

If you go down to the woods today...

Theoretical physicists decamp to the countryside.

Eric Hand

Texas

The Cook's Branch Conservancy in Montgomery County, Texas, is a large nature reserve of pine forest and wildflower meadows that is home to wild turkeys, bald eagles and a large population of the endangered red-cockaded woodpecker. For a fortnight in April, it was home to a rather different rare bird: the theoretical physicist.

A dozen of cosmology's brightest minds, including British astrophysicist Stephen Hawking, descended on the reserve to discuss the tricky problems of the early Universe. These physicists, most of whom are connected in some way to Hawking, either as collaborators or past graduate students at the University of Cambridge, UK, arrived for the invitation-only retreat, which, in its second year, has become one of the most exclusive — and pampered — workshops in physics.

The 23-square-kilometre property is owned by George Mitchell, an 88-year-old developer and oilman worth US\$3.2 billion. Late in life, Mitchell has cultivated a love for astrophysics, bestowing \$50 million on Texas A&M University in College Station. "I am trying to see how our top universities can have as much influence in high-level physics as, say, Caltech and the University of California, Berkeley, or Harvard or Yale," Mitchell explains. "And I am trying to see how we can get in on the act, because this state is big enough and wealthy enough to get it done."

Mitchell is not the only billionaire donating to the theoretical physics cause. Mike Lazaridis, founder of Canada's Research in Motion, which makes the BlackBerry, gave \$100 million to kickstart the Perimeter Institute for Theoretical Physics in Waterloo, Canada. And James Simons, a mathematician who runs Renaissance Technologies, one of the world's largest hedge funds, in February gave \$60 million to Stony Brook University in New York to establish the Simons Center for Geometry and Physics.

But it somehow seems more personal with Mitchell, who wanted to study astronomy before deciding that petroleum engineering at Texas A&M would be more affordable (and lucrative). Not only has he given \$35 million to construct two new physics buildings, due for completion in 2009, he has also opened up the bucolic Cook's Branch estate — where the Mitchell family still gathers every year for Thanksgiving — as a luxurious retreat centre for collaborations involving Texas A&M physicists. And in April, the secluded lodges of Cook's Branch played elaborate host to Hawking and his colleagues. A Dutch chef from New York arrived to cook French cuisine for the week. One night, a classical guitar player serenaded the scientists as they ate a barbecued feast of wild pigs from the estate. And the wine flowed. Nick Warner, a string theorist from the University of Southern California in Los Angeles, says the nurturing environment is good for the mind. "A different exterior landscape can change the interior landscape," he says.

The physicists stayed up late around a fire, poking at each others' theories, and during the days tested new ideas in PowerPoint presentations. Andrew Strominger, of Harvard University in Cambridge, Massachusetts, gave a talk on 'chiral gravity in three dimensions', but he explained it in 2D, wheeling out two chalkboards and quickly camouflaging them in a jungle of algebra.

The physicists followed the formulae, computing in their heads. Strominger's talk was interrupted only by a cool breeze and the beep from Hawking's computer, a reminder of his only mode of communication. Hawking, who is incapacitated by amyotrophic lateral sclerosis, has a sensor, super-glued to a paperclip on the inside of his glasses, which registers a wrinkling of his cheek. Letter by letter, word by word, he composes sentences that are spoken by an old 1980s-era voice machine that he has kept because it has come to define him.

Texas A&M graduate students, invited out to Cook's Branch for the afternoon, rolled into the audience wearing baseball caps, shorts and sports sandals. They were duly impressed by the celebrities in attendance — but not too impressed, because, being in a physics department in the making, they aren't unaccustomed to seeing top physicists stop by College Station for a lecture or a guest appointment. The Mitchell money has helped Texas A&M attract two-dozen new physics faculty staff since 2001, and start an astronomy group from scratch.

"We're getting used to good people coming through," says graduate student Jim Ferguson, as he was served lobster bisque for lunch.



Malcolm Perry, Gordon Kane, Stephen Hawking and George Mitchell (left to right) were among the elite physicists invited to the Cook's Branch Conservancy (above).

A. N. Zytkow/E. Hand

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