

3 Reasons Aerial Pesticides Are Not Causing Autism

Posted on *May 2, 2016* by [Hank Campbell](#)



NONSENSE

Steven Hicks, M.D. PhD, pediatrician at Penn State Milton S. Hershey Medical Center in Hershey, Pennsylvania, looked at autism rates in a swampy region of New York and saw higher developmental delay and autism diagnoses in some areas and thinks he knows why; pyrethroid pesticides being sprayed by airplanes to kill mosquitoes.

Scientists, toxicologists, and public health officials certainly appreciate some attention being drawn to killing mosquitoes as the season — and Zika concern — approaches, but [chemically it just can't be true](#), for three reasons:

1. Pyrethroids are less toxic than the popular home-use repellent DEET. DEET is even applied directly to the skin, where it is readily absorbed into the blood. It still isn't harmful, meaning pyrethroids are even safer.

2. There is no plausible biological mechanism for this correlation and none is proposed; it is simply two curves that happen to show an association, real or otherwise. It could just be a spurious correlation. For example, organic food sales have also increased with autism(1), which is obviously ridiculous. Furthermore, there are many reasons why people who live near swampland may seem to have more diagnosed developmental delays — a broadening of the definition of autism, and better reporting in areas that were not as well serviced before.

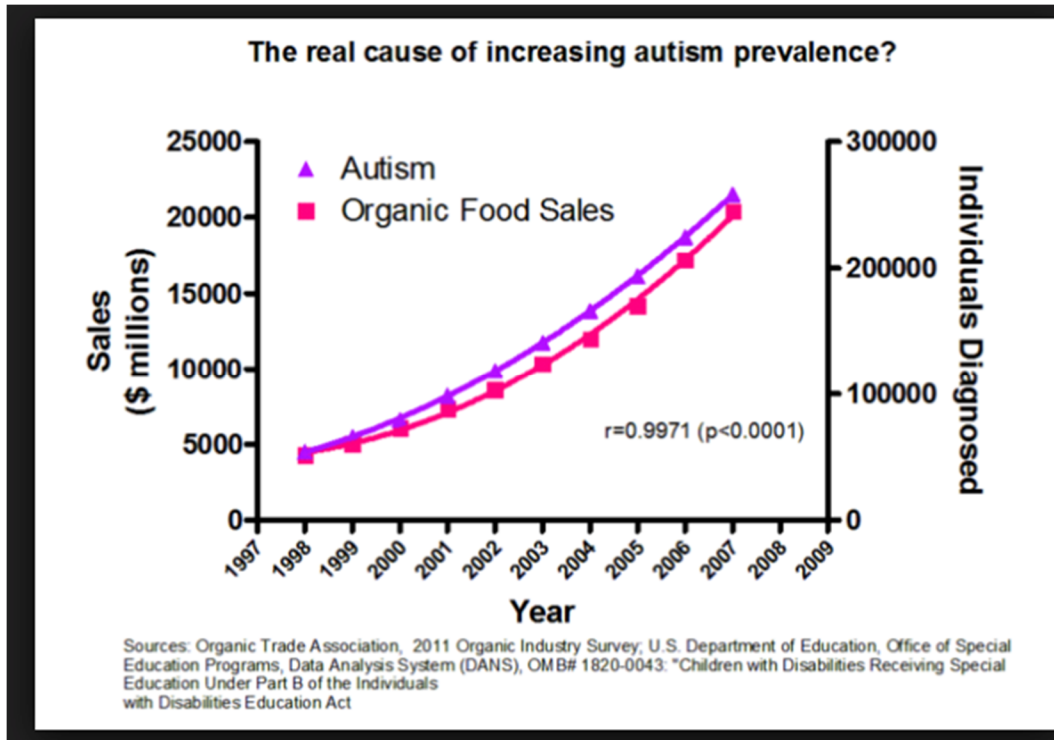
3. Pyrethroids have been used for 50 years, so they can't suddenly be causing autism. In the zip codes that were analyzed, 1 in 120 children was diagnosed with autism spectrum disorder or a developmental delay, while the same class of pesticides without aerial spraying was 1 in 172. Yet the prevalence nationwide for autism spectrum disorder is 1 in 68. From these data, it could be argued that pyrethroids *lower* the chances of autism, which is no more or less valid than these claims.

Hicks does not say he knows this correlation to be causative, he wants it “studied” more, but his supporting information is sketchy — he invokes a California paper regarding pregnant women and autism being linked to pesticides using proxies the same way, without noting that the paper was widely discredited because it did not measure any pesticides⁽²⁾, it simply matched two curves as is being done with aerial spraying. The author also did not disclose two conflicts of interest— she is both an autism and an anti-pesticide activist.

