

LETTERS

edited by Jennifer Sills

Canada's Weakening Aquatic Protection

CANADA'S REPUTATION AS A NATURAL WONDERLAND HAS TAKEN A BEATING LATELY FROM AN unlikely foe: its own government. Over the past months, deep budget cuts to departments with environmental responsibilities have been announced, including the closure of entire ecotoxicology labs and a unique large-scale aquatic research facility (1). There are also proposals to amend some of the strongest pieces of environmental legislation in the country, including the Fisheries Act. The Fisheries Act currently prohibits activities that harm the habitat of any fish species in any Canadian waters, either fresh or marine, but the new wording would limit protection only to those fishes involved in fisheries (2). This opens the door to unrestricted development on any water body as long as it does not contain federally listed endangered species or fish targeted by a fishery.

The government justifies changing the legislation by saying that it has been applied indiscriminately against ditches or other structures unlikely to bear fish, thereby interfering with landowners and farmers (3). They further argue that removing habitat protection would "[enable Canadians] to undertake activities on their properties without obtrusive interference" (4), implying that the law in its current form is inappropriately preventing routine activities from taking place.

This justification is not supported by the evidence. Between 2006 and 2011, only one proposal in thousands reviewed through the federal environmental assessment process was turned down, and its rejection was only partly due to potential destruction of fish habitat. Furthermore, a survey we conducted of 285 press releases, concerning 1283 convictions by the federal government for violations of the Fisheries Act between 2007 and 2011, showed that only 21 pertained to destruction of fish habitat (5). These low numbers could

reflect compliance with the habitat provision of the law, in which case there is no reason to alter it, or a poor enforcement capacity, which cannot be blamed on the law. Neither line of evidence suggests obtrusive interference by the federal government on behalf of fish habitat protection.

The Fisheries Minister argued that current policies go "well beyond what is necessary to protect fish" (6). The continued decline of Canadian fish and other aquatic species due to habitat loss and degradation suggests otherwise (7). The scientific case for protecting aquatic habitats is as strong as ever, and the justifications for weakening protection do not bear up to reasonable scrutiny. Canada should stand up to its responsibility as first signatory to the Convention on Biological Diversity and steward of the world's longest coastline and several of the largest lakes.

BRETT FAVARO,* JOHN D. REYNOLDS, ISABELLE M. CÔTÉ

Earth to Ocean Group, Department of Biological Sciences, Simon Fraser University, Burnaby, BC V5A 1S6, Canada.

*To whom correspondence should be addressed. E-mail: bfavaro@sfu.ca

References

1. H. Hoag, "Canada's renowned freshwater research site to close," *Nature News* (21 May 2012).
2. Canada, Parliament, House of Commons, "An Act to implement certain provisions of the budget tabled in Parliament on March 29, 2012 and other measures," Bill C-38, 41st Parliament, 1st Session, 2011–2012 (Public Works and Government Services Canada, Ottawa, Canada, 2012).
3. Canada, Parliament, House of Commons, Debates, 41st Parliament, 1st session, No. 113 (2012).
4. P. O'Neil, "Fisheries Act changes introduced amid debate over new law's intent," *Vancouver Sun*, 26 April 2012.
5. B. Favaro, J. D. Reynolds, I. M. Côté, "List of published convictions under the Canadian Fisheries Act, 2007–2011" (<http://tmel.wordpress.com/research-2/brett-favaro/fisheries-act/>).
6. Canada, Parliament, House of Commons, Debates, 41st Parliament, 1st session, No. 109 (2012).
7. J. T. Quigley, D. J. Harper, *Env. Manage.* **37**, 351 (2006).

Published online 21 June 2012; 10.1126/science.1225523

Postmarketing Trials
for Rare Diseases

WE FULLY AGREE WITH THE POLICY FORUM "Rethinking research ethics: The case of postmarketing trials" (4 May, p. 544), in which A. J. London *et al.* argue for rigorous, ethical, postmarketing (phase IV) trials for licensed drugs. We believe, moreover, that these phase IV studies should be mandatory for orphan products, which are developed specifically for rare and/or neglected diseases, as these products are usually approved after limited testing by the manufacturer's R&D department.

At present, there is an urgent need to produce reliable medical information about rare diseases, as the lack of data is a problem that affects vulnerable populations worldwide. It can take a long time to collect sufficient data (including health and social end points), but patients suffering from rare diseases have the right to be assisted with the same accuracy and efficacy as those with common diseases.

VIRGINIA A. LLERA* AND EMILIO J. A. ROLDÁN

GEISER Foundation, Avellaneda 595, Mendoza (5500), Argentina.

