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Occurrence and identification of Lesser White-fronted Goose



A mixed flock of White-fronted Anser albifrons, Lesser White-fronted A. erythropus and Red-breasted Geese Branta ruficollis. Upper row from left to right: White-front ad, White-front 1st cy, White-front ad. Lower row from right to left: White-front ad, Red-breasted, Lesser White-front ad, Red-breasted, Lesser White-front ad. Compared with the White-front, Lesser White-front has relatively shorter neck and bill, narrower wings and more uniformly dark brown head and upper neck. © Petteri Tolvanen, Kazakhstan, October 1998.

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esser White-fronted Geese Anser erythropus regularly occur in larger flocks of White-fronted Geese of the nominate race A. albifrons albifrons in Europe during winter and on migration. in Western Europe mainly as single individuals, and in Eastern Europe in small groups of 5 - 10 individuals. This globally threatened species is subject to a comprehensive effort to save it from extinction. The basic need in this struggle is to increase knowledge on this species' ecology, occurrence and identification. Studies at staging and breeding places in Fennoscandia (Norway, Finland and Sweden) have shown that breeding success is generally high (e.g. Aarvak et al. 1995), indicating that threats during the breeding period may be of limited significance. The most important reasons for the population decline are most likely found on the staging and wintering grounds, such as heavy hunting pressure and loss of feeding habitats.

Counts of wintering geese are conducted each year throughout Europe in different time periods for each species. Lesser White-fronted Geese, however, are rarely seen during these counts. This is assumed to be partly related to the sparse occurrence of the species and the difficulties in separating it from the White-fronted Goose. Most counts are conducted during the flight to and from the roosting places, and the counts are rarely followed up in the grazing fields during daytime. In recent years Dutch and German observers looking for neckbands and ringed individuals search thoroughly through the flocks of White-fronts, thus increasing the probability of observing Lesser Whitefronts in these flocks. It is known that Fennoscandian Lesser White-fronted Geese have stopover sites in Germany (Lorentsen et al. 1998) and Poland (unpublished data) before they carry on further to the wintering grounds. The extent of this staging in Western Europe is however poorly known, and hopefully this guide to the identification of Lesser White-fronted Goose in the flocks of White-fronts will encourage birders throughout Europe to carefully search through the flocks of Whitefronted Geese, thus providing valuable data in the work on protecting the Lesser White-front.

In Western Europe an increase in observations has been reported, many of which have colour rings. Colour-ringed



Some White-fronted Geese have a bright yellow eye-ring, and can be easily mixed with Lesser White-fronts. The coloration of the head and upper neck of this adult White-front, shot in north-western Kazakhstan, is exceptionally dark. Such dark-headed individuals with a yellow eye-ring can be even more difficult to identify in the field. The long bill and relatively longer neck are the best identification features of such White-fronts. © Petteri Tolvanen, Kazakhstan, October 1998.

birds may descend from a Swedish reintroduction programme (colour rings on both legs, 2 colour code), from a Finnish re-introduction programme (blue neck band + 3-colour coded ring on one leg) or from the Finnish/Norwegian natural breeding population (one 3-colour coded leg ring; some birds have a green neck band in addition). The Swedish re-introduced geese use wintering grounds in the Netherlands and Germany where they associate with their Barnacle Goose Branta leucopsis foster parents (von Essen 1991, 1996). Geese from the Finnish re-introduction programme have also frequently been observed in Western Europe.

Distribution and status

White-fronted Goose

The nominate race breeds across Arctic Siberia from Kanin Peninsula (44° E) to Kolyma River delta (155° E). The birds breeding in Western and Central Siberia winter primarily in Western Asia and Europe. The winter range stretches from Great Britain to the Caspian Sea in Western Asia (Bauer & Glutz von Blotzheim 1968, Mooij et al. 1996). Large numbers also winter on the Turkish steppes, in the western lowlands of the Black Sea and parts of Eastern Europe, having important stopover sites in Hungary and Austria in early and late winter. The Greenland race flavirostris winters mainly in Western Scotland and Ireland after a stopover in Iceland.

Lesser White-fronted Goose

The Lesser White-fronted Goose breeds in the northern mountain ranges of Europe and in Asia in a belt ranging from Northern Fennoscandia, through Northern Russia to Eastern Siberia (Morozov 1995, Syroechkovski, Jr. 1996, Lorentsen et al. 1997). Within the western and central part of its distribution range, the stronghold of the breeding population is in the area from Yamal to Taimyr in Russia (Madsen 1994). In the eastern part of its distribution area, very little is known of its population status and distribution. The world population has declined dramatically this century, and the species is at present one of the most endangered bird species in Europe (Tucker & Heath 1994). The breeding population in the European part of the distribution range has been reduced by more than 95 %, mainly since 1940 (Norderhaug & Norderhaug 1984, Øien et al. 1996, Tolvanen et al. 1997). The migration routes, staging areas and wintering grounds of this species are, however, generally poorly known. The main wintering areas are supposed to be close to the Caspian and Black Seas. In Europe, Lesser White-fronts occur regularly during passage or in winter in Hungary, Romania, Bulgaria and Northern Greece. However, apart from this, single individuals and family groups show up from time to time in most areas holding flocks of White-fronted Geese on passage or in winter.

