

## 2 APPEARANCES CAN BE DECEPTIVE

Keith Lambert

In common with many other fish species, catfish in general and wels in particular are well known for having a great deal of variation in their colouring and appearance; we are all familiar with the almost jet black cats that often reside in deep clear lakes. My own catting career started many years ago with the dark ebony coloured cats of the Airman Pit in Bedfordshire. By contrast, shallow and highly coloured waters, often with a clay bottom such as Claydon or Woburn tend to produce very pale, almost washed out catfish with poor markings. This variation in colour, pattern and shade when determined by the fish's environment is known by scientists as 'background adaption' and is basically just a form of camouflage. For a predatory species, the ability to blend in with its environment is of course an advantage. Whilst diet and genetics also play a part in influencing the colouration of a catfish, the environment is usually the prime determinant. This wide variation in a cat's appearance, is one of the things that struck me about them when I first started to catch a few, the same species can look totally different from water to water and for me, is one of the things that I really love about them and has become reason enough for fishing many different venues and countries.

Following a recent capture of a

beautiful 'golden' catfish, I got talking to a few fellow catters and soon realised that there is a great confusion over the terminology used to describe catfish with 'abnormal' colouration. The term 'Albino' for instance is generally used to describe any yellow, pink or gold coloured catfish, but appearances can be deceptive, and this classification is usually wrong!

Given that there are more and more of these unusual and interesting fishes being caught both here and abroad, I thought it might be helpful to try to clarify things. I am not really talking about different markings, shades or geographical/environmental variations here, but rather changes to their appearance due to aberrant pigmentation. The pigment in a fish's skin is made up of colour containing cells called chromatophores. There are many different types of these cells producing a wide variation of colours, the dominant ones being melanophores which produce eumelanin and give the fish a darker appearance - black/grey/green/brown. What though of 'albinos'? Technically an albino fish is one that for various reasons has an absence of melanin, and consequently the fish will take on a yellow/pink/golden hue caused by more dominant cells like xanthophores and erythrophores (yellow and red pigment cells) which is why they aren't pure white. Albinism in

These dark, almost black fish, are typical of Airman Pit catfish.





Clonking led to the downfall of this unusually coloured Spanish catfish

fish is generally established at the egg stage and is normally the result of a recessive gene, although other factors such as exposure to heavy metals can also have an influence. True albino animals including fish will have eyes that appear red or pink; this is caused by the underlying blood vessels showing through due to the lack of melanin in the iris. Whilst albino fish are often produced by man as 'ornamental' varieties for the aquatic trade (usually termed 'Golden'), naturally occurring true albinos are actually very rare.

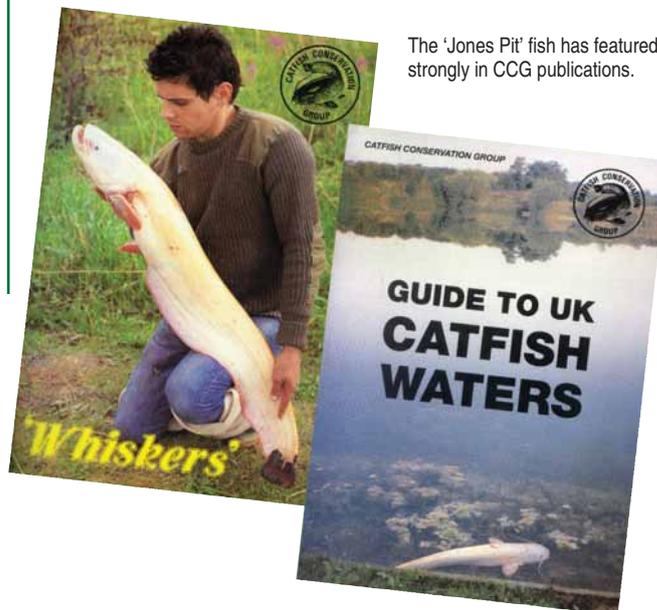
So, what of the many reported captures of 'albino' catfish usually captured in France or Spain that we see in the angling press? Well, actually the vast majority of these are not albino at all but are leucistic fish. Leucism occurs where there is only partial production of melanin resulting in fish that (usually) have patches of normal (dark) pigmentation interspersed with areas of golden (pink/yellow) skin. These fish have been christened by the French as 'Mandarins' and this has become a commonplace term in modern catfishing for 'part-albino' or 'piebald' catfish. The most well known of these fish in the UK is the instantly recognisable and famous Jones Pit 'albino'; not an albino at all - but a leucistic fish.

Now for the interesting bit, leucistic fish change colour! Scientists don't yet fully understand the reasons for this phenomenon but it is well documented that fish that show leucism can (and often do) change throughout their lifetimes. I am not talking about the ability to quickly change their appearance like a chameleon or squid (although the principles are similar) I refer to the proportion of yellow or black pigment that is visible at any given time and can alter one way or another. Certain species of aquarium fish (often catfish) have been known to start off with normal colouring and then change through varying degrees of leucism often resulting in a total lack of melanistic pigment. The real mind blower, is that they can change



It would appear that albino and leucistic cats can grow just as large as 'normal' catfish.

The 'Jones Pit Albino' is actually a leucistic fish and has changed colour drastically over the years.



The 'Jones Pit' fish has featured strongly in CCG publications.

back as well!

The aforementioned Jones Pit fish is a prime example of a catfish that has changed in its appearance and one that can be documented over a long period of time. This fish is quite probably around forty years old and its many captures have been well publicised photographically, indeed it has made several appearances in CCG publications over the years and is almost certainly the country's most well known catfish. Its changes in appearance can clearly be seen in the pictures. In recent times, its growth rate has stalled although its colouration has continued to change and one could be forgiven for assuming that they are different fish!

The one thing that never changes though, and which is common to all leucistic fish (and is never found in albinos) is the presence of melanin in the eyes making them appear dark. So even if a fish is golden yellow all over with no dark pigment at all but has black eyes, then it is leucistic, not albino!

As I said previously, it isn't fully known why these changes in pigmentation occur but it is thought that genetics, environment and trauma are the most likely causes. I know of one lake that suddenly out of the blue produced a large leucistic catfish. There was no record (that I knew of) of this fish being in the lake and although I fished there on and off for several seasons, I had never previously seen or heard of this very unusual cat. As far as I am aware, no new stock had been added; this can only

lead me to believe that something had triggered this condition and had affected a catfish that was previously 'normal'. I am not a scientist or specialist in genetics and I don't pretend to understand all the reasons behind these changes, what I do know though, is that there are more and more of these atypical catfish cropping up and I for one hope to encounter some more of these over the coming years!

## Where to Catch a 'Golden' or 'Mandarin' Catfish

### UK

Chittenden Lake, Kent  
Crowsheath Fishery, Essex  
Darenth Fishing Complex, Kent  
Hunters Lodge Fishery, West Sussex  
Pool Hall Fisheries, Staffordshire

### Europe

Embalse de Mequinenza, Caspe, Spain  
Many carp lakes, France  
Rio Segre, Mequinenza, Spain  
Rio Ebro, Spain  
River Rhone Delta (Camargue), France  
River Seine, France  
River Petit Rhone, France  
Schnackensee, Germany

This list is by no means exhaustive but all offer the chance to catch an unusual catfish!

Information correct at the time of going to press.

Probably the rarest catfish in Britain!

**Inset:** A beautiful true albino cat swims off strongly after capture

