

A Chicken Story That's No Croc(k)



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Back in New York, the executives of Imaginova are gathered around the board table celebrating the one-year anniversary of LiveScience.com. The journalistic essence of cool, *LiveScience* provides breaking science news coupled with in-depth and often irreverent feature stories that capture people's fascination with everything from technological innovations to space and nature images.

"They are getting scarcer than hen's teeth," lamented one of the guys.

"What is?" asked a notebook doodler, taking a sip from his triple-espreso double-latte with half milk and extra foam.

"Oh, coming up with scientific, but cool, innovative, but irreverent, rich and compelling, but wacko feature stories that will grab the attention of our intellectually curious, but adventurous audience demographic," explained the concerned staffer.

Enter Robert Roy Britt, *LiveScience* managing editor, a no-nonsense three-name journalist who recognized the hen's teeth reference as a challenge not to be denied.

In a trice, Bjorn Carey, *LiveScience* staff writer, is assigned a story so captivating, but

bizarre, so amazing, but incredibly cool that dentists the world over — except perhaps in Iraq and the Russian steppes — will be gathering in small places like where dentists gather to marvel at the revelation.

With the meringue sluiced off and some of the lines altered to make the right margins neater, this is essentially what Bjorn discovered:

- Despite the fact that millions of children have grown up knowing that birds have teeth, thanks to the scientific accuracy of Warner Bros. and Disney's cartoonists, the fact is, they don't. But, wait!

- Fifty years ago, a mutant chick was discovered to have severe limb defects. It died before hatching, so scientists went back to discovering that if they combined some common elements found around the house, like lard and attar of potrzebie, put them into attractive packages and labeled them with names like Rejuvenating Moisturizer, Fat Zapper Miracle Cream,

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Wrinkle Removing Advanced Crisco, and Celebrity Cellulite Eliminator, they could retail the stuff at \$75 an ounce to women dedicated to postponing the “My goodness, I-look-like-I’ve-slept-under-a-bridge-all-night look.”

■ When the scientists finally ran out of adjectives, one of them returned to the mutant chick and looked in its mouth. Teeth! The thing had teeth! Not regular cartoon Chiclet teeth, but more like crocodile dentition. A puzzlement.

Not so much to Mark Ferguson of the University of Manchester, who said that birds are the closest living relatives of the reptile. These early birds, called archosaurs, were well-equipped to get the worm as well as more substantial prey. This was about 300 million years ago, said Ferguson, who wasn’t alive at the time, so it could vary a few years either way.

The birds had mouths similar in shape to a reptile’s, but for reasons that are only clear to the Intelligent Design people, 80 million years ago, modern birds emerged with standard-issue bird beaks, causing them to lose their teeth, to say nothing of their standing as first-class carnivores.

John Fallon of the University of Wisconsin explained what happened. But unless you are into ornithological studies in a big way, you’d best skip this part. Suffice it to say, the discovery of the mutant chick and its teeth tickled the fancy of scientists who sharpened their imaginations and sat down to ponder.

What if the 80 million-year-old genetic pathway still existed in modern, healthy chickens pecking around happily under the watchful care of Tyson’s or Foster Farms?

By making “a few changes to the expression of certain molecules in the pathway,” *LiveScience* reported, the researchers were able to “induce tooth growth” in normal developing chickens. Inducing chickens to do anything is an art in itself. Outside of that one chicken on TV that could beat anybody three times out of five playing tic-tac-toe, the species is as dumb as a rock. How one would recognize a change in expression of a molecule, an entity given largely to deadpan responses, was probably on a need-to-know basis.

LiSci is not telling. The scientists reported the teeth looked like reptilian teeth. The whole thing supported their hypothesis — always a desirable goal when applying for new grants. Then they looked more closely at the big picture that included, but was not limited to, millions of free-range chickens having the temperament of land-based piranhas. Discretion became the better part of valor and they aborted the hatching process. Yay!

Cloaked in the usual scientific gobbledegook, the results are still scarcer than hen’s teeth to interested dentists who keep asking, “What’s in it for us?”

We have heard all the rumors of stem cell cloning teeth on mice, but have yet to see a practical application of this in our human patients. Unless the National Hockey League, an organization of edentulous bruisers with a treasury large enough to support lengthy strikes, develops a passion for action, another 50 years may slip by. Considering these guys are hugely intimidating as is, offering them an option of crocodile-like teeth as replacements may not be in society’s best interests. **CDA**