The most detailed information on migration routes exists for the Fennoscandian population where a study using satellite transmitters was carried out during 1995 (Lorentsen et al. 1998). Five geese equipped with satellite transmitters all moved eastwards to a staging place at the Kanin Peninsula in Russia. Three of the Lesser White-fronts then went southeastwards and one was probably shot in the Komi Republic (Russia), one was confirmed shot in the Ob Valley (Russia) and one was probably shot in Kazakhstan. The two other birds went southwestwards to the former East Germany, where one probably was shot. Before continuing to winter grounds at Lake Kerkini and the Evros Delta in Greece, the last individual stayed in the Hungarian plains.

Identification

Identification of Lesser White-fronts in flocks of White-fronted Geese is surprisingly difficult even under good observation conditions, especially in flying flocks. Neither is identification on the ground very straightforward due to the often restless behaviour of the geese and because the flocks are usually big and dense.

Structure, jizz and general colouring

Female Lesser White-fronts are smaller and more slender than males, and although male Lesser White-fronts in general are also smaller than the nominate White-fronted Goose, there is some degree of overlap in size between these two species, and size alone can not be used to separate them. The head of the Lesser White-front is smaller and neater, more rounded (sometimes the head appears box-shaped) with a relatively bigger eye and steeper forehead than White-fronted Goose. The head of a



A pair of Lesser White-fronted Geese flying over the breeding grounds in Northern Finnish Lapland. © Petteri Tolvanen, N Finland, June 1993.



Adult Lesser White-fronted Goose (right) and White-fronted Goose shot at Lake Tyuntyugur. The underwing coloration and pattern of these species is similar; the difference in this photo is due to different angles of the wings towards the sun light. © Petteri Tolvanen, Kazakhstan, October 1996.



Adult Lesser White-fronted Goose (lower) and White-fronted Goose (same individuals as in the opposite picture). Also the upperwing coloration and pattern of these species is similar. Both species have light bluish primary coverts. Both of these individuals can be identified as +2nd cy by two generations of adult type median and lesser coverts. © Petteri Tolvanen, Kazakhstan, October 1996.

Lesser White-front female is not as distinctive as a male's: the forehead is not as steep as the male's and the blaze is usually smaller. The bill is relatively much shorter than in White-fronted Goose and almost triangular in shape. The bill of White-fronted Goose is rather Greylag-like, giving a clearly different, heavier expression. The neck of Lesser White-fronts is distinctly shorter and relatively thicker than in the White-front. This feature, combined with the short bill, is very important also for flight identification.

In a flock on the ground, a good hint for sorting out a Lesser White-front is the overall darkness of the bird (applies especially for adults). In White-fronts, the contrast between the dark brown back and shoulders and the lighter brown flanks and belly is more distinct than in Lesser White-fronts. In addition, Lesser White-fronts normally show a more upright posture than Whitefronts. The black belly patches are usually less prominent in Lesser Whitefronts; in general they do not reach as far up on the flanks as in the Whitefront. However, there is too much variation in both species to use this as an identification feature on its own.

The wings of Lesser White-front are relatively somewhat longer, reaching beyond the tail, but careful observation for longer periods is necessary because White-fronts can sit in a position where the wings reach beyond the tail. The difference in wing-length alone is however not a good identification point during flight.

Head-shape and colours

The ground colour of head and neck is one of the most important and useful features to separate adult Lesser White-fronts from White-fronts. In the Lesser White-front, the whole head and the upper 2/3 of neck is quite uniformly dark brown (distinctly darker than in the White-fronted Goose). In the White-fronted Goose, only a narrow zone at the rear margin of the white blaze is dark brown, contrasting (in most light conditions) clearly with the light brown head and neck.

The short triangular bill of the Lesser White-fronted Goose is brighter pink in colour than the pallid pink bill of the White-fronted Goose, and the white blaze reaches further up the crown than in the White-fronted Goose. Some Whitefronted Geese may have a big white blaze stretching towards the eye, but not up to the forehead between the eyes as on the Lesser White-front, and it is generally most apparent when the bird is facing the observer. Both species show much variation in the size of the white blaze, some individuals (especially 2nd calendar-year birds in spring) have a very small white blaze (see plumage development) and the shape of the blaze should not be used as an identification feature alone. In flight the shape of the blaze is very difficult to determine.

