. They are easily confused and relatively little has been published on their identification.<sup>1-8</sup> In this paper I present field marks that will aid in distinguishing the different species. The information is based on field studies of a large number of individuals of all four species in different plumages, and complemented by studies of a large number of photographs. Topography terminology essentially follows Grant & Mullarney,<sup>9</sup> with a few terms first introduced here (Fig. 1). Measurements are from Brown & Amadon,<sup>2</sup> Roberts,<sup>5</sup> and measurements by Bill Clark (*in litt.*) on live White-rumped Vultures. The term subadult refers to any non-juvenile, non-adult plumage, while the term immature refers to any non-adult plumage (*i.e.* also including juvenile).

## Distribution

The White-rumped Vulture breeds in SE Iran, SE Afghanistan, E Pakistan, India, Nepal and Bangladesh. It was formerly also widely distributed in SE Asia, but is now almost extinct there. It is sedentary, usually found in the lowlands (up to 1,000 m), but exceptionally as high as 3,100m.<sup>1,2,4-8,10,14,16</sup>

The Long-billed Vulture breeds in SE-most Pakistan, India (not in extreme SW), Nepal and Bangladesh, and was formerly also more widespread in SE Asia. Resident, it is usually found in the lowlands, although sometimes up to 1,500m. Two distinct subspecies are recognised, *indicus* in Pakistan and peninsular India south of the Gangetic plain and *tenuirostris*\* in India north of and including the Gangetic plain east to Assam, Nepal, Bangladesh, Burma and SE Asia (Mayr & Cottrell<sup>14</sup> are alone in claiming that it is *indicus* that occurs in Burma and SE Asia).<sup>1,2,4,5,7,8,14,16</sup>

The Eurasian Griffon breeds locally in N Africa, S Europe, Arabia and W and C Asia. In C Asia it breeds north to at least Pamir, in Afghanistan, Pakistan and Kashmir, possibly also in other parts of NW India and in Nepal and W China (*e.g.* Brown & Amadon,<sup>2</sup> Etchécopar & Hüe<sup>11</sup> and Mayr & Cottrell<sup>14</sup> extends its range to Altaj, but this is disputed by Clark [*in litt.*] and others. Brown & Amadon<sup>2</sup> also state that it breeds in China east to Nan Shan, but this is not corroborated by Cheng<sup>15</sup>). In winter it occurs widely in Pakistan, N India (south to *ca.* 20°N and east to Assam) and Nepal. It breeds in mountainous areas and has been seen up to 1980m in Nepal. In winter it also occurs in the plains. Two subspecies are generally recognised: *fulvus* breeds in most of the range, and *fulvescens*

from Afghanistan/Pakistan east (distribution of the subspecies is poorly known).<sup>1,2,4-7,10,12-14,16</sup>

The Himalayan Griffon breeds in C Asia north to Altaj (Clark *in litt.*), in Afghanistan, N Pakistan, the Himalayas, S Tibet and C China. It is mainly resident at high altitude (usually 600m to 4,000m, occasionally up to 6100m), although immatures regularly winter in the plains of N India and Nepal.<sup>1,2,4,5,11,13-16</sup>

Eurasian Griffon and Himalayan Griffon overlap in Tajikistan, Kyrgyzstan, SE Kazakhstan, northern Pakistan, Afghanistan and the Himalayas, uncommonly also in the plains of the N Indian subcontinent. White-rumped Vulture and Long-billed Vulture are sympatric in much of the Indian subcontinent, rarely also in SE Asia, and both can be seen together with Eurasian Griffon in Pakistan, N India and Nepal, sometimes also together with Himalayan Griffon in the same region.

## Moult and ageing

Determination of whether a bird is in a juvenile or subsequent plumage is often helpful for identification. In all four species the **juvenile** plumage can be distinguished by its uniformity (all feathers are the same age, whereas older birds show a mixture of feathers of different generations). Moreover, the feathers of the body, wings and tail are distinctly more pointed in juveniles than in subsequent plumages; when perched this is most obvious on the median and greater coverts, tertials and rear scapulars, while in flight the shape of the secondaries is easily judged (in juveniles the trailing edge of the secondaries looks evenly serrated due to the pointed feathers).

\*synonym: *nudiceps* (cf. Mayr & Cottrell 1979).

Especially in White-rumped Vulture, juvenile secondaries are further characterised by being uniformly coloured, while non-juvenile secondaries show blacker tips. The feathers of the ruff are longer, more lanceolate, less fluffy and generally browner in juveniles than in older birds.

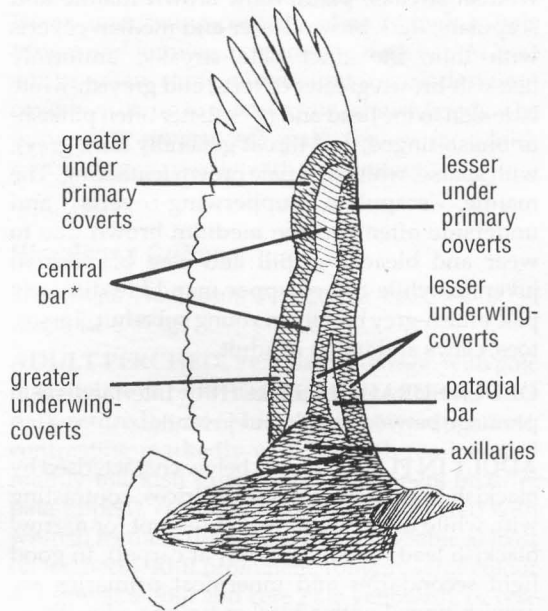
The start of the **post-juvenile moult** varies somewhat individually and between the species (presumably at least partly reflecting slightly different breeding periods; White-rumped may start considerably earlier than especially Eurasian Griffon and Himalayan Griffon<sup>1,16</sup>). In January-February many young White-rumped (*ca.* one year old) have moulted a large number of the juvenile body feathers and several upperwing-coverts and tertials, and the primary moult has begun. Other White-rumped Vultures have not yet started the post-juvenile moult at that time (some of these may actually be recently fledged!). In Long-billed, Eurasian Griffon and Himalayan Griffon the post-juvenile moult appears to start on average slightly later than in White-rumped, and in January-February most juveniles (close to one year old) have not yet started to moult, or have only renewed a few body feathers and/or upperwing-coverts. In all species the post-juvenile moult is very protracted.

The appearance of the resulting **first subadult plumage** is very similar to that of the juvenile, but most or all of the body feathers, upperwing-coverts and tertials have been renewed and have rounded tips; also a variable number of remiges and rectrices have been moulted and have rounded tips (In January-February at least Eurasian Griffon and Himalayan Griffon have often renewed only 2-3 inner primaries and no secondaries).

