

SILVER DUCKS IN PERSPECTIVE

the UK. It is therefore suggested that some of the colours we see in the domestic duck today – especially light phase (li), mallard restricted (M^r) and the brown dilution (d) – came from the Far East.

The mallard duck did evolve in the west too, but much later, and on a smaller scale. For centuries, birds in Europe were just trapped in duckeries and decoys, which delayed domestication because they were so readily caught from the wild. So there is little evidence of the effect that domestication had on the colour of domestic ducks in Europe, because they simply were not bred in large commercial flocks until the 1700s or even later.



ABOVE:
A 'badelynge' (paddling?) of ducks – a old term used in hawking for a collection of ducks (Ref. 2)

LEFT:
Abacot Rangers (Streichers) in the morning sun, showing the typical male plumage of the green head, white neck ring and claret feathers extending along the flank.

Dutch paintings from the Golden Age

Early evidence of domestication and the changes it brought in size, shape and colour, comes from Holland. During the 1600s the economy grew through international trade: people had money to spare and could afford to pay Dutch painters, who left a unique legacy of everyday life. It is estimated that no fewer than five million such paintings were executed in Holland in the seventeenth century, the Golden Age.

Some of the artwork included waterfowl on the table, in the backyard, and in collections on estates. Rich people wanted to show off their status and exotic new varieties were extremely fashionable. This fashion coincided appropriately with the newly forged colonial trade in the East Indies. One early record of the variety in ducks is found in Jan Steen's *Poultry Yard* (1650) where he paints a white crested duck and depicts birds with the pied gene, which would go on (with the bibbed gene) – thought to be European) to make the Magpie pattern.

Crested and pied birds are found in Indonesia today, and the inference is that both of these genes were found in mutations in the vast duck population of the Far East. Birds and their eggs were certainly transported from the Dutch East Indies by the sailing ships of the VOC (Dutch East India Company). The Dutch are sceptical about the crested gene arriving from the

in China, perhaps as long as 4000 years ago, and in Indonesia where the Indian Runner evolved in the islands of Lombok, Bali and Java. This long history of domestication of the duck in the paddy fields of south East Asia has meant that there have been far more opportunities for *de novo* mutations (1) in the vast flocks of South East Asia compared with the relatively recent history of duck culture in Europe and

'closed flocks'. Despite these new colours and combinations being recognized in Europe and the USA, the origin of all them is unlikely to have been European. Some probably have a much more distant and colourful past.

For thousands of years, ducks were just ducks – the wild ones. Then people began to domesticate them. It certainly started earliest

our exhibition birds and their huge variety of colours tend to be taken for granted. Yet it's only since 1982 that so many colour mutations have been accepted in the show pen, and only in the last decade or so that the varieties have exploded into the colour mixtures of the Call ducks found in both the UK and USA today. However, European paintings, even dating back to the seventeenth century, illustrate potential oriental sources for some of these mutations.

Colour mutations have often been referred to as 'sports' in the past, the variant seeming to arise inexplicably from a uniform flock of birds. Nothing need be further from the truth. The colours of these 'sports' may simply be the expression of recessive genes lying hidden, and waiting to be revealed as homozygotes, in what are often termed

pied birds, and the blue dilution is there, but one seems to have to wait until Victorian times to get an indication that restricted mallard and harlequin phase genes had arrived.

Victorian farmyard ducks

Farmyard scenes were popular with Victorian artists. White ducks were a familiar theme, but what really catches the eye is the farmyard ducks of George W. Horlor. 'A family question' (1880) shows a pair of ducks: an apparently white duck with a wild-colour mallard drake – and a rather mixed brood, which probably influenced the title of the painting. Horlor, it seems, is commenting on the six ducklings, five of which sport the Mohawk stripe. Since we now know that even a first cross of a mallard with restricted results in Mohawk ducklings, one is left in no doubt that the white duck was hiding the restricted gene.

The date of the painting is timely. The Pekin was introduced into Britain and the USA between 1872 and 1873, and these duck genes soon circulated in Europe and America. It most likely brought with it the restricted gene. Just look at pictures of baskets of Far Eastern ducklings (3) and one also sees the same pattern today.

Evidence for the harlequin gene in art

The harlequin gene in ducks is called 'silver' (4). In its homozygous form it lightens the plumage in the duck. In the drake, key characteristics are a complete neck ring, fringing on the feathers of the claret bib, and extension of the claret along the flanks.

East Indies, perhaps because *The Poultry Yard* depicts a crested mallard, not an upright duck.

The pied gene is even more enigmatic. Pied Fawn-&-white birds were painted by Wyntrack (Wijntrack) in the 1600s, and we do not know if the pattern was European or Asian. However, the associated brown gene in these Fawn-&-whites is crucial – the brown gene arrives in Europe with the Runners from Indonesia.

One of the greatest Dutch animal painters is Melchior d'Hondecoeter. Depicting birds was a tradition in the d'Hondecoeter family. Gillis d'Hondecoeter (c. 1570-1638) painted landscapes with domesticated and exotic birds and animals, and his son Gjsbert d'Hondecoeter (1604-1653) also painted birds, particularly waterfowl and poultry.

