

## Images of Barnacle Goose *Branta leucopsis* hybrids – a photo documentation of some crosses with different *Anser* species

*Bilder av hybrider av vitkindad gås Branta leucopsis – en fotodokumentation av några korsningar med olika Anser-arter*

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### Abstract

This article presents full-body and close-up photographs of hybrids between Barnacle Goose and some *Anser* goose species. The second parent was in one case a Snow Goose, in five cases a Greylag Goose, in one case a domestic Swan Goose and in one case a Bar-headed Goose. Parentage is considered proven in the Snow Goose and the Greylag Goose hybrids. These hybrids are all rare. The number of individuals is in the magnitude of the estimated total Swedish populations and this is apparently the first report of a Barnacle Goose x domestic Swan Goose hybrid in Sweden. The bill colour pattern varied markedly between the five Greylag Goose hybrid siblings

but little from one year to another. In the autumn, Greylag Goose hybrids and to some degree also the Swan Goose hybrid developed a transient white area of the front head next to the bill but a darker and browner colour of the pale cheek area. The various expressions of features inherited from the two parent species are exemplified in the Greylag Goose hybrids.

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### Introduction

Hybridisation between goose species is common but reporting is hampered by a number of factors (Kampe-Persson & Lerner 2007). Correct classification of parentage is for obvious reasons a key factor. However, there is a lack of information on hybrid geese in field guides and an overall limited volume of adequate reference material.

The aim of this study was to photographically document a number of hybrids between Barnacle Goose *Branta leucopsis* and some *Anser* goose species.

### Material and methods

The material was restricted to hybrids between Barnacle Goose and *Anser* species and comprised one cross with Snow Goose *Anser caerulescens*, five with Greylag Goose *Anser anser*, one with domestic Swan Goose *Anser cygnoides*, and one with Bar-headed Goose *Anser indicus*.

Parentage was in this study considered to be “proven” when immature offspring was observed together with parents of two different species and

the features of the offspring were compatible with what might be expected from that parent combination. Parentage was considered to be “probable” if the parent birds were not observed but it was considered obvious that one parent was a Barnacle Goose and the other an *Anser* goose and there were additional features strongly indicating which *Anser* species was involved. Individuals in whom parentage was only considered to be “possible” were excluded from the study.

It was attempted to achieve representative full body images as well as head portraits from both sides. When applicable, specific features were also documented.

### Results

#### *Barnacle Goose x Snow Goose (Figure 1)*

This bird was the offspring of a female Barnacle Goose and a male Snow Goose (white phase). It was born in the late 1990s. For some years it seemed to be mated to a Barnacle Goose but offspring was never observed and it was thus presumed to be sterile.

The bird was photographed in the summers 2006



1a: 21 July 2006



1b: July 2002



1c: 21 July 2006



1d: July 2002



1e: 5 September 2007

Figure 1. Barnacle Goose x Snow Goose. The same bird in all photos. White head and neck and greyish-yellow bill with dark areas, a round dot near the basis, and a conspicuous "grinning patch". The clearer colour of the bill in photo e is due to sunlight. Breast mainly dark within an area corresponding to the dark breast in Barnacle Geese and flanks largely white (c). The flanks had more dark patches 5–6 years earlier (d).

*Vitkindad gås x snögås. Samma fågel på alla foton. Huvudet är vitt och näbben grågul med mörka fläckar; en rund prick nära basen samt det tydliga svarta fältet, det artkaraktäristiska "leendet", the grinning patch, särskilt tydligt på bild e, vars klarare näbbfärg beror på solljus. Bröst huvudsakligen mörkt inom ett område motsvarande det mörka bröstet på vitkindad gås och kroppssidorna till stor del vita (c) fast med fler mörka partier 5–6 år tidigare (d).*

and 2007, i.e. at an age of almost ten years (Figure 1a,c,e). The bill nail was black and the bill greyish-yellow with irregular black and grey fields and spots (Figure 1a,b,e). At the edge of the bill, there was a tendency towards a “grinning patch” which is seen in Snow Geese (Figure 1a,b,e). The head and neck were white with minimal black spotting. The breast had a dark field with an extension corresponding to that in Barnacle Geese (Figure 1c) and within that dark field there were white patches. The dark breast colour was a mixture of grey and brown, reminding on a colour which may be seen in the blue phase of Snow Goose. The flanks were rather white with a few grey patches and the legs were livid greyish-pink with patches of a greyer tone. The upper parts looked rather similar to those in a Barnacle Goose.