The succession of **subadult plumages** is not well known, but the **adult** plumage is gradually attained over a period of several years; Eurasian Griffon has been reported to be fully adult at the age of *ca.* 7 years.<sup>12</sup>

The **bill and cere** are all dark in juveniles of all four species (except for pale culmen of Long-billed *indicus* and some *tenuirostris*). The upper mandible gradually becomes paler, and in adults is largely pale (except in Long-billed *tenuirostris*). In Long-billed *indicus* and Himalayan Griffon the same applies to the cere, and in the former the claws also get paler. In Eurasian and Himalayan Griffons the iris is dark in the juvenile and progressively gets paler. The bare parts are often not fully adult when the rest of the plumage is largely adult-patterned (also the ruff generally takes a long time to become fully adult; Dick Forsman *pers. comm.*).

Fig. 1. Topography terminology of underside of wing.



\* In this case the central bar equates the median underwing-coverts and the median under primary coverts, but *e.g.* the bases or all of the greater underwing-coverts and lowest row of lesser underwing-coverts may also be included or just the bases of the median underwing-coverts.

## DESCRIPTIONS

### White-rumped Vulture

Body length 75-85cm, wingspan 180-210cm, weight *ca.* 3.5-5.7kg (ave. 4.4kg).

**ADULT PERCHED:** Unmistakable. Mostly blackish plumage with slate-grey secondaries. At close range shows thin whitish streaks on underside and feathering medially on tibia (not always visible). Bare skin on head and neck rather dark brown-grey, usually with a pink or maroon tinge to neck; hindneck has very sparse whitish feathering. Upper mandible pale bluish-grey, shading into blackish on tip and along cutting edges. Lower mandible and cere blackish. Tarsus and toes medium to dark grey, claws blackish. Iris dark brown, looking blackish.

**JUVENILE AND YOUNG SUBADULT PERCHED:** Gives an overall dark brown impression, darker than any of the other species except juvenile and young subadult Himalayan Griffon. Shows dark brown underside and

feathering on lateral tibia, with rather clearcut, thin, whitish streaks; plain, dark brown mantle and scapulars; dark brown lesser and median coverts with thin, indistinct pale streaks; uniformly blackish-brown greater coverts; and greyish-white bare skin to the head and neck (latter often pinkish- or bluish-tinged, and throat generally dark grey), with sparse, whitish or pale brown feathering. The mantle, scapulars, upperwing-coverts and underside often become medium brown due to wear and bleaching. Bill and cere blackish in juvenile, while top of upper mandible diffusely pale bluish-grey basally in young subadult. Tarsus, toes, claws and iris as in adult.

**OLDER SUBADULT PERCHED:** Intermediate in plumage between adult and juvenile.

**ADULT IN FLIGHT:** From below characterised by blackish body, remiges and rectrices, contrasting with white underwing-coverts (except for narrow blackish leading edge, widest at carpal). In good light secondaries and innermost primaries are greyish-tinged with a blacker trailing edge. From above the most notable feature is the contrasting white back and rump. Also, secondaries contrastingly slate-grey with blackish tips.

**JUVENILE AND YOUNG SUBADULT IN FLIGHT:** Overall rather dark plumage, with from above comparatively slight contrast between dark brown lesser and median coverts and blackish-brown remiges (slightly more pronounced contrast when wing-coverts worn and bleached); dark brown back and rump; and from below rather dark underwing-coverts and underside of body.

**OLDER SUBADULT IN FLIGHT:** Very dark plumage with much white on underwing-coverts (except for distinct, dark leading edge to the wing), and white or mottled-white back/rump.

### Long-billed Vulture

Body length 80-95 cm, wingspan ca. 205cm, no information on weight.

The two subspecies, *indicus* and *tenuirostris*, are distinguishable in the field. In juvenile *indicus* the head and neck appear pale (skin of head blackish or grey, but mainly covered with whitish feathers, and neck pale pinkish). Adult *indicus* shows blackish head and neck with sparse whitish feathers mainly on the nape. In contrast, all plumages of *tenuirostris* show blackish, completely

or nearly unfeathered head and neck. In juvenile *indicus* the bill and cere are blackish with a pale pinkish culmen, (possibly not shown by very young birds) while adult *indicus* has largely or entirely pale pinkish or yellowish bill (often with some blackish distally on sides) and pale pinkish, yellowish or greyish cere. In young juvenile *tenuirostris* the bill and cere are all blackish, though from at least January/February they often show a pale culmen. In subadult and adult *tenuirostris* the bill and cere are similar to that of juvenile or young subadult *indicus*, while the cere is blackish. Moreover, the bill is on average shorter and deeper, and the entire head appears less drawn-out and less slim in *indicus* than in *tenuirostris*. In all plumages, the mantle, scapulars and lesser and median coverts generally appear paler in *indicus* than in *tenuirostris*. The feathers on the lateral side of the tibia are relatively long and firm (*i.e.* contour feathers) in *indicus*, while they are mainly downy in *tenuirostris* (as pointed out by John Schmitt). Interestingly, *indicus* nests on crags, while *tenuirostris* breeds in trees<sup>1,2,16</sup>. Their taxonomic status needs to be investigated and they may prove to be better considered as separate species.

**ADULT PERCHED:** Characterised by pale brown upperside, upperwing-coverts and underside, contrasting markedly with blackish flight-feathers; blackish, sparsely feathered head and neck; and characteristic colour pattern of the bill and cere (see above).

**JUVENILE PERCHED:** Easily distinguished from adult by *e.g.* darker lesser and median coverts and mantle/scapulars with prominent pale streaks (each feather is dark brown with a distinct pale central streak, which, however, often coalesce on the lesser coverts so that these appear rather uniformly pale); lack of broad pale tips to median and greater coverts; slightly darker and more distinctly pale-streaked underside; and browner ruff, with longer, more lanceolate and less fluffy feathers; in *indicus* also much paler head and neck, and less extensively pale bill and cere than in adult (see above).

**SUBADULT PERCHED:** Young subadult are most similar to juvenile, but are paler overall, and the upperwing-coverts show less distinct pale streaks and broader pale tips (also to greater coverts). Also, underside less distinctly streaked, and bill paler, in *indicus* also cere (see above). Older subadults are more like adults.

**ALL PLUMAGES IN FLIGHT:** The different plumages are rather similar in flight, although young birds are slightly darker on the upperwing-coverts and mantle/scapulars than older birds. There is pronounced individual variation in the pattern of the underwings. Most individuals show a pale brown underside and relatively poorly marked underwing-coverts, contrasting distinctly with the remiges. However, often the lesser underwing-coverts are contrastingly dark brown, and sometimes the underwing-coverts are rather uniformly dark brown with several very narrow pale bars (Fig. 19). From above shows pale brown upperwing-coverts, contrasting markedly with remiges, and pale, generally whitish, back and rump. In older subadult and adult *indicus* and in all *tenuirostris*, blackish head/neck usually evident.

### Eurasian Griffon

Body length 95-105cm, wingspan 240-290cm, weight ca. 6.8-8.2kg.

The two subspecies, *fulvus* and *fulvescens*, are very similar. The latter is said to be paler and more rufous.<sup>12</sup>

**ADULT PERCHED:** Uniformly pale rufescent brown upperside and upperwing-coverts, contrasting markedly with remiges; rather dark brown underside (except for whitish feathering medially on tibia), with relatively distinct, thin, whitish streaks; mainly whitish, rather fully feathered head and neck; whitish, fluffy ruff; dark grey cere and pale yellowish bill; medium or dark grey tarsi and toes, and dark grey claws; and pale yellowish-brown iris.

