

ARCHAEOLOGY

Archaeologists Alarmed by Turkey's Proposed Dig Rules

Proposed new rules governing foreign-led excavations in Turkey are causing alarm and confusion among archaeologists, who fear that the regulations could make it very difficult for foreigners to dig in the country. The draft regulations, drawn up by Turkey's Culture and Tourism Ministry, would apply to the 43 foreign excavations currently under way and possibly to an additional 34 foreign-led archaeological surveys. They could require that each excavation season last at least 4 months and that a Turkish co-director be appointed for each dig.

A number of foreign governments and archaeological institutes have expressed their concerns to Turkish officials, who met on the issue last week. As a result, a ministry spokesperson now says, the proposed rules may be revised.

Archaeologists are worried because most teach and follow academic schedules. The 4-month rule "would effectively eliminate the

possibility for most U.S. researchers to conduct fieldwork in Turkey," says John Yellen, archaeology program director for the National Science Foundation in Washington, D.C. Nicoletta Momigliano, an archaeologist at Bristol University in the United Kingdom and co-director of a dig at prehistoric Çatalar in Turkey, says that if her team had to carry out "4 months of actually digging or surveying, it would be impossible to carry on. No academic in the U.K. can afford to have such a long field season."

Turkish officials say the rules were spurred by several issues. Some foreign archaeologists take too long to finish excavations and publish results, says Mesut Özbek, counselor for culture and tourism at the Turkish Embassy in Washington, D.C. "Some of these excavations have been going on for more than 100 years," Özbek says, citing the Austrian-led dig at the classical city of Ephesus on Turkey's Aegean coast. In other cases, he adds, dig "directors

who run out of time do not properly protect their dig sites, and they get attacked by treasure hunters, get looted, or get damaged by nature, rain, and snow." Özbek says that archaeologists should not worry about the 4-month rule, because if they have to leave early, the Turkish co-director can finish the season. "Turkish archaeology is at an advanced stage."

But Sabine Ladstätter, director of the Austrian Archaeological Institute in Vienna, which sponsors the Ephesus excavations, says there are good reasons why the dig there has gone on for 115 years: "The aim of an excavation is not to finish it. This is a huge site, one of the biggest cities of the classical world." Ladstätter adds that the Austrian-led team has carried out numerous restoration projects at Ephesus, most notably the Celsus library, built in 117 C.E. and admired by nearly 2 million tourists each year. She says Turkish archaeologists are fully involved: Of the 174 researchers working at the

SCIENCE IN SOCIETY

Hong Kong's Darwin Defenders Declare Victory in Teaching Fracas

BEIJING—As a year of honoring Charles Darwin and his theory of evolution draws to a close, scientists in Hong Kong are celebrating a partial victory in what is likely to be an ongoing war against proponents of teaching creationism and intelligent design in secondary schools.

"We have kept the creationist barbarians from the gate," says aquatic ecologist David Dudgeon, faculty board chair at the University of Hong Kong (HKU), about a decision last month by Hong Kong's Education Bureau to discount language in new science curriculum guidelines that had opened the door to teaching creationism and intelligent design in secondary schools. But their triumph is bittersweet. The Education Bureau has not revised the guidelines, choosing instead to issue its pro-evolution statement as an annex. And no one expects the few dozen schools in Hong Kong that openly espouse creationism to suddenly abandon it. "It appears that the bureau is unwilling to confront the Christian schools openly, and the schools will probably continue to teach creationism as part of the science classes," says

astronomer Sun Kwok, HKU's science dean.

At first blush, cosmopolitan Hong Kong seems an unlikely bastion of creationism and intelligent design, which posits that the complexity of life requires action by an intelligent agent. But looks can be deceiving. Although all Hong Kong schools are publicly funded, most are run independently, and many have church affiliations, says Kwok. "Fundamentalist Christianity percolates through schools, government, and other authorities in Hong Kong,

and it informs attitudes towards gays and other social issues," Dudgeon says. "It is the elephant in the room" that no one talks about.

That changed in February when Dudgeon, Kwok, and like-minded colleagues began raising a ruckus over the "New Senior Secondary Biology and Combined Science Curriculum and Assessment Guide," a revision aimed at bringing Hong Kong's education system in line with international norms. Many changes were positive, but one rang alarm bells. The previous guidance suggested, vaguely but reasonably, that teachers "guide students to review the differences between scientific theories and other nonscientific modes of explanation, e.g. religious, metaphysical or philosophical." The new wording seems to put religious beliefs on an equal footing with evolution: "In addition to Darwin's theory, students are encouraged to explore other explanations for evolution and the origins of life, to help illustrate the dynamic nature of scientific knowledge."

Some people, Kwok says, perceived that the Education Bureau had "yielded to pressure from religious schools." So Kwok and HKU faculty members mounted a public campaign against what Kwok calls "pseudoscience sub-



In Darwin's corner. The Hong Kong Education Bureau's pro-evolution statement doesn't go far enough, says Sun Kwok.

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Tourist magnet. Visitors flock to the Celsus library at Ephesus, restored by Austrian archaeologists.

site, 46 are from Turkey.