The pictures from 2006 and 2007 were then compared to the first ones from 2002, i.e. when the bird

was about 5 years old (Figure 1b,d). On the left side of the bill, this individual had a distinctive round spot near the basis. This spot as well as the colour distribution on the rest of the bill looked very much the same on all occasions (Figure 1b versus 1a and e). The overall impression of the bird was also very similar except for the rear flanks which were clearly darker in 2002 (Figure 1d versus 1c). This difference was even more conspicuous when the bird was swimming.

#### *Barnacle Goose x Greylag Goose (Figure 2–4)*

In 2004, a Barnacle Goose and a Greylag Goose were seen together with three immature birds which seemed to be hybrids (Figure 2a). Both parent birds appeared to be typical for their respective species. In the spring 2005, the parent birds were sought for without success until they turned up with three new



2a: June 2004



2b: Early September 2004



2c: June 2005

Figure 2. Barnacle Goose x Greylag Goose. The pair with their brood in June 2004 (2a) and with one of the young in September 2004 (2b). One of the young of the brood from 2005 in June 2005 (2c).

*Vitkindad gås x grågås. Paret med sin kull juni 2004 (2a) och med en av ungarna i september 2004 (2b). En av ungarna från kullen 2005 i juni 2005 (2c).*



3a: Individual A, 3 June 2007



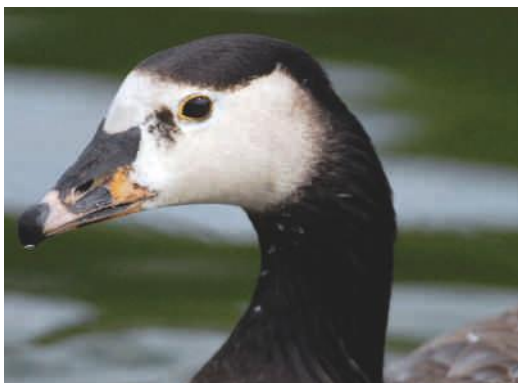
3b: Individual A, 11 October 2006



3c: Individual B, 13 July 2007



3d: Individual B, 11 October 2006

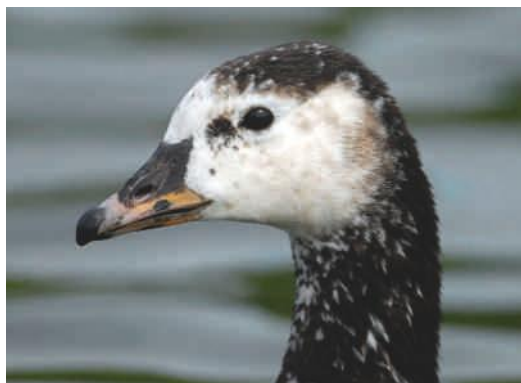


3e: Individual C, 3 June 2007

Figure 3. (this and next page) Barnacle Goose x Greylag Goose. Head and bill features of five young (individuals A–E) hatched in 2004 or 2005 by the same pair as in Figure 2, photographed in 2007 (3a,c,e,f,h) and 2006 (3b,d,g,i). The year of hatching is known only for individual C (3e; hatched in 2004).