**JUVENILE PERCHED:** Similar to adult, but shows indistinct, thin, pale streaks to lesser and median coverts; paler greater coverts lacking broad pale tips; paler underside with less contrasting whitish streaks; brown ruff with longer, more lanceolate and less fluffy feathers; blackish bill; and dark grey-brown iris.

**SUBADULT PERCHED:** Intermediate between adult and juvenile.

**ALL PLUMAGES IN FLIGHT:** Differences between plumages relatively slight. Medium to rather dark brown, usually rufous-tinged, underside of body and lesser underwing-coverts; usually rather broad whitish central bar (sometimes including greater underwing-coverts

and greater under primary coverts as well); and greater underwing-coverts usually blacker than lesser underwing-coverts, often showing pale fringes and forming a contrasting dark bar. At least adults often show rather uniform underwing-coverts, with up to four narrow whitish bands. The upperwing-coverts are pale (palest in adult), contrasting markedly with the remiges.

### Himalayan Griffon

Body length 115-125cm, wingspan ca. 260-310cm, weight ca. 8-12kg.

**ADULT PERCHED:** Very pale plumage, with pale buffy-white or brownish upperside (rear scapulars dark-centred), underside and upperwing-coverts, contrasting markedly with blackish remiges and mainly blackish greater coverts (inners broadly pale-tipped). Head and neck mainly covered with whitish feathers (pinkish skin often visible at least on foreneck). Ruff prominent, roughly same colour as upperside. Bill and cere pale yellowish, or cere more greyish. Tarsi and toes pale pinkish, and claws grey. Iris pale yellowish-brown.

**JUVENILE PERCHED:** Overall dark plumage with distinct, thin, whitish streaks to underside and entire upperside and lesser and median coverts. Ruff brown, consisting of long, lanceolate feathers. Bill and cere initially black, though from January-February bill often extensively pale horn or greyish. Tarsi and toes pale pinkish or greyish-pink, claws grey. Iris dark grey-brown.

**SUBADULT PERCHED:** Intermediate in appearance between juvenile and adult, gradually becoming paler above and below, and attaining paler bill, cere and iris. Young subadults differ from juvenile mainly in broader (especially distally), and more diffuse pale streaks on upperwing-coverts.

**JUVENILE AND YOUNG SUBADULT IN FLIGHT:** Gives a dark impression, both above and below. At close range shows heavily pale-streaked plumage.

**OLDER SUBADULT AND ADULT IN FLIGHT:** Gives an overall pale impression with contrasting blackish remiges and rectrices. The underwing-coverts and under primary coverts are white with a narrow dark leading edge (widest at the carpal), generally contrasting with at least slightly darker body.



## IDENTIFICATION

### White-rumped Vulture

**ADULT PERCHED:** Unmistakable. Mainly blackish plumage with white ruff and greyer secondaries are diagnostic.

**JUVENILE AND YOUNG SUBADULT PERCHED:** Easily distinguished from **juvenile and young subadult Long-billed Vulture** by distinctly darker lesser and median coverts, contrasting less clearly with the remiges (Long-billed shows prominent pale streaks, making coverts appear pale, in marked contrast with remiges); lack of distinct pale streaks to mantle and scapulars (well-marked pale streaks in Long-billed); and distinctly darker underside (including feathering on lateral tibia), with narrower, more clearcut, whiter and more contrasting streaks. Compared to Long-billed *tenuirostris* the head and neck are distinctly paler (blackish and nearly unfeathered in *tenuirostris*). In juvenile White-rumped the bill and cere are all blackish, while in young subadults the upper mandible is usually pale bluish-grey *basally*. In contrast, in juvenile and young subadult Long-billed (except perhaps young juvenile *tenuirostris*) the entire length of the culmen (including tip) is pale pinkish or yellowish; in young subadult *indicus* the cere is also pale. The bill of White-rumped is usually slightly shorter, deeper and more bulbous, than in Long-billed Vulture *indicus*, but some Long-billed are very similar to White-rumped. Compared to Long-billed *tenuirostris* the difference in the shape of the bill is usually more obvious, as *tenuirostris* generally has a longer and more slender bill than *indicus*.

More easily separated from **older subadult and adult Long-billed Vulture** by the much darker upperside, underside and upperwing-coverts; paler head and neck (mainly blackish head and neck in older subadult and adult *indicus*, though neck often pinkish in subadult; all blackish head and neck in *tenuirostris*); and differently coloured bill and cere (in Long-billed variable amount of pale pinkish or yellowish on bill, always covering entire culmen, and in *indicus* also pale cere).

Easily told from **juvenile Eurasian Griffon** by considerably darker and less rufous-tinged upperside, underside and upperwing-coverts, contrasting much less with the remiges. The head and neck (especially throat) are generally less

'woolly' and less whitish than in Eurasian Griffon, although some White-rumped approach Eurasian Griffon. In direct comparison, White-rumped is distinctly smaller and lighter than Eurasian Griffon, with less massive head and bill.

Told from **subadult and adult Eurasian Griffon** by much the same characters. The difference in the shade of the upperparts and upperwing-coverts is even more pronounced. However, in subadult and adult Eurasian Griffon the underside is distinctly darker with more contrasting whitish streaks than in juvenile Eurasian Griffon, and the difference from juvenile White-rumped is sometimes slight. Moreover, White-rumped differs from subadult and adult Eurasian Griffon by the uniformly dark greater coverts, scapulars and tertials (in Eurasian Griffon these feathers have broad pale tips) and by the differently coloured bill (more or less extensively pale yellowish upper mandible in Griffon).

Easily separated from **juvenile and young subadult Himalayan Griffon** by much less distinctly pale-streaked lesser and median coverts; plain mantle and scapulars (distinctly pale-streaked in Himalayan Griffon); and usually less heavily pale-streaked underside (though some White-rumped are close to Himalayan Griffon on their underside). Also, the head (especially throat) is usually less feathered and less-white; the tarsus/toes are usually darker and greyer (pale pinkish or greyish-pink in Himalayan Griffon); and the bill is usually darker (often extensively pale, also on tip, in juvenile Himalayan Griffon, from around one year old). When seen together, White-rumped is usually strikingly smaller than Himalayan Griffon.

The dark plumage of juvenile White-rumped prevents confusion with older **subadult and adult Himalayan Griffon**.

**OLDER SUBADULT PERCHED:** Easily identified by much the same characters as identify adults.

**ADULT IN FLIGHT:** Unmistakable. Mainly blackish plumage with white underwing-coverts/under primary coverts and white back/rump diagnostic.