Even if the swollen bright-yellow eye ring of the Lesser White-fronted Goose



Adult Lesser White-fronted Goose at the Valdak Marshes in Porsangen Fjord. The wings of Lesser White-fronted Goose are relatively long, reaching beyond the tail. The steep forehead suggests this individual to be a male. The legs of Lesser White-fronted Goose are bright orange and the bill is deep pink. © Ingar Jostein Øien, N Norway, May 1995.

is prominent at short distances, it is normally not visible beyond 200-300 metres, but exceptionally the eye-ring can be seen with a good telescope at a distance of ca 600 metres. It is also worth noting that about 20 % of nominate White-fronts show a thin dull yellow eye ring (Ogilvie and Wallace 1980). Juvenile Lesser White-fronts usually have much thinner and less visible eye-rings. In flight identification not much attention should be given to the eye-ring.

The nail of the bill of the Lesser White-front is white (like Whitefronts), but from some distance this is not easy to see. In juveniles, the nail may be dark grey, but it whitens during autumn.

Plumage development

The detailed moult pattern of the Lesser White-fronted goose is poorly known, but some assume it to be similar to that of White-fronted Goose e.g. Cramp and Simmons (1977). Our own field observations also point towards this, and in this article we follow this assumption when speaking about moult and age identification based on the moult features.

First-winter Lesser White-fronts have mainly juvenile plumage, generally somewhat darker than White-fronts, with variable extent of white on the forehead.

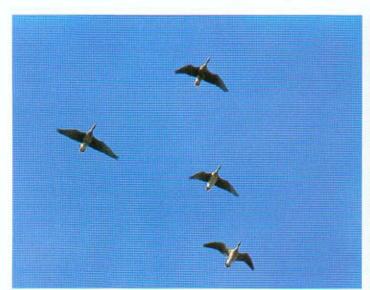


Adult White-fronted Goose (upper) and Lesser White-fronted Goose (same individuals as in photos on page 3). The head of Lesser White-fronted Goose is more uniformly dark brown, and the neck and bill are relatively short. The white blaze of Lesser White-fronted Goose reaches higher up over the eye, and it has a swollen bright yellow eyering. The colour of the bill of Lesser White-fronted Goose is deep pink. © Petteri Tolvanen, Kazakhstan, October 1996.

The white blaze starts to develop during September to February, but is often lacking throughout the first winter. In general the white blaze develops more quickly than in White-front. In March-June most 2nd cy Lesser White-fronts have a well developed white blaze, often with a dirty colouring to the upper part. In April-May most of them are im-

possible to distinguish from adults by this feature. Individuals with an uncompleted blaze are as a rule 2nd cy birds.

In 2nd cy spring birds (of both species), the belly patches are normally poorly developed, brownish and very narrow. Even in 2nd cy autumn / 3rd cy spring the belly patches are probably in general weaker than in fully adult birds,



A family of two adult and two 1st cy Lesser White-fronted Geese in flight at Lake Sheptekol. The best identification feature of juvenile Lesser White-fronted Geese in flight is the compact silhouette: compared with White-fronted Goose, the neck and bill are relatively shorter (and wings relatively longer and narrower). © Petteri Tolvanen, Kazakhstan, October 1996.



Adult Lesser White-fronted Goose of Swedish reintroduction origin. Note the uniform darkness of the head and upper neck, the short neck and the short triangular deep pink bill. In good conditions, even the eye-ring and the typical shape of the blaze can be seen in flight. © Henry Lehto, SW Finland, May 1998.



Adult Lesser White-fronted Goose of Swedish reintroduction origin, same individual as in the previous picture. Note the uniform darkness of the head and upper neck, the short neck, the short deep pink bill, and the typical shape of the blaze. © Henry Lehto, SW Finland, May 1998.

but there is considerable variation in the belly patches also in adult birds.

In spring, 2nd cy birds normally retain a completely juvenile wing, and in the field they can be distinguished from the bleached (light brownish) and worn juvenile type wing feathers, especially the well visible greater coverts. Some 2nd cy spring individuals may have moulted some of the little or median coverts during the first winter, and in such cases a contrast between these new coverts and the retained juvenile (greater) coverts could be possible to see under favourable conditions. This applies to both Lesser White-fronted and Whitefronted Geese.