*Vitkindad gås x grågås. Huvud och näbb av fem ungar (individerna A–E) kläckta 2004 eller 2005 av samma par som i Figur 2, fotograferade 2007 (3a,c,e,f,h) och 2006 (3b,d,g,i). Kläckningsåret är känt bara för individ C (3e; kläckt 2004).*





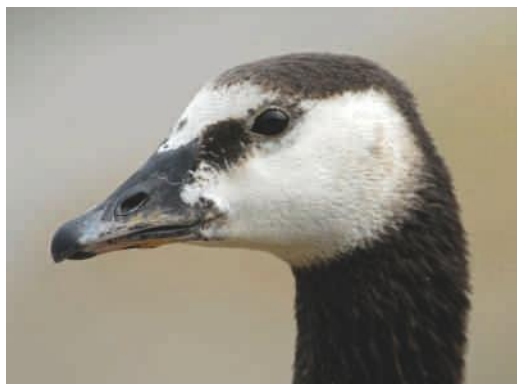
3f: Individual D, 3 June 2007



3g: Individual D, 27 May 2006



3h: Individual E, 13 July 2007



3i: Individual E, 21 July 2006

immature birds. The exact breeding site or mating of the two birds could thus not be observed. Two of the immature birds were similar to those three in 2004 and relatively large (Figure 2c) whereas the third one was paler and in several aspects less developed. From the next observation on, only the two larger immature birds were seen. The nature and fate of the third bird thus remain unknown. In November 2005, a small group comprising all five hybrids, one Barnacle Goose and one Greylag Goose was observed.

Immature and juvenile hybrids made a dull impression with a distinct dark grey breast and black neck. The bill was dark in immature birds but at least in early September there was a tinge of a diffuse Greylag Goose like colour component.

During a brief period in the summer 2007, it was possible to achieve close-up portraits of five

individuals (Figure 3). Based on these portraits, the five hybrids are henceforth called individuals A–E. In most cases, the head shape reminded most on a Greylag Goose with a strong bill but in hybrid D the bill appeared to be slightly shorter and weaker. There was a thin yellow eye ring in three cases (individuals A, B and C). The ground colour of the bill was rather similar to that in the Greylag Goose parent (Figure 2a) but with black patches and dots. The extent of black on the bill varied from a few small dark dots near the base of the bill, visible only at very close range in individual A, to an almost entirely black bill in individual E. The bill nail was black in all five hybrids. The large individual variation in bill colour pattern, and also other face features, was then used for identification of the individuals that were photographed in summer and October 2006. There was a strong resemblance



4a: Individual A, 8 July 2006



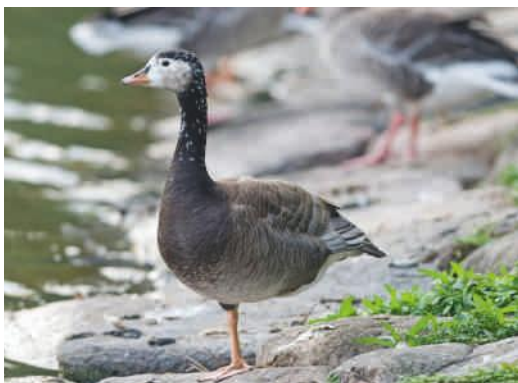
4b: Individual A, 5 June 2007



4c: Individual D, 27 May 2006



4d: Individual D, 24 June 2006



4e: Individual B, 11 October 2006

Figure 4. Barnacle Goose x Graylag Goose. Full body photos in 2006 (4a,c,d,e) of individuals A, B and C and for comparison individual A also in 2007 (4b), the same birds as in Figure 3.

*Vitkindad gås x grågås. Foton av hela fåglar 2006 (4a,c,d,e), individerna A, B och C från Figur 3 och för jämförelse individ A också 2007 (4b).*

in form and extent of the dark areas but with an overall impression that the black dots had grown somewhat larger over time.

These pictures also showed a colour shift in the autumn 2006 (Figure 3b,d) with a whiter area next to the bill and around the eye contrasting to a browner and somewhat patchy colour on the head sides as compared to the pictures from the summers 2006 and 2007. In October 2006, four hybrids (considered to be individuals A, B, C, and E) were observed but two of them were then so wary that it was impossible to achieve printable image quality. However, the visual interpretation was that the contrasting white area was even more conspicuous in the bird presumed to be individual C than in the presumed individuals A and B in Figures 3b,d. In the presumed individual C, a similar head colour pattern was also documented 25 March 2005 (i.e. at an age of about 10 months) but this had disappeared in the summer 2005.