**JUVENILE AND YOUNG SUBADULT IN FLIGHT:** Confusable with **all plumages of Long-billed Vulture**. From below distinguished by distinctly darker body (but beware of heavily worn and bleached White-rumped; Fig. 37). Also, the pattern of the underwings differs in several ways:

(1) The lesser underwing-coverts and axillaries are considerably darker than in most Long-billeds, and contrast less with the remiges; in White-rumped the lesser underwing-coverts, axillaries and body are the same colour (though see Fig. 37), while in Long-billed the lesser underwing-coverts are usually at least slightly darker than the axillaries and body. (2) The whitish patagial bar is more prominent and more contrasting (though sometimes it is equally distinct in Long-billed). (3) There is a whitish central bar of variable prominence, while the median and lesser under primary coverts are dark. In contrast, Long-billed shows a pale brown central bar and median under primary coverts, and the central bar is generally broader than in White-rumped. (4) In White-rumped the greater underwing-coverts and greater under primary coverts are uniformly brown-grey, marginally to distinctly paler than the lesser underwing-coverts, while in Long-billed these feathers are usually dark grey with pale fringes, and form a contrasting dark bar. Note that some (only old subadult and adult?) Long-billed show equally dark lesser coverts as White-rumped, and that sometimes the entire underwing-coverts are uniformly dark brown with several thin pale bars (Fig. 19); the latter pattern is not shown by White-rumped. **From above** White-rumped is easily separated from Long-billed by much darker upperside and lesser and median coverts, contrasting much less with the remiges (though White-rumped with strongly bleached lesser and median coverts can approach dark juvenile Long-billed). Another character which immediately distinguishes White-rumped from Long-billed is the dark back and rump (back and rump whitish in Long-billed, though sometimes pale brown in adult; however, note that the colour of the back and rump is sometimes difficult to judge on soaring birds due to overlapping scapulars). In White-rumped the head and neck are pale, whereas in Long-billed except juvenile and young subadult *indicus* the head and neck are blackish.

Resembles all plumages of **Eurasian Griffon**. **From below** distinguished from juvenile Eurasian Griffon by usually darker and less rufous-tinged body and lesser underwing-coverts, contrasting less with the remiges (though see Fig. 37). At close range the underside shows more contrasting whitish streaks than in juvenile Eurasian Griffon. However, compared to subadult and adult Eurasian Griffon, the difference in colour and streaking is rather slight. The whitish central bar is

usually less prominent than in Eurasian Griffon. Unlike in some juvenile Eurasian Griffon the underwing never shows a very wide whitish central bar which also includes the greater underwing-coverts. The greater underwing-coverts and greater under primary coverts never form a contrasting dark bar, whereas in Eurasian Griffon these feathers are frequently blackish, darker than the lesser coverts, with pale fringes, and form a characteristic dark bar. Also, White-rumped does not show more than two whitish bands on the underwing-coverts, whereas at least old subadult and adult Eurasian Griffon often show up to four rather narrow whitish bands. **From above** easily separated from Eurasian Griffon by much darker mantle, scapulars, back, rump and lesser and median coverts, contrasting less with the remiges (though beware of strongly worn and bleached White-rumped).

The dark plumage prevents confusion with **older subadult and adult Himalayan Griffons**. However, especially from a distance it is very similar to **juvenile and young subadult Himalayan Griffon**. The notable size difference is usually difficult to judge without direct comparison. However, with experience the silhouette is quite clearly different: White-rumped appears less heavily built and to have slightly narrower wings (especially the hand), a shorter tail and larger, more protruding head. When gliding overhead, the carpals tend to look more pointed than in Himalayan Griffon. Also, White-rumped generally soars on slightly raised wings with only slightly up-bent 'fingers', while Himalayan Griffon usually soars on more level wings with more distinctly up-bent 'fingers'. **From below** the most important difference is the (normally) reduced pale streaking compared to Himalayan Griffon, although some birds are very similar in this respect. Unlike Himalayan Griffon, the greater underwing-coverts and greater under primary coverts are often so pale brown-grey that they form a contrasting pale band. **From above** very similar to Himalayan Griffon, but has very indistinct pale streaks to lesser and median coverts, and lacks pale streaks on the mantle, scapulars, back and rump (distinct pale streaks in Himalayan Griffon, especially on lesser and median coverts, though this is difficult to see from a distance).

**OLDER SUBADULT IN FLIGHT:** The only confusion risk is some **old subadult or adult Eurasian Griffons** with extensively whitish

underwing-coverts (Fig. 21). However, the underside and the leading edge of the wings are generally distinctly blacker, the head and neck usually markedly darker, and in good light the secondaries usually appear greyer with more contrasting dark tips than in Eurasian Griffon. If seen from above the much darker upperside and upperwing-coverts easily distinguish White-rumped from Eurasian Griffon.

### Long-billed Vulture

**ADULT PERCHED:** Easily distinguished from all plumages of **White-rumped Vulture** (see p.38).

Easily confused with **subadult and adult Eurasian Griffon**. In direct comparison Long-billed is noticeably smaller and less heavily built, with less massive head and bill. The plumage is overall less rufous-tinged than in Eurasian Griffon. The lesser coverts are usually less uniformly pale than in Eurasian Griffon, since the lower, at least, frequently show slightly darker bases. The median coverts show darker bases, unlike in Eurasian Griffon. The underside and feathering on the lateral side of the tibia are distinctly paler, and lack the distinct, narrow, whitish streaks of Eurasian Griffon. The head and neck are blacker and less feathered (head and neck mainly covered with whitish feathers in Eurasian Griffon). Unlike Eurasian Griffon, the culmen of the upper mandible is always pale to the tip, and in *indicus* the cere is pale (contrastingly dark cere and sometimes tip of upper mandible in Eurasian Griffon). The iris is dark (chestnut), whereas it is paler (yellowish-brown) in old subadult and adult Eurasian Griffons, and unlike Eurasian Griffon, the claws are pale.

Differs from **juvenile Eurasian Griffon** by much the same characters (except for iris, which looks dark in juvenile Eurasian Griffon). Additional differences are: white ruff, consisting of short, fluffy feathers (brown, with longer and more lanceolate feathers in juvenile Eurasian Griffon); dark bases and pale tips to greater coverts, forming a dark bar (more uniformly coloured greater coverts in Eurasian Griffon); and in *indicus* pale cere and extensively pale upper mandible (all blackish bill and cere in juvenile Eurasian Griffon). The underside is paler than in juvenile Eurasian Griffon, with less distinct pale streaks.

Adult Long-billed is confusable with **older subadult and adult Himalayan Griffons**. In direct

comparison, Long-billed is much smaller and less heavily built, with less heavy bill. The head and neck are blacker and more sparsely feathered and the ruff is less prominent and more contrastingly white than in Himalayan Griffon (whitish or buffish-white feathering on head and neck in Himalayan Griffon, but at least foreneck sometimes rather bare and pinkish). Compared to adult Himalayan Griffon the mantle, scapulars and upperwing-coverts are slightly darker and browner, and the median and lower lesser coverts usually have darker bases. However, subadult Himalayan Griffons can be very similar to Long-billed in the colour and pattern of the upperside and upperwing-coverts. The tarsi and toes are medium to dark grey with contrasting pale pinkish claws, while in Himalayan Griffon the tarsi are pale pinkish and the claws are grey. The iris is darker than in Himalayan Griffon (yellowish-brown in old subadult and adult Himalayan Griffon). The colour pattern of the bill and cere is usually different from that of Himalayan Griffon, especially in the subspecies *tenuirostris* (largely or entirely pale yellowish bill and cere in adult Himalayan Griffon).