Some Turkish archaeologists have publicly expressed opposition: In July, the Istanbul branch of the Turkish Archaeology Association published a letter on its Web site saying that the obligation to appoint Turkish co-directors could jeopardize “the future of Turkey’s archaeology.” One reason, some researchers say privately, is that Turkey may not have enough archaeologists to go around, as Turkish researchers are busy working their

own sites. Foreign digs, which have long been welcome in Turkey, make up nearly one-third of the country’s roughly 140 excavations. Co-directors are not required in many other countries that welcome foreign archaeologists, including Egypt and Jordan.

After officials from several countries, including Austria, Germany, and the United States, conveyed concerns to the Turkish government, the culture ministry scheduled a meeting with foreign and Turkish archaeologists for 15 October. The week before, the ministry reportedly told foreign archaeologists that it was canceled. However, Özbek told *Science* that Culture and Tourism Minister Ertuğrul Günay did meet with culture ministry officials and Turkish archaeologists; only foreigners were excluded. But there are signs that the foreign archaeologists’ concerns are being heard. According to Özbek and others familiar with the meeting, the ministry plans to hold more discussions before making a decision and is considering including dig preparation and publication as part of the 4-month work period. —MICHAEL BALTER

jects such as intelligent design, astrology, and UFO studies [that] have no place in our science curriculum.” Hong Kong newspapers ate it up. But many religious leaders rallied behind the Education Bureau—as did some members of the scientific community. In May, a group of academics and high school teachers called the new guidance “stimulating, balanced, and nonbiased.” Their statement said that “there is a real legitimate scientific controversy over Darwinian Theory. ... Alternative explanations to Darwinian macro-evolution should thus be explored so long as they are based on rational and empirical grounds.”

One of the signatories, HKU physicist Chris Beling, argues that intelligent design concepts should be taught in addition to Darwinian theory. Intelligent design “may or may not be the answer to present problems in biological origins,” he says, “but if the [HKU] science faculty keeps on shouting that Darwinian theory is the answer and drowning out other voices, it is clearly unhealthy for the progress of science and for the promotion of critical thinking amongst students.”

After weeks of rancor, the Education Bureau sided with the Darwinian camp. In a 9 September letter to the Concern Group for Hong Kong Science Education, curriculum officer Cheung Kwok-wah, writing on behalf of the education secretary, revealed an annex to the curriculum guide that notes,

“Creationism and Intelligent Design are not included in the Biology Curriculum framework nor are they considered as an alternative to Darwin’s theory.”

Kwok, for one, is not satisfied. “The bureau has not changed the curriculum guide or issued a clarification statement to the schools,” he notes. In the meantime, Kwok has been overseeing an effort to strengthen HKU’s science curriculum as the university moves to a 4-year program. The science faculty is designing “foundation courses” that, starting in 2012, he says, would “provide all science students with a broader education and ensure that all students are exposed to the scientific way of thinking.”

Secondary schools are likely to be more resistant to change, however. Members of the Concern Group—now with more than 630 members—recently discovered that one biology textbook published by Oxford University Press (China) Ltd. and endorsed by the Education Bureau refers to intelligent design ideas and two creationist Web sites. Some schools are using it, says information technologist Virginia Yue, a founder of the Concern Group. “We were shocked and appalled by such shameless religious proselytizing under the guise of science,” says Yue, whose group is now mulling its next move. Their options may be limited, however. “Unless we police classrooms,” Dudgeon says, “I think the matter must rest.”

—RICHARD STONE

ScienceInsider

From the Science Policy Blog



Although the number of swine flu cases is rising in the United States, deliveries of **pandemic vaccine** have been delayed. The Department of Health and Human Services, which had hoped to deliver at least 40 million doses by the end of October, is now estimating 30 million or fewer. <http://bit.ly/2WCqCf>

The **FBI** arrested U.S. space scientist **Stewart David Nozette** 19 October on charges of attempted espionage. Nozette had a security clearance at Lawrence Livermore National Laboratory. <http://bit.ly/2JKquC>

Story Landis, director of the National Institute of Neurological Disorders and Stroke, resigned from the Interagency Autism Coordinating Committee. She accidentally left notes that angered **autism advocates**. <http://bit.ly/11TMha>

The **U.S. Congress** will hold its first hearing early next month on proposals to deliberately tinker with the climate. Legislators who support curbing carbon emissions have shied away from **geoengineering** out of concern that talk of a technical fix could distract from those efforts. <http://bit.ly/18jyGz>.

An Iranian lawmaker who helped investigate **alleged plagiarism by Iran’s science minister** says that the case isn’t plagiarism because the results are a “genuine scientific work.” Sections of a 2009 engineering paper written by Minister Kamran Daneshjou were verbatim copies of work by other scientists. <http://bit.ly/AmADY>

The **Large Hadron Collider** at CERN near Geneva, Switzerland, is ready to begin smashing particles, officials say. The \$5.5 billion accelerator broke down 13 months ago after operating for only 9 days. <http://bit.ly/2AY9kM>

The **Jackson Laboratory**, the mouse-research powerhouse in Bar Harbor, Maine, is thinking about building a branch in south Florida as part of a move into **personalized medicine**. <http://bit.ly/21syXV>

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