The extent of dark areas on head, neck and breast corresponded to the black area in Barnacle Geese, with an almost black colour on head and upper part of the neck but rather pale to dark brown on the lower part of the neck and the breast (Figure 4). There was however, constantly some degree of darker breast with an extension corresponding to the black breast in Barnacle Geese. In all cases, there was some white spotting in the dark area on the head and at least the proximal part of the neck. The degree of white spotting ranged from almost absent and visible only when sought for at extremely short range in individual E (Figure 3h,i) to extensive in individual D (Figure 3f,g and 4c,d). White spotting was also more marked in October than in the preceding and the following summer (Figure 3b versus 3a, and Figure 3d and 4e versus 3c). The flanks were greyish-brown and darker than in both parent species. The impression of the upper part colour seemed to vary somewhat with light and was usually greyish-brown (Figure 4) but on some occasions the same birds could give an almost bronze-tone impression (Figure 4c). The leg colour was paler and slightly more yellow than in Greylag Geese (Figure 4).

#### *Barnacle Goose x Domestic Swan Goose (Figure 5)*

The parentage of this bird is considered to be "probable". There are several features indicating that the second parent was a domestic Swan Goose. It was a very large bird with a black bill but brown legs (Figure 5a). It had a knob-like protrusion on the fore-head and this protrusion seemed to have

increased slightly in size over an observation time of several years (Figure 5c,d). Also the abdomen had increased in size and gave the bird a posture reminding of a domestic Swan Goose (Figure 5a,b). The dark areas of head and neck were blackish-brown. There was a darker brown zone of the breast corresponding to the border between black breast and pale grey flanks in the Barnacle Goose whereas the anterior part of breast and the adjacent part of the neck were paler greyish-brown. Upper parts and flanks were greyish-brown.

However, when the bird was once seen in October the breast and flank areas also gave a scaly and somewhat pearly impression (Figure 5e) and the upper parts were greyer than in the summer. The previously greyish-white sides of the head had also become somewhat browner and contrasted against a whiter zone next to the bill and up over the forehead (Figure 5d).

On its right leg, this bird carried a greyish-green ring with the number NL-H20 02 8705 but it has so far not been possible to get the parentage confirmed.

#### *Barnacle Goose x Bar-headed Goose (Figure 6)*

The parentage of this bird is also considered to be "probable", based on the colour pattern of head, neck and legs in combination with its similarity with previously published pictures (Randler 2001). This bird was occasionally seen together with the Snow Goose hybrid in the summer 2006 but has not been found since. The white areas of the head were more extensive than in Barnacle Geese and also extended down the right (but not the left) side of the rather slender black neck (Figure 6a,c). The dark area of the head and upper part of the neck was black and there was a tendency towards two black bands on the rear crown of the head (Figure 6e,f). The breast was dark brownish-grey whereas upper parts and flanks were brownish-grey in a paler tone. The belly and the ventral region were white. The legs were conspicuously yellow (Figure 6a,e). The bill of this bird was rather weak with blackish patches and dots against a pale greyish-pink background (Figure 6d).

Also in February 2004, the Snow Goose hybrid was temporarily accompanied by a presumed Barnacle Goose x Bar-headed Goose hybrid (Figure 6b). Comparison of the colour pattern on both sides of the bill and the similar asymmetric distribution of white on the right and left side of the neck makes it probable that this was the same individual as in 2006, even though the neck appeared to be thicker in 2004.



5a: 8 July 2006



5b: 1 October 2006



5c: 8 July 2006



5d: 1 October 2006



5e: 1 October 2006

Figure 5. Barnacle Goose x domestic Swan Goose. Same individual in all photos. Comparison between July and October.

*Vitkindad gås x knölgås (domesticerad svangås). Samma individ på alla foton. Jämförelse mellan juli och oktober.*



## Discussion

### *Prevalence of the presented hybrids*

The hybrids presented in this study are all relatively rare. To the best of my knowledge, these are the first pictures of a Barnacle Goose x domestic Swan Goose hybrid and according to a recent study on goose hybrids it should be the first observation in Sweden (Kampe-Persson & Lerner 2007). The bird carried a greyish-green ring NL-H20 02 8705 (underlined 02 standing in vertical position) belonging to a breeder associated with the NHDB-ringenbureau in Holland. They have kindly answered that the 02 stands for the year 2002 but additional information is given only at the discretion of the breeder. Several but so far fruitless attempts have been made to get the presumed parentage confirmed.