Hicks' work has not been peer-reviewed yet (preliminary findings, presented at the Pediatric Academic Societies 2016 Meeting), so it is sadly both unfortunate and predictable that environmental groups are already exploiting developmentally disabled children and their parents by promoting this finding to raise money —and that publications like Newsweek are enabling them without any critical thinking.

NOTES:

(1) It's a serious issue, I don't want to be glib about it, but since every environmental group is glib about their curve matching when dialing for dollars:



(2) Other flawed uses of proxies published as fact:

- (1) Zebras evolved stripes due to flies
- (2) Famous paintings are proof of climate change
- (3) Bicep size correlates to political conservatism.
- (4) A lack of vitamins is linked to more autism

About Hank Campbell

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Zebras Evolved Stripes Due To Flies



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How And Why Zebras Earned Their Stripes

By News Staff | April 1st 2014 02:33 PM | [Print](#) | [E-mail](#) | [Track Comments](#)

Why zebras have black and white stripes is a long-standing puzzle of evolution.

To find out, the researchers behind a *Nature Communications* paper mapped the geographic distributions of the seven different species of zebras, horses and asses, and of their subspecies, noting the thickness, locations, and intensity of their stripes on several parts of their bodies. Their next step was to compare these animals' geographic ranges with different variables, including woodland areas, ranges of large predators, temperature, and the geographic distribution of glossinid (tsetse flies) and tabanid (horseflies) biting flies.

They then examined where the striped animals and these variables overlapped.

After analyzing the five hypotheses, the scientists ruled out all but one: zebras evolved stripes to avoid blood-sucking flies.

Biting flies, including horseflies and tsetse flies, are the evolutionary driver for zebra's stripes. Experimental work had previously shown that such flies tend to avoid black-and-white striped surfaces, but many other hypotheses for zebra stripes have been proposed since Alfred Russel Wallace and Charles Darwin debated the problem 120 years ago. These include:

1. A form of camouflage
2. Disrupting predatory attack by visually confusing carnivores
3. A mechanism of heat management
4. Having a social function

5. Avoiding ectoparasite attack, such as from biting flies



Zebras, like these plains zebras in Katavi National Park, Tanzania, have stripes. But why? Researchers say they know the answer. Credit: Tim Caro/UC Davis

While the distribution of tsetse flies in Africa is well known, the researchers did not have maps of tabanids (horseflies, deer flies). Instead, they mapped locations of the best breeding conditions for tabanids, creating an environmental proxy for their distributions. They found that striping is highly associated with several consecutive months of ideal conditions for tabanid reproduction.

"I was amazed by our results," said lead author Tim Caro, a UC Davis professor of wildlife biology. "Again and again, there was greater striping on areas of the body in those parts of the world where there was more annoyance from biting flies."

Why would zebras evolve to have stripes whereas other hooved mammals did not? The study found that, unlike other African hooved mammals living in the same areas as zebras, zebra hair is shorter than the mouthpart length of biting flies, so zebras may be particularly susceptible to annoyance by biting flies.

"No one knew why zebras have such striking coloration," Caro said. "But solving evolutionary conundrums increases our knowledge of the natural world and may spark greater commitment to conserving it."

Yet in science, one solved riddle begets another: Why do biting flies avoid striped surfaces? Caro said that now that his study has provided ecological validity to the biting fly hypothesis, the evolutionary debate can move from why zebras have stripes to what prevents biting flies from seeing striped surfaces as potential prey, and why zebras are so susceptible to biting fly annoyance.

Source: [University of California - Davis](#)

Famous Paintings Are Proof Of Climate Change



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Extreme Gray Literature - Famous Paintings As Evidence For Earth's Climate Past

By News Staff | March 25th 2014 11:14 AM | [Print](#) | [E-mail](#) | [Track Comments](#)

Tree rings don't lie but if you trust temperature readings before 1980, you are not using a rational approach to science. There are too many cases where the official reader is a thermometer of unknown quality or a television report that used what a farmer who called in from his house said.

if you can't trust old thermometers, can you trust old paintings? A paper in *Atmospheric Chemistry and Physics* used the colors of sunsets painted by famous artists to estimate pollution levels in the Earth's past atmosphere. They found that the paintings reveal that ash and gas released during major volcanic eruptions scatter the different colors of sunlight, making sunsets appear more red.