The grandson, Melchior d'Hondecoeter, became known eventually in the nineteenth century as the 'Raphael of bird painters'. He was born into a family of artists and studied both with his father Gjsbert and his uncle Jan Baptist Weenix. His paintings can be found in several museums, including those of the UK, and show crested Hook Bills, a white crested duck, and small magpie-marked birds (which are ducklings, not Call ducks).

Of all the seventeenth century bird paintings I've managed to find so far, none has depicted ducks with harlequin or restricted mallard genes. Dick Wyntrack and Joris van der Haagen depict brown,



A similar Streicher to the ones featured in the Eleven ducks in the morning sun by Alexander Koester, is shown above. As noted in the Report of the Committee of European Poultry Standards, March 2010, there is considerable variation in the body marking of the female Streicher (Abacot Ranger). Absence of streaks on the flank and body feathers are a serious defect; nor should there be excessive striations. However, markings on Silver ducks do vary with the time of year, and with age.

When do these birds appear? This gene does not seem to be expressed in the Far Eastern duck flock. It does not appear in the early Dutch or Victorian paintings and may not have come from the Far East, for the Silver Runner is a recent invention in Germany. It may indeed make its first recorded appearance in Mrs Campbell's ducks in the photograph in Harrison Weir, published in 1902.

It was not, however, an isolated occurrence. The silver gene is illustrated by Alexander Koester (1864 - 1932), who trained at the Karlsruhe Academy from 1885. He produced a large number of duck paintings, and the artist became known as 'duck-Koester' when his paintings became very popular. They developed from detailed and realistic illustrations in the 1890s

to an impressionist free brushstroke style, beautifully suited to the wind in the plumage, in his later works (5). In 1904 Koester was awarded the gold medal at the world fair in St. Louis for his painting 'Enten'.

His most interesting paintings are the ones with coloured ducks: he shows the Runner pattern in fawn & white, as well as bibbed

ducks, the magpie cap in mainly white ducks, a light phase mallard and most useful of all – a harlequin drake in *Enten in Wasser* unter Birken, and a silver duck (i.e. harlequin phase) in *Eleven ducks in the morning sun*. The actual date of the paintings is as yet unknown but they seem likely to have executed in the first two decades of the 1900s.

Further evidence for the harlequin gene

It is around this time too, that Frank Finn, 1913 (6), comments on the variations in ducks in the London Parks. Of particular interest is the reference to the drake where 'reddish brown of the breast is continued along the flanks and sometimes onto the shoulders, while the upper parts are paler grey, often nearly white'. This is of course what distinguishes the harlequin phase in the drakes. In his text, Finn also distinguishes the dusky, and indicates that the park ducks have restricted genes (not yet named, but indicated by yellow ducklings with a dash of black on the crown).

From this point onwards, the harlequin gene becomes almost official. The Abacot Ranger colour type – first produced by Mrs Campbell – re-emerges and is recorded around 1917, and Hunter's Mallard is described 1939 (7, 8). Hunter's five birds hatched in 1938 were typical harlequin ducklings in the fluff – light yellow with smoky-coloured down on the head and tail. The adult birds illustrated are typical harlequin phase: the duck with a distinct hood and streaked body, the drake with extensive claret on the flanks. This photograph can leave us in no doubt that these birds, which are very similar to Koester's ducks, are indeed hooded silvers. Hunter has simply 'found' the recessive harlequin gene in his flock of what he identified as 'mallards.'

Silvers are therefore not 'new', but the origin of the harlequin gene is simply not known. There is no evidence that it came

from the Runner or the Pekin. It could have been a *de novo* European gene. Who knows at this point? What we do know is that the colour is very popular, was first found in the light ducks, and was subsequently transferred to the Call duck by the 1920s and to the Indian Runner at some point in Germany. If German readers would like to contribute more information, that would be excellent. In the meantime, more information on the Silver Calls will appear in a further edition.

References

1. *De novo*: an alteration in a gene that is present for the first time in one family member as a result of a mutation in a germ cell (egg or sperm) of one of the parents or in the fertilized egg itself

2. Joseph Struth, Edition by William Hone, London 1833
3. Ashton, C&M, Keeping Ducks and Geese, David & Charles 2009, page 34
4. Lancaster, F.M., 1963 'The inheritance of plumage colour in the common duck' (Bibliographica Genetica)
5. http://de.wikipedia.org/wiki/Alexander_Koester
6. Finn, Frank, *Variation in Mallard Ducks*, Avicultural Magazine, 1913
7. Hunter, Isaac, R A light mutant of the mallard duck', *The Journal of Heredity*, 1939, Vol. 30
8. Ashton, M, 'Silver Ducks', *Fancy Fowl*, Feb 2010

www.ashtonwaterfowl.net
Alexander Koester's pictures can be found by searching under his name, on the internet, on several websites.



The Abacot duck on the left is much more heavily marked than her sister, from the same hatch. The darker duck is similar in colour intensity to the female figured as Hunter's mallard in his paper A Light Mutant of the Mallard Duck, 1939. His silver females were produced from 'normal' mallard stock. Harlequin phase is recessive to dark phase, and the silver ducks would seem to just appear in the individuals which happened to be homozygous for the gene. This effect was noted in Call ducks in the 1990s when Blue and Apricot Silver Silvers 'appeared' from parent Apricot and Blue Mallard Calls which had, in fact, been crossed with Silvers.