The other hybrids are also rarely observed. The total Swedish populations in 2005 were estimated to be one or two Barnacle Goose x Snow Goose, four Barnacle Goose x Greylag Goose and no Barnacle Goose x Bar-headed Goose hybrids (Kampe-Persson & Lerner 2007). The number of individuals presented in this study is thus in the magnitude of the whole Swedish populations. One additional *Branta x Anser* hybrid was extensively documented but then excluded from the study since the classification of parentage was only considered to be "possible" and there were some Canada Goose like features indicating that it might possibly not be a Barnacle Goose x Snow Goose but a (Barnacle Goose x Canada Goose species) x Snow Goose cross.

The study material is relatively large also from an international perspective. When the results from four studies were pooled with an estimated number of goose hybrids exceeding 1000 individuals, these studies included only five or six Barnacle Goose x Snow Goose, six Barnacle Goose x Greylag Goose and six Barnacle Goose x Bar-headed Goose hybrids (Kampe-Persson & Lerner 2007).

### *Validity of classifications*

Correct classification of observed hybrids is one of the major problems in studies on goose hybrids. Lack of applicable field guides is an often heard complaint. There are few articles dealing with field classification of goose hybrids and an internet search often provides limited relevant information. Validity of parentage classification may be categorized into "confirmed/proven" parentage, "probable parentage" and "possible" parentage. Some publications may state that described hybrids are

of "confirmed" or "proven" parentage (Randler 2001, Gillham & Gillham 2002) but in the majority of cases, validity of the classification is either not given or only reaches the lowest level of "possible" parentage. This study contains six birds where parentage is considered to be "proven", one where parentage is "probable" but potentially may still become "proven" and one where parentage is "probable" for reasons stated earlier in the Methods and material section.

### *Parentage and features*

Features of a hybrid may be affected by the two parent species in several ways, demonstrated in the Barnacle Goose x Greylag Goose hybrids in this study. There was a mixture, with some features inherited from one species and other features inherited from the other species. The extension of dark and pale areas of the head was thus inherited from the Barnacle Goose whereas the orangey-yellow ground colour of the bill resembled that in the Greylag Goose parent. Other features may be intermediate to what is seen in the parent species. An example of this is the brown colour of the breast in these hybrids, which is darker than in Greylag Geese but not black as in Barnacle Geese. Some features may be a mosaic of what is seen in the parent species. This is illustrated by the mixture of black fields and spots on orangey-yellow bottom on the bills of the hybrids. Finally, there may be features which are not seen in either parent species. The white spotting on the neck in Barnacle Goose x Greylag Goose hybrids is one example and the colour of the flanks in these crosses being darker than in both parent species is another. Less expected features in the other crosses are e.g. the greyish-yellow ground colour of the bill in the Barnacle Goose x Snow Goose hybrid and the greyish-pink bill colour in the Barnacle Goose x Bar-headed Goose hybrid.

Some of these less expected features may even give an impression of a third species being involved. The white area next to the bill in the Barnacle Goose x Greylag Goose hybrids has thus lead to their misclassification as possible hybrids of Barnacle Goose x Greater White-fronted Goose. By repeated registrations of the individual-specific bill colour pattern and the head colour pattern in the summer, in the autumn and then again in the following summer this study shows that there is a transient and season-related variation with a white area next to the bill contrasting against a greyer head side in the autumn.



6a: 11 July 2006



6b: February 2004



6c: 21 July 2006



6d: 21 July 2006



6e: 11 July 2006



6f: 19 July 2006

Figure 6. Barnacle Goose x Bar-headed Goose. The bird photographed in 2004 (6b) was presumably the same bird as the one from 2006.