When the Tambora volcano in Indonesia erupted in 1815, painters in Europe could see the colors of the sky changing. The volcanic ash and gas spewed into the atmosphere traveled the world and, as these aerosol particles scattered sunlight, they produced bright red and orange sunsets in Europe for up to three years after the eruption. J. M. W. Turner was one of the artists who painted the stunning sunsets during that time. Now, scientists are using his, and other great masters', paintings to retrieve information on the composition of the past atmosphere.



The Lake, Petworth: Sunset, Fighting Bucks (c. 1829) was one of the paintings by J. M. W. Turner analyzed by Zerefos et al. to study the past atmosphere. [WikiPaintings public domain](#).

"Nature speaks to the hearts and souls of great artists," says lead-author Christos Zerefos, a professor of atmospheric physics at the Academy of Athens in Greece. "But we have found that, when coloring sunsets, it is the way their brains perceive greens and reds that contains important environmental information."

Zerefos and his team analyzed hundreds of high-quality digital photographs of sunset paintings done between 1500 and 2000, a period including over 50 large volcanic eruptions around the globe. They were looking to find out whether the relative amounts of red and green along the horizon of each painting could provide information on the amount of aerosols in the atmosphere.

"We found that red-to-green ratios measured in the sunsets of paintings by great masters correlate well with the amount of volcanic aerosols in the atmosphere, regardless of the painters and of the school of painting," says Zerefos.

Skies more polluted by volcanic ash scatter sunlight more, so they appear more red. Similar effects are seen with mineral (desert dust) or man-made aerosols. Air with a higher amount of aerosols has a higher 'aerosol optical depth', a parameter the team calculated using the red-to-green ratios in the paintings. They then compared these values with those given by independent proxies such as ice-core and volcanic-explosivity data, and found good agreement. The results obtained validate those of the team's previous study, published in *Atmospheric Chemistry and Physics* in 2007.

To further support their model, the researchers asked a famous colorist to paint sunsets during and after the passage of a Saharan dust cloud over the island of Hydra in June 2010. The painter was not aware of the dust event.

The scientists then compared measurements of the aerosol optical depth made by modern instruments with those estimated from the red-to-green ratios of the paintings and of digital photographs, and found that they all matched well.



The top image shows digitally compressed paintings produced by colorist P. Tetsis at the island of Hydra in June 2010 during and after the passage of a Saharan dust cloud. The painting on the left features a more aerosol-rich scene (more dust in the atmosphere) than the one on the right. The bottom images show digital camera photos of the landscape. The pictures shown were taken half-way through the painting process. Credit: P. Tetsis (paintings) and C. Zerefos (photos)

Since aerosols scatter sunlight, less of it reaches the surface, leading to cooling. The Tambora eruption, the largest in recorded history, killed some 10,000 people directly and over 60,000 more due to the starvation and disease during the 'volcanic winter' that followed.

Aerosol optical depth can be directly used in climate models, so having estimates for this parameter helps researchers understand how aerosols have affected the Earth's climate in the past. This, in turn, can help improve predictions of future climate change.

"We wanted to provide alternative ways of exploiting the environmental information in the past atmosphere in places where, and in centuries when, instrumental measurements were not available," concludes Zerefos.

Citation: C. S. Zerefos, P. Tetsis, A. Kazantzidis, V. Amiridis, S. C. Zerefos, J. Luterbacher, K. Eleftheratos, E. Gerasopoulos, S. Kazadzis, and A. Papayannis, 'Further evidence of important environmental information content in red-to-green ratios as depicted in paintings by great masters', *Atmos. Chem. Phys.*, 14, 2987-3015, 2014 [doi:10.5194/acp-14-2987-2014](https://doi.org/10.5194/acp-14-2987-2014)

Bicep Size Correlates To Political Conservatism



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Physical Strength And Political Conservatism Co-Evolved, Say Social Scientists

By News Staff | May 15th 2013 09:39 AM | 22 comments | [Print](#) | [E-mail](#) | [Track Comments](#)

If you are physically strong, social science scholars believe they can predict whether or not you are more conservative than other men.

This might seem obvious. Fitness takes a lot of individual initiative, the government can do all of the outreach programs and legislate all of the soda cups they want, but it won't make people exercise. Super-fit people have to be conservative when it comes to their own exercise, even if they are liberal about money.

Michael Bang Petersen, associate professor in the Department of Political Science and Government at Aarhus University, and evolutionary psychology colleagues at UC Santa Barbara say the strength/politics connection is due to evolution, which is sure to annoy biologists.

