

# Is the classic Lizard canary heading towards extinction?

**HUW EVANS** identifies the threats – which are still widely underestimated – to this historic canary breed, but offers reasons for hope that a broader appreciation of the genetic issues involved will secure its successful future

**COVER STORY: CANARIES**

IN 1945 the Lizard canary was in a parlous state. The Second World War had taken its toll of breeders and their birds, and the number of surviving Lizards had plummeted to a dangerously low level. So concerned were the founders of the Lizard Canary Association that the minutes of the inaugural meeting held on May 13, 1945 contained the following plea:

“The Council is determined to keep the Lizard true to type. With this in view it is hoped that all members of the Association when disposing of stock birds, will give priority to fellow members. All are asked to give this resolution their fullest support.”

Thanks to the LCA’s guardianship, the Lizard recovered. Numbers have

varied over the years, but you can still see more than 150 exhibits at specialist shows in the UK, and several hundred at some of the larger European events. Amidst all that abundance, surely any talk of extinction is nonsense?

The answer, as far as the classic Lizard canary is concerned, might surprise you.

I use the term “classic” to denote the true-bred Lizard, a breed that has survived intact for three centuries; no other canary has such an ancient heritage. By definition, a true-bred Lizard is a bird that is free from alien genes, but they are now in the minority since colour variants of the Lizard have developed a following in the UK and abroad.

The colour variants have been produced by cross-breeding the Lizard



A true-bred natural-coloured gold cock Lizard canary showing the amber tint produced by lutein in the feathers. Four photos: Huw Evans



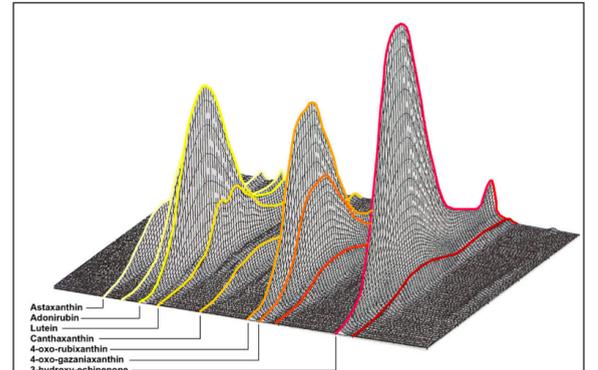
A natural-coloured example of a true-bred Lizard canary. This and the two birds to the right are all clear cap silver cocks



A colour-fed example of a true-bred Lizard. Breeder: Nigel Hasteed



A false-bred Lizard canary, plainly showing the loss of colour



3D chromatogram of carotenoids in plumage, adapted from Stradi's *The Colour Of Flight*. Colours are notional. Left to right, type of carotenoid. Bottom to top, quantity of the carotenoid (the higher, the stronger). Front to back, wavelength of the colour. Graphic: Huw Evans

with colour canaries, the most common being white (better known as “blue” in the Lizard) and brown (cinnamon or Ocelado), but there are several others.

People are free to keep and breed whatever birds they like, provided it is within the law. It is a freedom I cherish, but introducing alien genes into a historic variety does have consequences, and breeders need to be aware of them. They have had a significant impact on the fortunes of the classic Lizard canary.

**Problems with linked genes**

Like most colour mutations, only some of their progeny are the desired colour; many are yellow-ground birds that, at first glance, can look like real Lizards with cap, spangles and dark wings and tail. I refer to them as false-bred Lizards to distinguish them from true-bred birds. Their spangles can be very neat and it is easy to see why breeders might be tempted to cross them back to classic Lizards.

So what’s the problem? Surely the introduction of a single colour gene cannot threaten the integrity of the classic Lizard canary? Answer: the colour gene does not come alone.

Contrary to popular belief, genes do not necessarily act independently during sexual reproduction. Those that are linked closely on a chromosome tend to stick together. Let me give you a familiar example: have you noticed how people with freckles also have red or ginger hair? These characteristics are controlled by different genes, but they invariably act in tandem.

It is the same when breeders try to produce colour variants of the Lizard: on the coat tails of the desired colour gene comes a cluster of linked genes, some of which are incompatible with the classic Lizard canary’s phenotype. Those genes affect the Lizard in many ways, but in this article I am going to concentrate on a fundamental flaw: the ruinous loss of colour. The yellow ground colour, so rich in the

classic Lizard canary, becomes pale and drab in cross-bred offspring.

This had long puzzled me. After all, you don’t see a comparable loss of colour in the progeny of other canary varieties that are bred from a white x yellow pairing. I could only add it to the long list of mysteries that surround the Lizard. Then came the breakthrough.

Thanks to Antonio Petraroli, I was introduced to the work of Professor Ricardo Stradi at Milan University in the 1990s [footnote 1]. Stradi and his team investigated the carotenoids in birds’ plumage using a technique known as high-pressure liquid chromatography, which can distinguish between different colour compounds. Carotenoids are the source of yellow, orange and red colours in the feathers. Birds are unable to produce these pigments themselves; they absorb them from their diet, but not all birds metabolise the carotenoids in the same way.