*To whom correspondence should be addressed. E-mail: fundgeiser@yahoo.com.ar

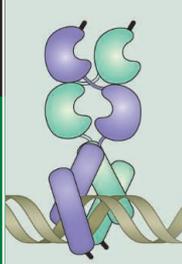


Lake Louise, Alberta, Canada



Another flu viral protein found

164



Mammalian clock mechanism

165

CORRECTIONS AND CLARIFICATIONS

News & Analysis: “Young researchers deserve more support, reviews say,” by M. Price (22 June, p. 1489). The story did not credit a co-chair of the reporting group: Sally Rockey, NIH deputy director of extramural research.

News & Analysis: “Action urged to curb racial bias in NIH grants,” by M. Price (22 June, p. 1490). The story did not credit a co-chair of the reporting group: Lawrence Tabak, NIH principal deputy director.

Reports: “Baseline map of carbon emissions from deforestation in tropical regions” by N. L. Harris *et al.* (22 June, p. 1573). In Table 1, fourth column, “Gross forest cover loss, 2000–2005,” the unit “Mha year⁻¹” (million hectares per year) is incorrect. The correct unit is Kha year⁻¹ (1000 hectares per year).

Perspectives: “Beyond Turing’s machines” by A. Hodges (13 April, p. 163). The volume in Ref. 4 was incorrect. The correct reference is: A. M. Turing, *Mind* 59, 433 (1950).

TECHNICAL COMMENT ABSTRACTS

Comment on “Plant Species Richness and Ecosystem Multifunctionality in Global Drylands”

Tommaso Jucker and David A. Coomes

Maestre *et al.* (Reports, 13 January 2012, p. 214) reported a general, but weak, positive relationship between plant diversity and ecosystem multifunctionality in global drylands. We show that the strength of this relationship changes consistently along multiple environmental gradients, becoming strongly positive in stressed habitats. This suggests that biodiversity loss may have especially strong consequences in harsh environments. Full text at www.sciencemag.org/cgi/content/full/337/6091/155-c

Response to Comments on “Plant Species Richness and Ecosystem Multifunctionality in Global Drylands”

Fernando T. Maestre, Santiago Soliveres, Nicholas J. Gotelli, José L. Quero, Miguel Berdugo

Jucker and Coomes claim that the relationship between plant species richness (biodiversity) and ecosystem multifunctionality (B-EMf) reported in our study changes along environmental gradients. We point out flaws in their analytical approach and then reanalyze our data to further demonstrate that the B-EMf relationship does not substantially change along environmental gradients. Full text at www.sciencemag.org/cgi/content/full/337/6091/155-d

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.



theBUZZ

NSF’s Big Pitch

On 25 May, a News & Analysis story titled “NSF’s ‘Big Pitch’ tests anonymized grant reviews” (Y. Bhattacharjee, p. 969) described a National Science Foundation (NSF) study comparing the review results between grant proposals written in the standard format and versions rewritten as two-page summaries and stripped of investigator names. Results showed little overlap between the subset of grants in each group that reviewers rated as high priority, indicating that the format may affect funding selection. NSF plans to conduct further studies and track the success of the grants selected through the shorter, “Big Pitch” summaries. Many readers wrote in to comment on the study and its implications. Excerpts from some of those comments are below. You can read all the comments at <http://comments.sciencemag.org/content/10.1126/science.336.6084.969>.

A selection of your thoughts:

...[Y. Bhattacharjee states] that NSF’s Molecular and Cellular Biosciences (MCB) Division “plans to institute the (four-page preproposal) system soon.” The MCB Division has no plans to change from the current policy of accepting full-length regular proposals. The article also did not acknowledge that two divisions within Biological Sciences at NSF participated in the “Big Pitch” experiment in proposal review: the MCB and the Division of Integrative Organismal Systems (IOS). —John Wingfield (Assistant Director, Directorate for Biological Sciences, NSF)

...If we maintain that preclinical/clinical research should be done blinded, this concept should be extended to the grant review process as well. Bold ideas do not necessarily require a proven “track record”; imagine the fate of the then-novel PCR invention proposal by the current system. The merit of any grant proposal should initially be reviewed blinded with minimum strings attached. This process would free up conflicting reviewers and result in innovative and transformative funded proposals. —Debomoy Lahiri

...[I]t is clear that the “plan” is everything for the standard 15-page proposal.... A great idea with an incomplete, unclear, or uncertain plan of action will not get funded; a good idea with a good plan will. For the two-page proposals, it will be impossible to give many details of the plan, so it will have to be judged in large part by judgment and supposition on what would be done. I am uncertain on whether this is a good idea or not.... Another side effect is that if it becomes much easier to submit proposals, PIs will simply submit more—doubling or tripling the number they submit over a funding cycle.... —Andrew Kennedy

...Even if you showed the same set of proposals to the same review panel on different days of the week, they would select different proposals. And in the end, this would not matter much (for the taxpayer) because the selected proposals were all very good. Favoring “proven track record” over “originality” is not bad per se, it’s just a deliberate political choice. Many people do that when their own money is at stake.... —b eber

...It is a shame that many new ideas get shot down in favor of “proven track records,” which often are repeating minor variations of the same work already published.... —David Donze