Men's upper-body strength predicts their political opinions on economic redistribution, they write, and they believe that the link may reflect psychological traits that evolved in response to our early ancestral environments and continue to influence behavior today.

"While many think of politics as a modern phenomenon, it has — in a sense — always been with our species," says Petersen. Few people would argue that politics has not always been with us, and we have always evolved. They must be linked?

In the days of our early ancestors, they say, decisions about the distribution of resources weren't made in courthouses or legislative offices, but through shows of strength. With this in mind, the scholars hypothesized that upper-body strength — a proxy for the ability to physically defend or acquire resources — would predict men's opinions about economic redistribution.

So they surveyed hundred of people in America, Denmark and Argentina about bicep size, socioeconomic status, and support for economic redistribution. Their belief was that since bicep size as a proxy for upper body strength is irrelevant to payoffs from economic policies in modern mass democracies - might no longer makes right - anyone who wants to be strong is likely to have political decision making shaped by an evolved psychology designed for small-scale groups.

In line with their hypotheses, the data revealed that *wealthy* men with big biceps were less likely to support redistribution, while less wealthy men of the same strength were more likely to support it. In other words, richer men with big biceps supported lower taxes while poorer men with big biceps wanted higher taxes - on the rich. But men with tiny biceps were less adamant on both sides, they weren't as fanatical about socialism or capitalism.

"Despite the fact that the United States, Denmark and Argentina have very different welfare systems, we still see that — at the psychological level — individuals reason about welfare redistribution in the same way," says Petersen. "In all three countries, physically strong males consistently pursue the self-interested position on redistribution.

"Our results demonstrate that physically weak males are more reluctant than physically strong males to assert their self-interest — just as if disputes over national policies were a matter of direct physical confrontation among small numbers of individuals, rather than abstract electoral dynamics among millions."

No link was found between upper-body strength and redistribution opinions among women. Petersen argues that this is likely due to the fact that, over the course of evolutionary history, women had less to gain, and also more to lose, from engaging in direct physical aggression.

Whereas some biologists think nothing in biology has functions, evolutionary psychologists (and at least one political scientist and criminologist) believe everything in culture, psychology and decision-making is predetermined by inheritance. The psychology and political science scholars say the results indicate that an evolutionary perspective may help to illuminate political motivations, at least those of men.

"Many previous studies have shown that people's political views cannot be predicted by standard economic models," Petersen explains. "This is among the first studies to show that political views may be rational in another

sense, in that they're designed by natural selection to function in the conditions recurrent over human evolutionary history."

So Republicans shouldn't be conducting voter registrations outside the IRS office, like they do now, they should be doing them outside the gym.

Petersen, M. B, Sznycer, D., Sell, A., Cosmides, L., & Tooby, J. 'The ancestral logic of politics: Upper body strength regulates men's assertion of self-interest over economic redistribution', *Psychological Science* doi: 10.1177/0956797612466415

A Lack Of Vitamins Is Linked To More Autism



Welcome to the *CHARGE* study homepage



Uncovering environmental causes of autism

CHARGE (Childhood Autism Risks from Genetics and the Environment) was launched in 2003 as the first comprehensive study of environmental causes and risk factors for autism and developmental delay. The CHARGE study recognizes that no single factor accounts for all autism cases, nor is there one event or exposure that can be responsible for the rapid increase in diagnoses over the last few decades. Instead, each child's path to altered brain development may be different.

Refining our understanding of environment-gene interactions

Both genes and non-inherited factors contribute to autism, developmental delays, and children's behaviors. The CHARGE study has been the first to identify an interaction between genes and environment: specifically we showed that the combination of certain unfavorable genes *and* a lack of prenatal vitamin supplementation in the preconception period led to exceptionally high risk for autism—as much as 7-fold! We also found that both the mother's and the child's genes could have this impact.

The participants

Children enrolled in the study must:

- Be between 24 and 60 months of age
- Have been born in California
- Have parents who speak either English or Spanish
- Live with at least one biological parent

Children with autism or developmental delay are identified with assistance from the California Department of Developmental Services' Regional Centers. Other children come from the community at large.

The evaluation

Children are assessed for their stage of social, intellectual and behavioral development. In addition, information is collected about chemicals in the environment at home and elsewhere, medical history, diet and other aspects of their lives, before and after birth. We also look at factors that may affect brain development, including cells in the immune system, chemicals that regulate the nervous system and lipids such as cholesterol.

Assessments are performed at the UC Davis MIND Institute in Sacramento and an extensive interview is conducted by telephone.