Subject: Re: [gbird] FW: good editorial in Nature
From: David Threadgill <dwthreadgill@tamu.edu>
Date: 12/7/2017 10:52 AM
To: Karl Campbell <karl.campbell@islandconservation.org>, gbird@lists.ncsu.edu
CC: Royden Saah <royden.saah@islandconservation.org>

In case you hadn't seen the response to the Nature editorial:

https://mobile.twitter.com/pricklyresearch/status/938521647316914176/photo/1

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On Tue, Dec 5, 2017 at 10:14 PM, Karl Campbell <karl.campbell@islandconservation.org> wrote:

> Heads up team!
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> https://www.nature.com/articles/d41586-017-08214-4
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> **EDITORIAL**
>
> 05 DECEMBER 2017
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> # Gene-drive technology needs thorough scrutiny
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> *Scientists must continue to play their part in pointing out the potential environmental dangers.*

Editing the genes of mosquitoes could combat malaria but carries an environmental risk. Credit: Mario Tama/Getty

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At a meeting in Montreal, Canada, this week, scientists and green campaigners will be among those discussing how a gene-editing technology could influence the environment. And although it might not always be obvious, both critics and advocates of the technique — called a gene drive — tend to agree on many things. The science is emerging, but potentially powerful. It could offer great benefit, but it could also do much harm. It should be used with care, and only after a thorough examination of the risks. As the rhetoric heats up, both sides should remember this common ground.

The meeting is of a group of experts who advise the United Nations Convention on Biological Diversity (CBD), which last year rejected calls for an international moratorium on gene-drive research. Such calls are likely to be repeated, and those who want a freeze on the science this week claimed a major coup. More than 1,000 e-mails sent and received by US scientists working on the technology were obtained under freedom-of-information laws and released to the media. And sent with them were claims that gene-drive researchers and funders were working with a public-relations company to unduly influence how the UN biodiversity treaty tackles the technology.

This is an unfair attempt to create damaging and polarizing spin. The e-mails reveal mostly mundane discussion about research and meetings. Where they discuss the UN process, they explain how scientists can share their expertise on the technology and its potential impacts.

Discussion of those impacts has some way to run, and it is natural that observers and those directly involved might see them differently. But presenting these exchanges as nefarious, as the campaigners have done, only polarizes discussions. And it could de-legitimize scientists' role in the UN talks — one of the few mechanisms currently available for considering the implications of the technology from a global perspective.

That would severely weaken the process. Because gene drives rapidly spread genetic modifications through animal populations, they have the potential to alter entire species and wipe out diseases such as malaria. Unlike conventional genetically modified crops or animals, organisms carrying gene drives are designed to move across international borders. Over the past few years, the CBD has been considering how gene drives and other synthetic-biology tools could affect biodiversity. This week's meeting will set the scene for further discussions next year.

In the absence of regulations on deploying gene drives or even studying them safely in labs, scientists and others have been seeking to demonstrate that they are careful stewards of the technology. Last week, funders agreed on basic guidelines. And researchers have compiled voluntary biosafety rules.

Government and international controls are probably on the way. The Dutch government has adjusted legislation so that researchers are now required to seek permission to work on gene drives, after a 2016 report identified gaps in how the risks of the research are assessed. Future regulation — both on the research and on any field releases — demands proper discussion and one that scientists must contribute to.

The release of the e-mails echoes the way in which hackers released documents stolen from climate scientists before a major UN meeting in 2009. Much commentary on those documents suggested — wrongly — that scientists were up to no good. Still, damage was done and public trust in scientists declined. It would be unfortunate if the trick were repeated here, not least because it is scientists working on gene drives who have raised many of the concerns.