

SPECIAL REPORT

Anti-evolutionists raise their profile in Europe

The teaching of alternative theories to evolution in schools is not just an issue in the United States. **Almut Graebisch** and **Quirin Schiermeier** assess whether creationism is threatening science in Europe.

Being a trained biologist doesn't stop Maciej Giertych from insisting that evolution is a falsified hypothesis¹. The 70-year-old Polish member of the European parliament, who has a PhD in tree physiology, also wants to spread the word. In October, he organized a workshop for parliamentarians entitled "Teaching evolution theory in Europe: is your child being indoctrinated in the classroom?"

Although the teaching of evolution has become a highly politicized and hotly discussed matter in the United States, such moves are rare in Europe, and Giertych's activities have so far met with little response in Strasbourg or Brussels. But a number of similar incidents over the past couple of years, in various countries, are raising fears among the scientific community that creationism may be on the rise in Europe.

Last month, for example, it emerged that creationism is being taught at two schools in the German state of Hesse. The incident, albeit minor, has provoked debate in the country. The Christian view of creation should at least be discussed in science classes, argues Karin Wolf, Hesse's Christian Democrat education minister. But the Association of German Biologists warns of the dangers of blurring the division between science and religion.

And in Britain in September, the prominent creationist group Truth in Science sent information packs to every UK secondary school. The material suggests intelligent design should be taught as an alternative to the theory of evolution, although the UK government's education department was quick to say that it does not endorse its use in science classes.

In response, a group called the British Centre for Science Education has been formed to campaign against the teaching of creationism in schools. Meanwhile, British school leavers' knowledge about evolution is considered so poor, and creationist ideas so widespread, that

the universities of Leeds and Leicester are planning to introduce remedial courses next year for first-year science students.

Steve Jones, a geneticist at University College London who has lectured widely about evolution, is one of those concerned by the growing influence of creationist groups. "I have talked about evolution in front of more than 100,000 British schoolchildren in the past 20 years — during most of that time I was never asked questions about creationism," he says. "But in the past couple of years, wherever I go I am asked about it." He ascribes the change largely to the activities of groups such as Truth in Science.

But perhaps the most blatant attempt to ban evolution from the classrooms occurred in Italy in 2004. Letizia Moratti, then education minister, caused a public outcry when she removed the theory of evolution from the curricula of Italy's middle schools² on the grounds that teaching Darwin's theory of evolution can instil a materialist view of life in young minds.

Following widespread protest, the education ministry partially reintroduced darwinism into school courses. A recent study by *Observa Science in Society*, a Vicenza-based body that promotes informed debate on scientific issues, shows that only 11% of Italians support the exclusion of darwinism from curricula. But almost two-thirds would prefer lessons to cover both evolutionary theory and the creationist view. "Italy is no longer a completely secular country," says Telmo Pievani, a philosopher of science at the University of Milan II in Italy. "We are facing a dramatic and worrying cultural and political regression."

In Russia, meanwhile, creationist societies are receiving strong support from the Protestant minority. Besides translating the writings of European and US creationists, Russian groups conduct their own 'creation research'. In Moscow, for example, the ARCTUR Research Geological Lab is looking for geological and

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geochemical proof of creationism. The society collaborates with creationists in the West and promotes its findings in several Russian and English-language creationist journals.

Such examples illustrate the complexity of the issue in Europe compared with the United States. Whereas the US drive towards creationism comes mainly from Protestant fundamentalist groups, the European movement has diverse roots. "There is an aggressive anti-darwinism inspired by radical Islamic minorities in immigrant communities in Britain and France; there is a Catholic creationism growing in Poland; there is Protestant creationism in some schools in England," says Pievani.

The Koran is less clear than the Bible on divine creation. But that does not mean Islam accepts evolution, and the influence of Islamic creationist groups in countries such as Britain and France is increasing. The movement is by far the strongest in Turkey, however, which is in negotiations to join the European Union. The main Muslim creationist organization, the Turkish Bilim ve Araştırma Vakfı, distributes creationist literature in Turkey and elsewhere that often consists of material translated from Christian fundamentalist groups, particularly the Institute for Creation Research, based in


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The teaching of evolution theory is under threat in some European countries.