*Vitkindad gås x stripgås. Fågeln som fotograferades 2004 (6b) var troligen samma individ som 2006.*

### Comparison with previously published images

The Barnacle Goose x Greylag Goose hybrids in this study are rather similar to a previously published bird (Randler 2001) even though that bird and especially its breast appeared to be darker. They also resemble a possible Barnacle Goose x Greylag Goose hybrid shown by Dave Appleton (www). The bill of the latter bird seems to be pinkish. This could very well be due to the variation within the Greylag Goose species and on the whole one should expect a larger diversity in features of the hybrids when offspring from a larger number of parent pairs are studied as opposed to the siblings which are presented in this study.

I have not been able to locate any previously reported Barnacle Goose x domestic Swan Goose hybrids. However, there are some reports on domestic Swan Goose x Greater Canada Goose hybrids (Randler 2001, David Wheeler (www), Harry J. Lehto (www)). These hybrids have a head profile resembling that in the presumed Barnacle Goose x domestic Swan Goose hybrid in this study. They also share the combination of black bill and brown feet and some birds have a white area proximal to the bill. However, the crosses with Greater Canadian Geese have a different distribution of black on the neck, resembling that in the well documented Greater Canada Goose x Greylag Goose hybrids. This differs from the more or less dark breast in the Barnacle Goose x Greylag Goose and to some degree in the Barnacle Goose x domestic Swan Goose hybrids in this study.

The Barnacle Goose x Bar-headed Goose hybrid in this study resembles those previously published (Randler 2001). The head colour pattern in such hybrids seems to be diverse but the tendency to bars on the crown of the head resembling those is in Bar-headed Geese as well as a white stripe on the side of the neck may be regarded as typical features (Randler 2001). Notably, in the present bird a white stripe was seen only on the right side of the neck and it is thus not an obligate feature of such hybrids. The yellow legs in this bird remind on the colour of the legs in Bar-headed Geese. Contrary, the ground colour of the bill was greyish-pink in the hybrid and not orangey-yellow as in the Bar-headed Goose. A similar phenomenon with a bill colour markedly different from what is seen in the *Anser* parent was also seen in the Barnacle Goose x Snow Goose hybrid but not in the Barnacle Goose x Greylag Goose hybrids. However, the mosaic-like bill colour pattern with black or grey fields and spots was a constant feature in all eight *An-*

*ser* crosses with the exception for the Swan Goose hybrid where both parent species may have black bills. The distribution of the dark areas on the bill seems to be relatively constant over time and may with caution be used as a “fingerprint” to identify individuals. Other features shared by many *Branta* x *Anser* crosses are the tendency towards white areas next to the bill which in this study was seen in the crosses with Greylag Goose and domestic Swan Goose as well as the white spotting on the neck in crosses with Greylag Goose.

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### Sammanfattning

Hybridisering mellan olika gåsarter förekommer ofta. Korrekt rapportering försvåras dock av ett antal faktorer, inklusive brist på referenslitteratur. Avsikten med denna artikel är att presentera några hybrider mellan vitkindad gås *Branta leucopsis* och ett antal *Anser* arter.

### Materialet

Materialet omfattar sex hybrider där föräldraskapet anses vara säkerställt och två hybrider där sannolikheten för korrekt klassifikation bedöms vara mycket hög. Den förstnämnda gruppen omfattar en hybrid mellan hona av vitkindad gås och hane av snögås samt fem hybrider mellan vitkindad gås och grågås, där icke-flygga ungfåglar observerats tillsammans med föräldrar av respektive art men där föräldrarnas kön inte kunnat avgöras. Den sistnämnda gruppen består av en hybrid där det är svårt att föreställa sig annan bakgrund än vitkindad gås korsad med knölgås och en hybrid som visar ett

flertal tecken på att vara en korsning mellan vitkindad gås och stripgås.