**JUVENILE PERCHED:** Easily separated from **juvenile and young subadult White-rumped Vulture** (see p.36 for differences).

Easily distinguished from juvenile **Eurasian Griffon**. Seen side by side the difference in size of body, head and bill is obvious (see above). The plumage is overall less rufous-tinged than in Eurasian Griffon. The lesser and, especially, median coverts are darker with more conspicuous pale streaks than in Eurasian Griffon, and the same applies to the mantle and scapulars. The underside and the feathering on the lateral side of the tibia are slightly paler than in Eurasian Griffon and show more diffuse, broader and less contrasting pale streaks. In *indicus* the face is blacker and less feathered and the neck is usually less feathered, while in *tenuirostris* all of the the head and neck are blacker and less feathered than in Eurasian Griffon (head and neck mainly covered with whitish feathers in Eurasian Griffon). In *indicus* and some *tenuirostris* the entire culmen is pale, unlike Eurasian Griffon.

Juvenile Long-billed differs from **subadult and adult Eurasian Griffon** by much the same characters. However, the difference in the pattern of the lesser and median coverts is even more pronounced as these are uniformly pale brown

without pale streaks in Eurasian Griffon. Also, unlike Eurasian Griffon, the greater coverts lack broad pale tips and consequently do not form a dark bar. The underparts are distinctly paler than in Eurasian Griffon and show less distinct whitish streaks. The bill is less extensively pale, and the iris is darker.

Juvenile Long-billed is similar to **juvenile Himalayan Griffon**, and shows similarly patterned mantle, scapulars and upperwing-coverts, although the pale streaks are generally broader, especially on the lesser coverts (though sometimes they are very similar; see Fig. 28 and 29). In direct comparison the size difference is obvious (see Fig. 29). The bill is relatively longer and more slender than in Himalayan Griffon. The clear-cut pale pinkish culmen shown by *indicus* at least is probably never matched by Himalayan Griffon (bill of latter is often rather pale, at least from January, though not only on the culmen). In *indicus* the face is more blackish, and the neck generally less feathered than in Himalayan Griffon, and in *tenuirostris* the head and neck are considerably blacker and barer. The underside is distinctly paler, with broader, more diffuse, buffier and less contrasting pale streaks than in Himalayan Griffon. The tarsi and toes are medium or dark grey, whereas they are pale pinkish or greyish-pink in Himalayan Griffon.

**SUBADULT PERCHED:** Easily distinguished from **juvenile and young subadult White-rumped Vulture** (see p.36).

Differs from **Eurasian Griffon** by much the same characters as distinguish adult and juvenile from Eurasian Griffon.

Could be confused with **Himalayan Griffon** in corresponding plumage. Young subadults can be told by much the same characters as distinguish between juveniles of the two species. Older subadults are quite similar to some subadult Himalayan Griffons, but can be distinguished by size; shape and pattern of bill; colour of tarsi and toes; and colour and amount of feathering of head and neck (see adult, above).

**ALL PLUMAGES IN FLIGHT:** Easily distinguished from **White-rumped Vulture** (see p.36).

Confusable with **all plumages of Eurasian Griffon**. The smaller and lighter build than Eurasian Griffon is not always clear without direct comparison. The plumage is overall less rufous-

tinged than in Eurasian Griffon. **From below** it is usually easily distinguished from Eurasian Griffon by paler body and pale brown rather than whitish central bar; in Long-billed the body (at least rear), axillaries and central bar are similarly coloured, and are usually at least slightly paler than the lesser underwing-coverts, whereas in Eurasian Griffon the body and lesser underwing-coverts are concolorous and are significantly darker than the central bar. The underwing-coverts of Long-billed are often paler and more uniformly brown than in Eurasian Griffon (Fig. 18). Individuals with dark underwing-coverts with several thin pale bars (Fig. 19) differ from similarly patterned Eurasian Griffons by distinctly paler body than underwing-coverts (body as dark as lesser underwing-coverts in Eurasian Griffon); also the pale bars are sometimes less distinct in Long-billed than in any Eurasian Griffon. Older subadult and adult *indicus* and all *tenuirostris* further differ from Eurasian Griffon by the blackish head and neck. **From above** Long-billed usually differs from Eurasian Griffon by whiter back and rump, but there is some overlap. Subadult and adult birds also differ from Eurasian Griffon by the dark bases to the median coverts, forming a second dark bar on the upperwing-coverts (occasionally absent).

Easily distinguished from **juvenile and young subadult Himalayan Griffons** by the overall paler plumage. **From below** differs in much the same ways as from Eurasian Griffon and especially immature White-rumped (see above and p.37, respectively). **From above** usually told by considerably paler lesser and median coverts, contrasting more with the remiges (this is surprising, since the upperwing-coverts are often so similar in these two species when perched; however, bleached Himalayan Griffon can approach dark juvenile Long-billed; Fig. 33), and by the whitish back and rump (dark in Himalayan Griffon).

Confusable with **older subadult and adult Himalayan Griffon**. **From below** distinguished by the browner underwing-coverts and under primary coverts, which are never all white with a narrow dark leading edge as they are in Himalayan Griffon. Unlike Himalayan Griffon the underwing-coverts are never paler than the body, and the body never appears close to whitish. Compared to subadult Himalayan Griffon the body is less distinctly streaked in Long-billed. **From above** Long-billed is similar to Himalayan Griffon, but is generally slightly darker and browner on the





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Fig. 8. Juvenile Long-billed Vulture *Gyps i. tenuirostris* (top), with juvenile (bottom left) and young subadult (bottom right) White-rumped Vulture *Gyps bengalensis*, NW Uttar Pradesh, India, early February. Note all black bill/cere and head/neck (with very sparse whitish feathers); downy lateral tibia; and darker lesser and median coverts than *indicus*. (Photo: Dan Zetterström)

Fig. 9. Young subadult Long-billed Vulture *Gyps i. tenuirostris*, Assam, mid February. Note overall rather pale plumage; all black head/neck (with very sparse whitish feathers); pale culmen to upper mandible; and downy lateral tibia. (Photo: Anders Paulsrud)

Fig. 10. Adult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late January. Mainly blackish plumage with whitish ruff and grey secondaries. Note colour pattern of bill and cere. (Photo: Göran Ekström)

Fig. 11. Old subadult Eurasian Griffon *Gyps fulvus*, Rajasthan, India, early February. Note mainly pale yellowish bill (tip dark); blackish cere; mainly whitish head/neck; pale lesser and median coverts and upperside; and rather dark underside. (Photo: Göran Ekström)

Fig. 12. Adult Himalayan Griffons *Gyps himalayensis*, Nepal, February. Note overall pale plumage; pale head/neck; pale bill/cere; and pinkish tarsus/toes. (Photo: Per-Olof Johansson)