In most species the pigments have to pass through an intermediate stage

which converts the original carotenoids (usually lutein and zeaxanthin) into more stable compounds (such as canary xanthophylls A & B) before they can be incorporated in the feathers.

Professor Stradi found that relatively few species can deposit lutein and zeaxanthin directly in their plumage. They include yellow buntings, yellow wagtails, golden orioles and... the Lizard canary.

Just in case you might wonder if this characteristic was inherited from the wild canary, Professor Stradi’s tests show that *Serinus canaria* does not possess this capability. In fact, no species of serin or cardueline finch that he examined can absorb carotenoids directly from their diet. How the Lizard acquired this ability is not known, but it is a profound distinction. It sets the true-bred Lizard apart from all other canaries.

Both the direct and indirect systems of pigment synthesis are capable of producing a bright colour, yet false-bred Lizards fall short of both. The most

likely explanation is that the two systems are genetically incompatible.

Worse still, this loss of colour seems to be permanent, cascading down the generations. Crossing back to the classic Lizard can alleviate, but not cure, the problem. It suggests that something is irreparably damaged in the genotype of false-bred Lizards and their descendants.

**The yellow ground colour becomes pale and drab in cross-bred offspring**

It is rather like an artist mixing oil paints and water colours together before applying the concoction to the canvas. The two types of paint have a different chemistry and they cannot work together; the result is a mess.

An artist can easily abandon the experiment and start again, but Lizard breeders don’t have that luxury. They

may not realise how bad things are until their youngsters have completed the moult, and then what do they do with the refuse stock?

You can understand why breeders of the classic Lizard canary are on their guard, but avoiding tainted blood is not as simple as you might think.

Lizards are, by tradition, colour-fed for exhibition in Britain. This can mask

the problem because canthaxanthin (the red pigment in colour food) saturates the feathers and obscures the true nature of the ground colour, especially in gold Lizards.

There are clues if you know what to look out for: a gold Lizard with a white vent cries “foul”; a silver Lizard (especially a male) with pale, drab or

unusual colour should set the alarm bells ringing. Unfortunately, newcomers to the fancy are unlikely to be aware of these traits, with the inevitable result that some birds of dubious provenance slip through the net, and the decline continues.

History teaches us that canary fanciers tend to be complacent about the survival of rare breeds until it is too late. R.L. Wallace, author of *The Canary Book* (1875) was unconcerned about the decline of the London fancy until the third edition of the book (1893) when he admitted: “I regret now that I did not try some experiments to resuscitate this breed.” Another example was the disastrous crossing of the Liverpool Green with mainstream Yorkshire canaries to improve type at the turn of the 20th century. Type and carriage were enhanced, but the brilliant green colour, as one breeder noted, had become “dull and smutty”. The Liverpool Green was almost certainly extinct by 1911 (see “Liverpool and the liver birds”, *Cage & Aviary Birds*, September 11).

Could history repeat itself with the classic Lizard canary? Even now, many people do not realise how serious the threat is. The proportion of classic Lizards I see at shows in the UK has been declining over many years, and the number of studs of true-bred Lizards is probably at its lowest since the dark days of the Second World War. Unless that trend is reversed, the classic Lizard canary will be heading towards extinction.

That is why I asked the question in the headline to this article. Fortunately, the headline conforms to Betteridge’s Law [footnote 2], and there are three reasons for optimism:

■ First, there has been an upsurge in novice breeders who are passionate about the true-bred Lizard canary. Their enthusiasm is already delivering results. Not only have novice exhibitors won best Lizard at the National Exhibition and the LCA Classic in recent years, but they also have strength in depth; we currently have the best novice section that I have seen for 20 years.

■ Second, I believe the two divisions can co-exist. The leading breeders of colour variants have come to realise that it is in their own interests to

support the true-bred Lizard canary because it is the foundation of quality; they need the classic genes to improve the standard of their own birds. By the same token, classic breeders must acknowledge that colour variants have become an established part of the Lizard scene; we cannot turn the clock back. It may be an uneasy relationship, but it is surely better than the antagonism we have seen in the past.

■ Third, the new leadership of the LCA, itself close to extinction in 2018, was elected on a mandate to promote the classic Lizard canary. This echoes the determination of the founding fathers of the LCA “to keep the Lizard true to type”. The classic Lizard canary has a wonderful opportunity to flourish under a reinvigorated LCA.

Is the classic Lizard canary heading towards extinction? No, although not so long ago that was a distinct possibility. Numbers are still low, but as I write, the future is looking rather bright.