North Santee, California. Prominent US creationists are also frequently invited by the group to give talks.

Jones has just returned from the Istanbul book fair, where he says many creationist publications were on sale, and proving extremely popular. "Creationism is a major issue in Turkish politics; the debate is much more tense than in the United States," he says. "All biology textbooks now used in schools are creationist in tone."

There is debate over the size of the threat posed to science in Europe by the various creationist movements. The creationists' main goal is to have their views included in school curricula. But, unlike in the United States, many pupils in European schools receive religious education anyway and are therefore familiar with the theme of divine creation. Some think this may steal the thunder of the creationist movement in Europe — why force creationism into science classes if it is already taught in religious education?

Moreover, Europeans do seem to be more enlightened than Americans when it comes to evolution. According to a 2005 US study³, just 40% of Americans accepted the theory of evolution, down from 45% in 1985. In Europe, that figure has increased, from 65% in 1992 to 70% in 2005, although numbers vary widely across the region⁴.

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Others warn that scientists can't afford to be complacent. "The anti-evolution movement does undermine public understanding of science," argues Ulrich Kutschera, an evolutionary biologist at the University of Kassel in Germany and vice-president of the Association of German Biologists. "In Germany and other European countries, anti-evolutionists with different religious backgrounds promote their ideology via colourful web pages that are appealing to students and people without a scientific background. Perception of evolutionary biology, in particular, is seriously undermined by these activities." He suggests that biologists should devote more time to counteracting its spread by explaining their theories to the public.

Jones says that, despite his dislike of creationism — "it annoys and depresses me that intelligent students persist in holding irrational views" — he doesn't think that such arguments are set to undermine science in countries such as Britain. "But I am not so optimistic about Turkey." ■

1. Giertych, M. *Nature* **444**, 265 (2006).
2. *Nature* **428**, 595 (2004).
3. Miller, J. D. et al. *Science* **313**, 765–766 (2006).
4. Special Eurobarometer *Europeans, Science & Technology* http://ec.europa.eu/public_opinion/archives/ebs/ebs_224_report_en.pdf (Eur. Comm., 2005).

Q&A PETER KOREVAAR

Peter Korevaar is head of the physics and cosmology working group of Germany's Studiengemeinschaft Wort und Wissen, one of the largest creationist groups in Europe. He holds a PhD in astrophysics and now works at IBM in Mannheim. Quirin Schiermeier asks him about his group's aims.

What are your main goals?

We are a Protestant group. We want to do accurate and honest scientific work under the premise that God has created the world. Scientific naturalism as we know it doesn't allow for a creator who can interfere with the physical world. Evolution should be taught in schools, and creation discussed along with it.

How would you describe your relationship with scientists?

You don't have to agree on everything to do good, accurate science together with [non-creationist] scientists. We use the same methods as other scientists,

namely falsifying and verifying hypotheses. We don't want to put anyone down. We would very much like to have an open discussion with evolutionary biologists about the issues at stake. But we feel constantly misunderstood. Scientists — and the media — always say we are dilettantes, Christian fundamentalists. This is mean. 'Fundamentalism' is immediately associated with Islamic fundamentalism: read terrorism. Fighting against these prejudices



is extremely hard.

What about evolution?

Microevolution, the adaptation of species to their environment, is an observed scientific fact, which we of course do not deny.

But macroevolution, the gradual process of development of new species, is a mere conclusion, there's no observational evidence for that.

How would you compare your group with creationists

in the United States?

We are aware of other creationist groups in Europe and the United States. But we don't collaborate too much with any of them. The US debate is more aggressive, there is more foul play from both sides. This is not helpful.

Do you advocate intelligent design?

There's an open question about how the many complex structures observed in the Universe came into being. Intelligent design gives an alternative answer to this question. We can subscribe to most of its arguments.