Fig. 13. Adult Long-billed Vulture *Gyps i. indicus*, Rajasthan, India, late January. Note nearly all pale bill/cere; blackish head/neck (scant whitish feathers); and pale lesser and median coverts and upperparts. (Photo: Dan Zetterström)



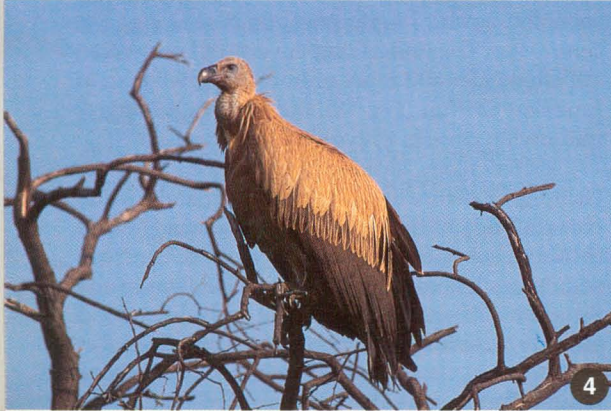


Fig. 2. Juvenile White-rumped Vultures *Gyps bengalensis*, India, January. Note overall rather dark plumage; relatively indistinct whitish streaks to lesser and median coverts; thin, distinct whitish streaks on underparts; and all black bill/cere. (Photo: Markku Huhta-Koivisto)

Fig. 3. Young subadult White-rumped Vulture *Gyps bengalensis* (right), and juvenile Long-billed Vulture *Gyps i. indicus* (left), Rajasthan, India, February. Note overall rather dark plumage, thin whitish streaks below, and all black bill/cere of former, and pale pinkish culmen (including tip) to upper mandible and rather pale underside of latter. (Photo: Eva Wallander)

Fig. 4. Juvenile Eurasian Griffon *Gyps fulvus*, Gujarat, India, January. Note pale, rufous-tinged lesser and median coverts with indistinct pale streaks; rather indistinctly pale-streaked underside; and all black bill and cere. (Photo: Bill Clark)

Fig. 5. Juvenile Himalayan Griffon *Gyps himalayensis*, Rajasthan, India, December. Note overall dark plumage, with distinct pale streaks to lesser and median coverts and underparts; relatively pale upper mandible; and pinkish-tinged tarsus and toes. (Photo: Bill Clark)

Fig. 6. Juvenile Long-billed Vulture *Gyps i. indicus*, Gujarat, India, early August. Note prominent pale streaks to lesser and median coverts; rather pale underside; and pale pinkish culmen (including tip) to upper mandible. (Photo: Arnoud B. van den Berg)

Fig. 7. Young subadult Long-billed Vulture *Gyps i. indicus*, Rajasthan, India, early February. Note overall rather pale plumage and colour pattern of bill and cere. (Photo: Göran Ekström)





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Fig. 14. Juvenile White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late September. Note overall dark plumage; moderately distinct pale streaks on underparts; and whitish patagial and central bars (latter narrow). (Photo: Arnoud B. van den Berg)

Fig. 15. Young subadult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, January. This individual shows very narrow central bar; contrastingly pale grey greater underwing-coverts and greater under primary coverts (not shown by any other species); and rather distinct whitish streaks on the underparts. (Photo: Markku Huhta-Koivisto)

Fig. 16. Old subadult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late January. Note overall very dark plumage with extensively whitish underwing-coverts; dark head/neck; and greyish secondaries with blackish tips. (Photo: Göran Ekström)

Fig. 17. Juvenile Long-billed Vulture *Gyps i. indicus*, Rajasthan, India, late September. Note overall rather pale plumage; broad, pale brown central bar; dark bar on greater underwing-coverts and greater under primary coverts; and pale head/neck. (Photo: Arnoud B. van den Berg)

Fig. 18. Adult Long-billed Vulture *Gyps i. indicus*, Rajasthan, India, late January. Note overall pale plumage; dark bar on greater underwing-coverts and greater under primary coverts; and blackish head/neck. (Photo: Göran Ekström)

Fig. 19. Adult/old subadult Long-billed Vulture *Gyps i. indicus*, Uttar Pradesh, India, December. This individual shows rather dark underwing-coverts, with several indistinct pale bars, and contrastingly pale body. (Photo: Bill Clark)





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Fig. 20. Juvenile Eurasian Griffon *Gyps fulvus*, Pakistan, February. Note medium dark, rufous-tinged (colour accentuated by morning light) plumage; moderately distinct pale streaking on underparts; prominent, whitish central bar; and dark bar on greater underwing-coverts. (Photo: Björn Johansson)

Fig. 21. Old subadult Eurasian Griffon *Gyps fulvus*, Tajikistan, July. This individual shows unusually broad central bar. Note rather uniformly (not heavily streaked; cf. old subadult Himalayan Griffon), dark brown (not blackish; cf. old subadult White-rumped) underside, and mainly whitish head/neck (dark in old subadult White-rumped). (Photo: Magnus Ullman)

Fig. 22. First subadult (3rd calendar-year) Himalayan Griffon *Gyps himalayensis*, NW Uttar Pradesh, India, late January. Note overall dark plumage with whitish patagial and central bars, and heavily white-streaked underside. (Photo: Dan Zetterström)

Fig. 23. Young subadult Himalayan Griffon *Gyps himalayensis*, Kashmir, India, early May. Note heavily pale-streaked underside (Photo: Urban Olsson)

Fig. 24. Old subadult Himalayan Griffon *Gyps himalayensis*, Qinghai, China, mid June. Note all-white underwing-coverts/under primary coverts with dark leading edge, and moderately dark, pale-streaked body. (Photo: Göran Ekström)

Fig. 25. Adult Himalayan Griffon *Gyps himalayensis*, Nepal, April. Note all-white underwing-coverts/under primary coverts with dark leading edge and pale brownish body. (Photo: Urban Olsson)





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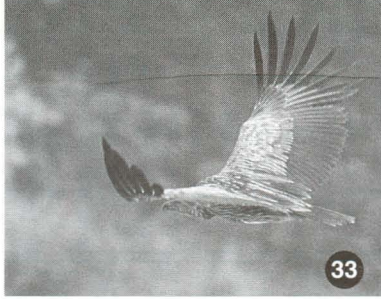


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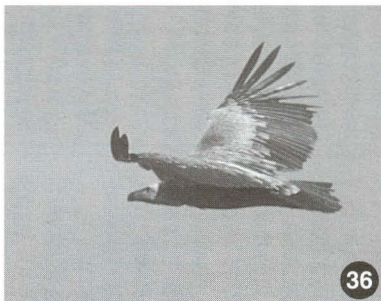
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Fig. 26. Adult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late January. Note all-white underwing-coverts/under primary coverts with dark leading edge and blackish body. (Photo: Göran Ekström)

Fig. 27. Adult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late January. Note blackish plumage with grey secondaries and white back/rump. (Photo: Göran Ekström)