### *Fynden*

Snögåshybriden föddes i andra hälften av 1990-talet. Den har fotograferats 2006 och 2007 och bilderna har jämförts med de första bilderna från 2002, dvs. när fågeln var ca 5 år gammal (Figur 1). Näbben är grå-gul med mörka fält och prickar och på denna individ finns oförändrat från 2002 till 2007 en karakteristisk rund svart fläck på näbbens vänstra sida nära dess bas. Näbbnageln är svart. Det finns ett tydligt svart band i näbbkanten, en ”grinning patch”, som är ett arv från snögåsen. Huvudet och halsen är vita med enstaka svarta småfläckar. Bröstet är mörkt inom ett område som motsvarar det svarta bröstet på vitkindad gås och inom detta mörka fält finns vita inslag. Kroppssidorna var 2006 ganska vita (Figur 1c) medan åtminstone den bakre delen var klart mörkare 2002 (Figur 1d). Benen är blekt grårosa med något mörkare och gråare fläckar.

Hybriderna med grågås (Figur 2–4) har en fördelning mellan ljusa och mörka delar av huvud, hals och bröst som påminner om den hos vitkindad gås. Grundfärgen på näbben är gulorange liknande den hos grågåsföräldern och i detta finns mörka/svarta fält och prickar. Omfattningen av de mörka inslagen på näbben varierar från enstaka små svarta prickar till nästan helsvart näbb (Figur 3). Näbbnageln är svart hos alla fem. Hos tre av fem individer (individ A, B och C; Figur 3) fanns en tunn gul ögonring. De ljusa partierna på huvudet var sommartid något mörkare än hos vitkindad gås, men vid observation under oktober månad betydligt brunare med kontrast mot ett påtagligt vitt område vid näbbroten och kring ögat. De partier av huvud, hals och bröst som motsvarar det svarta på vitkindade gäss var hos hybriderna mörkbruna på huvudet och övre delen av halsen samt speciellt sommartid tydligt ljusare på nedre delen av halsen och bröstet. Utbredningen av detta relativt sett ljusare parti hos hybriderna motsvarar det ljusare partiet fram på halsen och bröstet hos grågås (Figur 4a,b,d). Under hösten gav även dessa partier ett mörkare intryck (Figur 4e). I de mörka partierna på halsen fanns en tendens till vitfläckighet, som var mest uttalad hos individ D och minst uttalad hos individ E. De vita fläckarna på halsen verkade också vara mera uttalade på hösten. Ryggen och kroppssidorna var brunaktigt grå men gav i viss belysning ett närmast bronsaktigt intryck (Figur 4c). Benen var hos 1k gråa och hos äldre individer något blekare och gu-

lare än hos grågås (Figur 2 respektive 4).

Hos den individ som uppfattats som vitkindad gås x knölgås är föräldraskapet inte bevisat, men det är svårt att se vilken annan kombination som skulle kunnat ge upphov till dess ganska särpräglade yttre. Fågeln är märkt med en holländsk ring med nummer NL-H20 02 8705. Märkaren tillhör en park- och prydnadsfågel organisation NHDB-ringenbureau. Det är således potentiellt möjligt att få föräldraskapet bekräftat, men informationen lämnas endast med uppfödarens godkännande och har ännu inte gått att få. Det är en mycket stor fågel (Figur 5) med svart näbb men mörkbruna ben, som på avstånd kan verka svarta. Även hos denna fågel liknade utbredningen av de ljusa partierna på huvudet respektive de mörka partierna på huvud, hals och bröst motsvarande utbredning hos vitkindad gås. Dessa ljusa parter var under sommaren gräddfärgade men i oktober var kinderna något mörkare med ett vitt parti från näbbroten upp mot pannknölen. Under sommaren kunde man se att det fanns en millimetersmal vit rand längs näbbens kant mot de befjädrade partierna. De mörka partierna var på huvudet och övre delen av halsen mörkt chokladbruna men påtagligt ljusare över framsidan av halsens nedre del och över bröstet. Översidan och kroppssidorna var brungråa. När fågeln vid ett tillfälle sågs i oktober månad (Figur 5e) gav färgerna ett annat, mosaikartat, fjälligt och nästan pärlaktigt intryck över bröst och kroppssidor. Översidan var gråare än under sommaren och färgen på huvudet var annorlunda, se ovan.

