

Search

Ask an Expert: Heat, drought and climate change in the USA

English language's evolution slowed in 20th Century

Jul 26, 2012

Antlers make the beetle

USA TODAY's Science team

Visit Science Fair for your daily dose of scientific news, from dinosaurs to distant galaxies. Science Fair is written by science reporters Dan Vergano and Elizabeth Weise and weather reporter Doyle Rice. Their subjects are often controversial – and always fascinating – be they stem-cell research, slime mold, or underground slush on Mars. [More about the team](#)



Recommend 5 4 0 [Email] [Print] [Share]

By Dan Vergano, USA TODAY

Are big antlers indeed a sign of fitness, as evolution suggests? Yep, at least for male rhinoceros beetles, a study shows.

Updated 2012-07-26 5:09 PM



CAPTION Will Frehofer and Douglas Emlen

"The most elaborate male ornaments and weapons of sexual selection grow to exaggerated proportions, especially in the largest and best-conditioned individuals," begins the *Science journal* study led by Douglas Emlen of the University of Montana. From the peacock's feathers to moose antlers, male ornamentation is taken a signal used by females to select mates in evolutionary theory, a process known as "sexual selection" first described by Darwin in 1871.

Subscribe to Science Fair

Subscribe to Science Fair via RSS

Subscribe

Sign up for Science Fair e-mail alerts

[Email Input] Subscribe

Delivered by FeedBumer

Blogroll

- American Society of Oriental Research
- Ars Technica Science
- Cosmic Variance
- Deltoid
- The Front Page
- The Space Review
- Jeff Masters' WunderBlog
- Knight Science Journalism Tracker
- Last Word on Nothing
- Real Climate
- Science and the Public
- ScienceBlogs
- ScienceWatch.com
- Small Things Considered
- Time to Eat the Dogs
- Virology
- WeatherInsights

In rhinoceros beetles, as in other animals, a "good genes" explanation for such antlers has served evolutionary biologists, where the horns act as a signal to female beetles on the fitness of mates. But how does that work?

Emlen and colleagues find that "enhanced sensitivity" to insulin and related growth factors explains the wide variation in antler sizes among rhinoceros beetles. Since insulin is supplied by eating, the best-fed and hence, most fit beetles do sport the largest antlers. The same insulin signals likely drive similar outsized ornaments in males of other species:

"We suggest that exaggerated animal structures may be unfakable signals of quality because of the developmental mechanism responsible for their accelerated growth. If true, then our hypothesis of 'intrinsic reliability' could help explain why so many different signal traits embark on an evolutionary trajectory of bigger and bigger size."

See photos of: [Beetle](#)

TAGS: [EVOLUTION](#) [BEETLE](#)

More from USATODAY

- [Lady Gaga shares nude photo; Duchess Kate gets photoshopped](#)
- [Scientist's cameras find 5 flags on moon](#)
- [Tips for best viewing of Perseid meteor shower's peak](#)
- [Study: NFL preseason games haven't mattered since 1994](#)
- [Video animation: Curiosity rover lands on Mars](#)

More from the web

- [The Take: Who Holds Back the Electric Motorcycle?](#) *(Technologist)*
- [Thomas Edison Did Not Invent The Lightbulb \(and Other Things You Should Know\)](#) *(Qualcomm Spark)*
- [Oil sands innovation: Greater efficiency, fewer emissions, more supply](#) *(ExxonMobil's Perspectives)*
- [Video: Frozen Woman Tries to Speak English](#) *(Linguavore)*
- [Breakthrough Technology Could Lead to Battery-Powered Future](#) *(ecomagination)*

[?]

PREVIOUS

[Ask an Expert: Heat, drought and climate change in the USA](#)

NEXT

[English language's evolution slowed in 20th Century](#)

To report corrections and clarifications, contact Standards Editor [Brent Jones](#). For publication consideration in the newspaper, send comments to letters@usatoday.com. Include name, phone number, city and state for verification. To view our corrections, go to corrections.usatoday.com.

USA TODAY is now using Facebook Comments on our stories and blog posts to provide an enhanced user experience. To post a comment, log into Facebook and then "Add" your comment. To report spam or abuse, click the "X" in the upper right corner of the comment box. To find out more, read the [FAQ](#) and [Conversation Guidelines](#).



Post to Facebook

Posting as Danielle Whittaker ([Change](#))

Facebook social plugin