Fig. 28. From left to right: old subadult White-rumped Vulture *Gyps bengalensis* (foreground), juvenile Himalayan Griffon *Gyps himalayensis* (background), juvenile Long-billed Vulture *Gyps i. indicus*, old subadult White-rumped Vulture, and young subadult White-rumped Vulture, Rajasthan, India, early February. Cf. especially patterns of upperparts, upperwing-coverts, underparts/lateral tibia, and bills. The Long-billed shows darker than usual lesser and median coverts. (Photo: Göran Ekström)

Fig. 29. Juvenile Himalayan Griffon *Gyps himalayensis* (in background Long-billed Vulture *Gyps i. indicus*, young subadult to the left and juvenile to the right), Rajasthan, India, early February. Note distinct pale streaks to upperparts and lesser and median coverts; dark feathers with narrow pale streaks on lateral tibia; mainly dark bill/cere; and pinkish tarsus/toes. (Photo: Göran Ekström)

Fig. 30. Young subadult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late February. Note pale (bluish/greyish) base to upper mandible and overall rather dark plumage. (Photo: Urban Olsson)

Fig. 31. Juvenile Long-billed Vulture *Gyps i. indicus*, Rajasthan, India, late February. Note pale (pinkish/yellowish) culmen (including tip) and rather pale, broadly and diffusely pale-streaked underside. (Photo: Urban Olsson)

Fig. 32. Young subadult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late January. Note relatively dark upperwing-coverts (dark back/rump not visible). (Photo: Göran Ekström)

Fig. 33. First subadult (3rd calendar-year) Himalayan Griffon *Gyps himalayensis*, Uttar Pradesh, India, December. Note moderate contrast between upperwing-coverts (bleached) and remiges, and dark back/rump. (Photo: Bill Clark)



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Fig. 34. Juvenile Long-billed Vulture *Gyps i. indicus*, Uttar Pradesh, India, December. Note rather pale lesser and median coverts and white back/rump. (Photo: Bill Clark)

Fig. 35. Adult Long-billed Vulture *Gyps i. indicus*, Uttar Pradesh, India, December. Note very pale lesser and median coverts, white back/rump and blackish head/neck. (Photo: Bill Clark)

Fig. 36. Young subadult Eurasian Griffon *Gyps fulvus*, Rajasthan, India, early February. Note pale, rufous-tinged lesser and median coverts. This individual shows whitish back/rump. (Photo: Göran Ekström)

Fig. 37. Young subadult White-rumped Vulture *Gyps bengalensis*, Rajasthan, India, late January. This individual is exceptionally pale (bleached/worn) on the body. Cf. Long-billed in Fig. 38 and note e.g. darker lesser underwing-coverts/axillaries; whiter central bar, which does not extend onto under median primary coverts; and less 'conspicuous' greater underwing-coverts/greater under primary coverts (indistinctly pale-fringed, forming slightly contrasting dark bar in Long-billed in Fig. 38). (Photo: Dan Zetterström)

Fig. 38. Young subadult Long-billed Vulture *Gyps i. indicus*, Rajasthan, India, late January. Cf. White-rumped in Fig. 37. (Photo: Dan Zetterström)

# SUMMARY OF MOST IMPORTANT CHARACTERS

Perched

White-rumped (WRV)		Long-billed (LBV)		Eurasian Griffon (EG)		Himalayan Griffon (HG)	
adult	juv/young subad	adult	juv/young subad	adult	juv/young subad	adult	juv/young subad
Unmistakable. Mostly blackish with slate-grey secondaries.	Overall dark brown. Upperside uniform. Indistinct pale streaks on upperwing-covs. Thin whitish streaks on underside. Bill + cere blackish in juv; top of upper mandible pale bluish-grey basally in young subad (tip always dark). Cf. imm. LBV, EG, HG.	Pale brown upperside, upperwing-covs + underside without distinct pale streaks. Blackish, sparsely feathered head + neck. <i>tenuirostris</i> : bill + cere blackish with pale pinkish culmen. Cf. ad EG, HG.+ <i>indicus</i> : largely or entirely pale bill (tip always pale) + cere.	Dark brown upperside with distinct whitish streaks. Lesser + med covs pale due to prominent whitish streaks. Underside rather pale; broad, diffuse, pale buffish streaks. <i>tenuirostris</i> : blackish, sparsely feathered head + neck; bill + cere all blackish, or with pale culmen (including tip). <i>indicus</i> : bill + cere blackish with culmen (including tip) pale pinkish. Cf. imm. WRV, EG, HG.	Uniformly pale rufescent brown upperside + upperwing-covs. Rather dark brown underside, with thin, whitish streaks. Mainly whitish, fully feathered head + neck. Dark grey cere + largely pale yellowish bill, often with dark tip. Cf. ad LBV, HG.	Pale rufescent brown upperside + upperwing-covs, with indistinct pale streaks, especially to latter. Medium dark brown underside, with indistinct, pale streaks. Mainly whitish, rather fully feathered head + neck. Blackish bill + cere, or bill paler on top. Cf. imm WRV, ad EG, HG.	Overall very pale; pale buffy-white or very pale brownish upperside, upperwing-covs + underside. Mainly whitish or buffish-white, rather fully feathered head + neck. Bill and cere pale yellowish, sometimes with some dark at tip. Cf. ad LBV, EG.	Dark brown upperside with distinct whitish streaks. Lesser + med covs rather pale due to prominent whitish streaks. Dark brown underside with rather prominent whitish streaks. Mainly whitish, rather fully feathered head + neck. Bill + cere blackish, or bill medium pale on top. Cf. imm WRV, LBV.

# SUMMARY OF MOST IMPORTANT CHARACTERS

In flight

White-rumped (WRV)		Long-billed (LBV)	Eurasian Griffon (EG)	Himalayan Griffon (HG)	
adult	juv/young subad	all plumages	all plumages	adult	juv/young subad
<p>Unmistakable.</p> <p><b>Below:</b> Blackish body, remiges + rectrices, white underwing-coverts with narrow blackish leading edge.</p> <p><b>Above:</b> Contrasting white back and rump. Secondaries + inner primaries slate-grey with blackish tips.</p>	<p>Head/neck pale.</p> <p><b>Below:</b> Rather dark brown lesser underwing-covs and body, especially latter thin white-streaked. Central bar whitish (often indistinct). Greater underwing-covs uniformly brown-grey.</p> <p><b>Above:</b> Upperwing-covs rather dark brown, contrasting relatively little with remiges (more contrast when wing-covs worn + bleached); indistinct pale streaking. Dark brown back + rump. Cf. EG, LBV, imm HG.</p>	<p>In older subad + ad <i>indicus</i> and in all <i>tenuirostris</i> blackish head/neck (pale in other plumages).</p> <p><b>Below:</b> Pale brown body. Lesser underwing-covs medium brown, usually darker than body. Central bar same colour as body. Greater underwing-covs often dark grey with pale tips, forming contrasting dark bar. Sometimes underwing-covs uniformly pale brown (same colour as body), or dark brown, darker than body.</p> <p><b>Above:</b> Pale brown upperwing-coverts, contrasting markedly with remiges. Pale, generally whitish, back and rump. Cf. EG, ad HG, imm WRV.</p>	<p>Head/neck pale.</p> <p><b>Below:</b> Medium to dark brown, usually rufous-tinged body + lesser underwing-covs. Usually broad whitish central bar (sometimes including greater underwing-covs). Greater underwing-covs usually blacker than lesser, often showing pale tips and forming a dark bar. Adults often show up to four whitish bands on underwing covs. Thin pale streaks on underside.</p> <p><b>Above:</b> Upperwing-covs pale, contrasting markedly with remiges. Back + rump sometimes contrastingly whitish. Cf. HG, LBV, imm WRV.</p>	<p>Head/neck pale.</p> <p><b>Below:</b> Underwing-covs white with narrow dark leading edge (widest at carpal), generally contrasting with at least slightly darker body.</p> <p><b>Above:</b> Pale buffy-white or very pale brownish upperside + upperwing-covs, strongly contrasting with blackish remiges. Cf. LBV, EG.</p>	<p>Head/neck pale.</p> <p><b>Below:</b> Dark brown underwing-covs and underside of body, especially latter heavily white-streaked. Central bar whitish (often indistinct). Greater underwing-covs uniformly brown-grey.</p> <p><b>Above:</b> Upperwing-covs medium dark, contrasting relatively little with remiges (more contrast when wing-covs worn + bleached); at close range upperside + upperwing-covs prominently pale-streaked. Dark brown back + rump. Cf. LBV, EG, imm WRV.</p>