Den sist presenterade fågeln i detta material uppfattas som vitkindad gås x stripgås (Figur 6). Denna bedömning grundas dels på flera detaljer som tyder på stripgåsbakgrund, dels på likhet med tidigare publicerade exemplar av denna föräldrakombination (Randler 2001). Det vita partiet på huvudet var mera utbrett än på vitkindad gås och sträckte sig även som en rand längs den högra sidan (men inte den vänstra!) av halsen (Figur 6a,c). Över huvudet fanns på två ställen klara tendenser till svarta stripor, den främre var större och sträckte sig ut mot ögonen (Figur 6e) medan den bakre var liten och tydligt urskiljbar endast rakt bakifrån (Figur 6f). Halsen var närmast svart och bröstet mörkt brungrått inom ett område som motsvarar det svarta hos vitkindad gås. Ryggen och kroppssidorna var ljusare brungrå medan undersidan var vit (Figur 6a,b). Benen var iögonenfallande gula (Figur 6a,b,e). Näbben var påtagligt klen och grårosa med mörka fält och linjer (Figur 6d). En liknande hybrid sågs 2½ år tidigare, i februari 2004 (Figur 6b). Halsen verkade då grövre, men i övrigt var in-



trycket likartat. Baserat på likhet i de svarta fälten på näbben och att det finns en ljus linje på halsens högra sida men inte på den vänstra sidan verkar det troligt att det rörde sig om samma individ. Vid samtliga observationer har den varit i sällskap med snögåshybriden (som dock oftast setts tillsammans med enbart vitkindade gäss).

### *Diskussion*

Samtliga presenterade hybrider är relativt sällsynta och vid jämförelse med ett nyligen publicerat material motsvarar de olika hybridtyperna ungefär hela de svenska populationerna under 2005 (Kampe-Persson & Lerner, 2007). Vad gäller hybriden vitkindad gås x knölgås verkar detta vara den första observationen i Sverige och jag har inte heller kunnat finna någon tidigare publicerad bild. Beträffande övriga hybrider finns det enstaka bilder i tryck (Randler 2001) respektive på internet, men det här materialet avviker från majoriteten av publicerade bilder bl.a. genom verifierad härstamning hos flertalet fåglar.

Hybridernas utseende kan påverkas av föräldrararterna på flera olika sätt. Detta kan exemplifieras hos vitkindad gås x grågås hybriderna. I vissa avseenden dominerar egenskaper från den ena respektive den andra arten; utbredningen av de ljusa partierna på huvudet hos hybriderna har ärvts från den vitkindade gåsen och den orange-gula näbbfärgen från grågåsen. Vissa egenskaper kan bli ett mellanting mellan vad som ses hos föräldrararterna; hos

vitkindad gås x grågås exemplifierat t ex genom att den bruna färgen på bröstet är mörkare än hos grågås men inte svart som hos vitkindad gås. Vissa egenskaper kan bli en mosaik av vad som ses hos föräldrararterna: exempel på detta är näbbfärgen med gråsvarta fläckar på orangegul botten. Slutligen kan det dyka upp egenskaper som inte tydligt ses hos någondera av föräldrararterna. Exempel på detta är den vita fläckigheten på halsen och den mörka färgen på kroppssidorna, som är mörkare än hos båda föräldrararterna. Andra exempel på svår-förutsebara egenskaper hos avkomman är en grågula grundfärgen på näbben hos snögåshybriden och den grårosa näbbfärgen hos stripgåshybriden. I vissa fall kan dessa oväntade egenskaper t o m ge intryck av att en tredje art skulle kunna vara inblandad; exempel på detta är det vita vid näbbroten som sågs på vitkindad gås x grågås i oktober månad och som i något fall ledde till felklassificering som vitkindad gås x bläsgås.

De gråsvarta teckningarna på näbbarna verkar vara påtagligt olika mellan individerna men även relativt konstanta från år till år. Det förefaller alltså kunna vara så att denna variation i näbbarnas teckning, åtminstone hos snögåshybriden och grågåshybriderna, med försiktighet kan användas som individspecifika "fingeravtryck" (även om fläckarnas storlek verkade öka något med tiden hos grågåshybriderna). På exempelvis knölgåshybriden är naturligtvis inte detta tillämpligt eftersom den har helsvart näbb, vilket både knölgås och hybriderna kanadagås x knölgås också kan ha (Randler, 2001).