In 2nd cy autumn and respectively 3rd cy spring, some otherwise adultlooking (and adult-like behaving) individuals can retain some juvenile wing coverts during the complete moult in 2nd cy summer, and thus be identified as 2nd cy (autumn) / 3rd cy (spring) by the extremely bleached and abraded juvenile coverts. Such Lesser White-fronts have been identified as 3rd cy birds in spring at Valdak Marshes (Porsangen Fjord, Norway), following the assumption mentioned above (Aarvak & Øien 1999). It is, however, not possible to identify an individual as 2nd cy (autumn)/3rd cy (spring) by the lack of the juvenile type coverts, because at least some (maybe most) of the individuals moult the wing completely in 2nd cy summer. On the other hand, some adult birds don't moult all the wing coverts in the complete post-breeding moult, and thus an individual can be identified as +2nd cy in autumn and +3rd cy in spring by two generations of adult type wing coverts. Extreme caution should be exercised when identifying a bird as 2nd cy autumn / 3rd cy spring, because the retained older generation adult type feathers of +2nd cy autumn and especially +3rd cy spring birds can also be very bleached and worn.

The white sideline of the body is not present until development starts in March-June, and the belly patches also start to develop to some extent during the first spring. A small amount (5%) of the 2nd cy Lesser White-fronted Geese have large areas of juvenile feathers with narrow tips on flanks, giving a scaly impression like juveniles.

Flight identification

In flight the two species are very difficult to separate, particularly when a few Lesser White-fronts are mixed among a great number of White-fronts. The identification is easier, if a direct comparison with the other species is possible. Especially juvenile Lesser White-fronts without adults in a flock of White-fronted Geese are very difficult to discover and identify.

It has been assessed, e.g. by Markkola & Peltomäki (1994), that there is a contrast between lighter underwing coverts and darker primaries and secondaries in the underwing of White-fronted Geese, whereas the underwing of Lesser White-fronted Geese is uniformly dark grey. However, the underwings of both species are very similar, and this feature can *not* be used to separate the species in flight.

The colouring of the upperwing of White-fronted Goose and Lesser White-fronted Goose is very similar. The primary coverts and the base of a few outermost primaries are quite light blue-grey in both species. This may have led to the incorrect impression that the colouring of the upperwing is a useful separation feature between White-fronted Geese and Lesser White-fronted Geese. Both species have one clearly visible white wing bar formed by the white tips of the greater secondary coverts.

The smaller size of the Lesser White-front is not a good cue for flight identification, but the shorter neck and bill and the relatively somewhat longer wings are flight identification characters to which attention should be paid. This, combined with the shape of the head and the uniform darkness of the head and the upper neck of the Lesser White-fronted Goose are the only valuable features for flight identification. However, identification of flying individuals in flocks of White-fronted Geese should be avoided if the birds are not seen in very good conditions.

Voices

The most typical voice of the Lesser White-front is a two or three syllabic long "tu-yu" or "tu-yu-yu". This sound is much clearer, brighter and more whistling than the voice of any other goose species. However, it has to be remembered, that White-front has a corresponding voice, but it is "muddier", slightly lower and normally two syllables long. However, in the repertoire of the Lesser White-fronts there are also some rasping sounds similar to the cackling of the White-fronted Goose, and only the typical clear three-syllable sound is for certain separable. Lesser White-fronts lacks the White-front's sharp "click-click-click" call.

Experienced observers may pick out Lesser White-fronts by its calls from a flying group of nominate White-fronts (see e.g. Ogilvie & Wallace 1980). However, we believe it is extremely difficult to pick Lesser White-front voices from the noise of a big flock of White-fronted Geese, and appeal for caution in all attempts to identify the species on the voice in such conditions. The typical voice may, however, be a very important clue inh searching for Lesser White-fronts in a flying flock.

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An adult Lesser White-fronted Goose (in the middle) in a wintering flock of White-fronted Geese on a rice field near the Izunuma Marsh in the Miyagi Prefecture. The difficulty in the specific identification is one of the biggest problems in the conservation of the Lesser White-fronted Goose. Compare the profile of the head and bill, and the coloration of neck, head and bill with the adult White-front. In this case, the prominent size difference is due to the fact that the surrounding White-fronts are ssp. A. a. frontalis. © Keiichi Kasahara, Japan.

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Any information on the occurrence of Lesser White-fronted Geese may be helpful in a conservation effort for this globally threatened species. If you have observations or other information, please contact Wetlands International Lesser White-fronted Goose Task Force:



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Cover: Lesser White-fronted Goose. © Ingar Jostein Øien, Valdak Marshes, North Norway, May 1995



The Lesser White-fronted Goose faces threats throughout its whole distribution range. Lei Gang demonstrates a 2cy Lesser White-fronted Goose poisoned by poachers in the Dongting Lake Nature Reserve in China. © Petteri Tolvanen, SE China, February 1999.