# LETTERS

*edited by Jennifer Sills*

## Forgotten Biodiversity in Desert Ecosystems

AS THE WORLD'S GOVERNMENTS CONGREGATE FOR THE UNITED NATIONS CONFERENCE ON Sustainable Development (Rio+20), we call on them to address one of the greatest oversights in conservation in recent years: the neglect of desert ecosystems. Deserts cover 17% of the world's land mass and harbor surprisingly high biodiversity (*1*), including some of the most endangered species in the world (*2*). They are also home to 6% of the world's population (*3*), including some of the poorest and most marginalized people in the world (*4*), who depend on deserts to deliver sustainable ecosystem services in a changing climate. Deserts and other dryland ecosystems currently harbor almost one-third of terrestrial global carbon stock (*5*), with further potential for carbon sequestration through improved land management. Furthermore, desert genetic biodiversity is key to improving dryland agricultural productivity (*6*).

**Deserted land.** The Ahaggar Cultural Park, Algeria, is home to overlooked biodiversity.

Over the past two decades, however, conservationists have argued that targeting funding at tropical forests and other "biodiversity hotspots" maximizes the number of species conserved per conservation dollar and contributes to climate change mitigation by reducing greenhouse gas emissions from forest loss and degradation (*7*, *8*). Consistent with these goals, between 1992 and 2008 only 1% of Darwin Initiative funding went to projects in deserts, compared with 24% to forests (*9*). Similarly, between 1991 and 2009 only 11% of Global Environment Facility funding to Africa went to Saharan nations (*10*). Lack of financial support is mirrored by lack of scientific information: Between 2000 and 2011, most scientific publications in ecology focused on forest biomes (67%) compared with deserts (9%) (*11*).

We call on governments to reverse the historic neglect of deserts and include them with forests at the top of the agenda at Rio+20; to support the UN Convention on Combating Desertification minimum target of halting land degradation; and to set a clear target for restoration of desert ecosystems to benefit biodiversity and people.

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### Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the past 3 months or matters of general interest. Letters are not acknowledged upon receipt. Whether published in full or in part, Letters are subject to editing for clarity and space. Letters submitted, published, or posted elsewhere, in print or online, will be disqualified. To submit a Letter, go to www.submit2science.org.

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11. On 9 February 2012, we searched the ISI Web of Science (http://wok.mimas.ac.uk) for scientific articles under the subject area ecology that included the terms "desert" and "forest," as well as other major biomes. We found 29,318 publications on forests and 4114 on deserts.

## Predatory Publishers and Plagiarism Prevention

M. BALTER ("REVIEWER'S DÉJÀ VU, FRENCH science sleuthing uncover plagiarized papers," News & Analysis, 9 March, p. 1157) describes how a scientist recently published at least nine articles that largely or entirely duplicated papers written by others and was exposed only after we found one of our papers integrally copied in a manuscript that both of us coincidentally received for review. What is remarkable here is not only the flagrant fraud, but the fact that six of these papers were published in scholarly journals only last year. Publishers can easily prevent publishing plagiarism by systematically running submitted manuscripts through software such as CrossCheck and eBlast (*1*, *2*) or by running strings of words that are unlikely to be repeated by chance through search engines (*3*). It is evident that not all publishers systematically use these tools, despite the fact that plagiarism is common (*1*, *2*). It is also noteworthy that these six 2011 papers—as well as the manuscript for review—are all from journals of publishers that Beall (*4*) lists as "predatory open-access scholarly publishers." Such publishers "exploit the author-pays, Open-Access model for their own profit" and do not invest in quality control (*4*, *5*). In this light, it is less surprising that papers escape plagiarism detection today. We argue that publishers that do not systematically use anti-plagiarism tools consciously take the risk of copyright infringement and of being accomplices in plagiarism. We encourage copyright holders to sue publishers of plagiarism for these offenses. When fines become a realistic threat, plagiarism prevention will become valuable even for predatory publishers.

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## LIFE IN SCIENCE

### Potato Pedagogy

When I was in ninth grade, my class did a common experiment: We stained the starch in a potato with iodine. We found that the area of the potato exposed to the iodine-containing solution turns dark purple. I remember dejectedly staring at my purple potato and wondering what happened to the grand vision of science promised to me in television, films, and comic books. A scientist was supposed to go into a laboratory, mix some things together, generate a small fire (or at least some smoke), and end up with a cure for cancer.

Little did I know, I was indeed participating in this mythical idea of science: The simple iodine-staining reaction can be used to detect cervical cancer. The staining works because the normal cells of the cervix contain glycogen, a starch-like molecule, whereas cancerous cells do not. Iodine stains the normal cells brown but leaves the glycogen-deficient cancer cells white. Once exposed, the malignant cells can be excised. If the detected tumor is localized and accessible, it can be surgically removed in its entirety, curing the patient.

Understanding the real-world implications of the simple potato experiment would have transformed my science experience as a student. With this in mind, I committed my time to The Providence Alliance of Clinical Educators (*1*), an organization dedicated to connecting important health topics to basic science concepts covered in high school. Science lessons that put scientific concepts in context allow students to appreciate their relevance immediately. These students won't have to wait 16 years like I did to realize that one purple potato is more impressive than any puff of smoke.

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**Reference**
1. More examples of these connections can be found at www.pacescience.org.

**EDITOR'S NOTE**
This is an occasional feature highlighting some of the day-to-day humorous realities that face our readers. Can you top this? Submit your best stories at www.submit2science.org.

## CORRECTIONS AND CLARIFICATIONS

**News Focus:** "Researchers set course to blockade ballast invaders" by D. Strain (11 May, p. 664). The article incorrectly referred to the Asian clam by an obsolete Latin name, *Potamocorbula amurensis*. It is currently cited in literature as *Corbula amurensis*.

**News & Analysis:** "First spinoff of African math institute takes root in Senegal" by M. Enserink (4 May, p. 533). Neil Turok was quoted as saying that a network of AIMS institutes across Africa would cost $100 million over the next 10 years, or about 0.003% of Africa's aid budget. Actually, $100 million is about 0.03% of that budget.

**News Focus:** "New lens offers scientist a brighter outlook" by A. Saini (30 March, p. 1562). The second sentence in the fourth paragraph stated that the Mesolens can image up to 0.22 micrometers below the surface of a specimen. The correct figure is 0.22 millimeters.

**News Focus:** "Partners prepare to pick a site for world's biggest telescope" by D. Clery (30 March, p. 1564). To clarify, the images on pages 1564 and 1565 show artists' conceptions of antennas planned for the proposed Square Kilometre Array; the actual antennas have not been built yet.

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