mantle/scapulars and upperwing-coverts than adult Himalayan Griffon (though may be similar to older subadult Himalayan Griffon), and usually shows more contrastingly pale back and rump (but back and rump sometimes contrastingly whitish in Himalayan Griffon). Also, unlike adult Himalayan Griffon, the median coverts usually show dark bases (though older subadult Himalayan Griffon often show darker bases to the median coverts). Older subadult and adult *indicus* and all *tenuirostris* further differ from Himalayan Griffon by blackish head and neck.

## Eurasian Griffon

**ADULT PERCHED:** The main confusion risk is **adult and older subadult Long-billed Vulture** (see p.38). For differences from **White-rumped Vulture** see p.36.

Adult Eurasian Griffon is easily told from **juvenile and young subadult Himalayan Griffon** by much paler and more uniform mantle, scapulars and lesser and median coverts; broadly pale-tipped greater coverts; overall more rufous-tinged plumage; whitish, fluffy ruff; and paler, yellowish upper mandible.

Easily distinguished from **adult and old subadult Himalayan Griffon** by darker and more rufous-tinged mantle/scapulars and upperwing-coverts, and distinctly darker brown underside, with more contrasting, more clearcut and thinner whitish streaks. Also the cere is always dark grey (pale, generally yellowish in Himalayan Griffon), and the tarsi and toes are medium or dark grey (pale pinkish in Himalayan Griffon).

Similar to some 'semi-old' **subadult Himalayan Griffons**, but mantle/scapulars and lesser and median coverts more rufous-tinged and more uniformly coloured (slightly mottled appearance in these Himalayan Griffons due to darker bases of feathers); underside more rufous-tinged and less heavily pale-streaked; and tarsi and toes grey (pale pinkish in Himalayan Griffon).

**JUVENILE PERCHED:** For differences from **White-rumped Vulture** and **Long-billed Vulture** see p.36 and 38, respectively.

Easily told from **juvenile and young subadult Himalayan Griffons** by much paler, much more uniform and more rufous-tinged mantle/

scapulars and lesser and median coverts; and paler, less contrastingly pale-streaked and more rufous-tinged underside. Also, shows medium or dark grey tarsi and toes (pinkish or greyish-pink in Himalayan Griffon).

Easily distinguished from **adult and older subadult Himalayan Griffon** by darker and more rufous-tinged mantle, scapulars and upperwing-coverts; more rufous-tinged and usually darker brown underside with more clearcut, thinner pale streaks; blackish bill and cere; and grey, not pale pinkish, tarsi and toes.

**SUBADULT PERCHED:** Depending on age, differs from **Himalayan Griffon** by same characters as described under adult or juvenile respectively (see above). For differences from **White-rumped Vulture** and **Long-billed Vulture** see p.36 and 38, respectively.

**ALL PLUMAGES IN FLIGHT:** For differences from **White-rumped Vulture** and **Long-billed Vulture** see p.37 and 39, respectively

All plumages are confusable with **Himalayan Griffon**. The shape tends to be subtly different from that of Himalayan Griffon: the head appears slightly larger, the body less 'barrel-shaped', and the tail slightly shorter. Generally soars on slightly lifted wings (usually rather level wings in Himalayan Griffon). From below easily confused with **juvenile** and particularly **young subadult Himalayan Griffon**. The underside is slightly paler and more rufous-tinged, and shows significantly thinner and less distinct pale streaks than in Himalayan Griffon. The central bar is on average broader and more prominent than in Himalayan Griffon, which never shows a contrasting blackish bar on the greater underwing-coverts. From above easily distinguished from juvenile and young subadult Himalayan Griffon by much paler mantle, scapulars, back, rump, and lesser and median coverts, which contrast significantly with the remiges.

**From below** easily distinguished from **old subadult and adult Himalayan Griffons** by less extensively white underwing-coverts (in Himalayan Griffon nearly or entirely white with narrow dark leading edge) and by more rufous-tinged and usually darker body. **From above** more closely resembles old subadult and adult Himalayan Griffon, but the mantle, scapulars, back, rump and lesser and median coverts are generally slightly darker and more rufous-tinged.

Individuals with much white on the median and greater underwing-coverts (Fig. 21) can be very similar to some **subadult Himalayan Griffons**. **From below** these individuals differ mainly in darker, less heavily pale-streaked and generally more rufous-tinged undersides. They never show as extensively whitish underwing-coverts as old subadult and adult Himalayan Griffons (probably never so extensively white that the patagial bar disappears). **From above** they usually differ from Himalayan Griffon by more rufous-tinged and generally more uniform lesser and median coverts.

## Himalayan Griffon

**ADULT PERCHED:** Not confusable with **White-rumped Vulture**. For differences from **Long-billed Vulture** and **Eurasian Griffon** see p.38 and 48, respectively.

**JUVENILE PERCHED:** Most similar to juvenile **Long-billed Vulture** (see p.39). Also confusable with juvenile and young subadult **White-rumped Vulture** and **Eurasian Griffon** (see p.36 and 38, respectively).

**SUBADULT PERCHED:** For differences from **White-rumped Vulture**, **Long-billed Vulture** and **Eurasian Griffon** see p.36, 39 and 48, respectively.

**JUVENILE AND YOUNG SUBADULT IN FLIGHT:** Closely resembles juvenile and young subadult **White-rumped Vulture** (see p.37). For differences from **Long-billed Vulture** and **Eurasian Griffon** see p.39 and 48, respectively.

**OLDER SUBADULT AND ADULT IN FLIGHT:** Main confusion risk is **Long-billed Vulture** (see p.39). Especially some subadults are also confusable with **Eurasian Griffon** (see above).

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