● Anyone interested in joining the Lizard Canary Association should contact the secretary, John Record, at johnrecord@googlemail.com

Huw Evans is the vice chairman of the LCA and the author of a blog on the London fancy and Lizard canary: [www.finespangledsort.com](http://www.finespangledsort.com)

**Footnote 1:** An introduction to Professor Stradi’s research can be found in *The colour of flight: carotenoids in bird plumage*, 1998, Milan.

**Footnote 2:** Betteridge’s Law states that the answer to any headline that is presented as a question is likely to be “no”.

**Status uncertain**

HOW rare is the true-bred Lizard canary? The Lizard is bred all over the world, yet I can vouch for the authenticity of no more than 10 studs in the British Isles, five in continental Europe, and none elsewhere in the world. I know of other studs that are potentially genuine, but I have insufficient knowledge of them to be certain.

## The starling/gannet

**GARY BRALSFORD** completes his introduction to the spotless starling, a likeable songbird that packs a serious appetite! For his previous article, see the September 4 issue

**SOFTBILLS**

A GOOD description of the spotless starling is that it is closely similar to the common starling, but marginally larger (21-23cm in length, 70-100g in weight), with darker, oily-looking black plumage, glossed slightly purple or green in a bright light. It is entirely

**“ In two minutes they can clear the food dishes of everything**

spotless in spring and summer, and has only very small spots in winter, with pale tips to the outer feathers.

The spotless starling also differs in having longer throat feathers, twice the size of the common starling’s. This forms a loose, shaggy beard which is obvious when the pair start to sing. The legs are a pinkish colour. In

summer, the bill is yellow with a base blueish in males and pinkish in females. In winter it is much duller and often looks black. Juvenile birds look like the common starling but are browner all over. Confusion in winter with the common starling is quite normal where they overlap.

Like the common starling, it walks rather than hops, and has a strong direct flight, looking triangular-winged and short-tailed. It is noisy and a great mimic of other birds. Its song is like a common starling’s but louder.

The preferred habitat is open country, from farmland to olive groves and orchards; human habitation is quite

common. Most are found in fields following cattle and other livestock.

The species’ population has grown in recent decades, with a northward range expansion. It is an omnivore taking berries, fruits, livefood and any human scraps of foods. The captive diet must be as varied as the wild diet. It forms large flocks, often mixing with common starlings in a murmuration some 100,000 birds strong in winter. Nest sites in the wild are in crevices in cliffs or buildings, and typically three to five eggs are laid.

The vocabulary is varied, but the long descending whistling notes, typical of



A wild spotless starling in winter plumage, showing its tiny pale dots. © Shutterstock.com/Jesus Cobaleda. Inset: in flight, note the short wings and tail. Movement through the air is always bustling and rapid



starlings, are dominant and accented, and sometimes trilled or stuttered. The whistles are used as contact calls outside the breeding season. Nests of juveniles ready to fledge are noisy and can be annoying if built in house walls.

I believe this is a very interesting subject to add to a varied softbill collection. If you like watching the antics

of your garden starlings, you will love the spotless. It could be 2020 before I breed this species by the look of things, but I am patient enough to wait.

A friend of many years and a top softbill breeder, Rob Monk, has also kept this species. Rob has bred the likes of blue-bellied rollers (*Coracias cyanogaster*) and the beautiful Nicobar pigeon (*Caloenas nicobarica*). He also



Adults can look so uniform you might mistake them for a blackbird! © Shutterstock.com/Jesus Cobaleda

had a great breeding of the lovely plush-capped (plush-crested) jay (*Cyanocorax chrysops*) of South America, which was very impressive.

He briefed me on the present species as follows: “Had spotless starlings a few years ago and had eggs from them, but clear. The male’s beak needs to turn yellow before anything will happen, he then

starts to chase the hen. They nested in an upright parakeet box and used anything they could find to build with, more or less the same as sprees (Lamprolornis superbus)."

If I had any chicks I would have fed mainly crickets, plus small locusts, white mealworm and waxworms. I guessed that as they came from North Africa to southern Spain, the insects would be

hard-bodied (like black crickets) with not so many grubs, caterpillars, etc, available. I think they will only have one nest a year as mine went out of breeding condition after nothing hatched."

My most recent studies of my own birds have confirmed that the spotless starling is a GANNET! (Greedy person who stuffs their mouth.)

You produce the food dishes and they get very excited and loud, ready for the dishes to be placed in their flight. You can’t get your hands out quickly enough before they descend on the food. In two minutes they can clear the dishes of everything: softfood, fruit, livefood such as waxworms and mealworms, and egg mix. I then feel guilty of walking away with the dishes empty. And yet I put enough in to feed a small dog! Fruit pellets and dried mealworm are always on offer as well.

As I was writing this summary, my pair were displaying again and the cock was singing his different songs loudly and in an excited way, his throat feathers all puffed out. So maybe I’ll still be able to report that 2019 brings a breeding success.

Gary Bralsford is an experienced breeder of the rarer softbill species.