DISCOVER

CONTENIDO

VOLUME 31 No. 2, MARCH 2010

40 How to travel Through Time.

Do inescapable paradoxes make time travel impossible? Not at all, says this theoretical physicist. *Sean Carroll.*

32 The Picasso of DNA

Geneticist George Church is learning how to reassemble our genes the way a great artist rearranges the way a great artist rearranges paint. Medicine —and *Homo sapiens*— may never be the same. *Ed Regis.*

44 Who Are You Calling Bird Brain?

The amazing mental capacities of ravens, jays, and crows are forcing scientists to reevaluate their ideas about the evolution of intelligence. *Charles Wohlforth.*

50 Ice Fishing for Neutrinos.

On the frozen surface of Siberia's vast Lake Baikal, physicists set a cunning trap for ghost particles from the edge of the cosmos. *Anil Ananthaswamy*.

58 Where the Wild Things Are.

A Dutch ecologist is re-creating the landscape of prehuman Europe, challenging the sacred rules of conservation in the process. *Andrew Curry*.

66 DISCOVER Interview: Barry Marshall.

He discovered the cause of ulcers and stomach cancer. But it was so hard to convince the medical establishment that he had to run the test on himself.

4 Contributors

- 5 Mail
- 6 Editor's Note

8 Data.

A hands-on approach to brain research, the secrets of fish oil, a practical makeover for geothermal energy, robotic insects, slicing the universe, and more.

20 Five Questions for Erez Lieberman-Aiden.

His three-dimensional model of the human genome could help solve one of biology's central mysteries. Amy Barth.

22 **Destination Science.**

At the New Mexico site of the world's fist nuclear explosion, everything seems normal-until you look more closely. LeeAundra Keany.

26 **Hot Science**

The best new books, TV, film and exhibits.

28 The Brain

The Mind's eye is more than a metaphor: It really is possible to see without looking.

Carl Zimmer.

30 **Vital Signs**

Was something wrong with this rambunctious 3-year-old, or was he just acting his age? Mark Cohen.

20 Things You Didn't Know About Light. 80 LeeAundra Keany.

On the Cover.

High-definition video still by Biwa Studio.

DISCOVER ON THE WEB

Videos, breaking news, and more - the latest is online at dsicovermagazine.com