Correspondence

Harness passion of private fossil owners

Reproducing palaeontological results depends on unrestricted access to fossils described in the literature, allowing others to re-examine or reinterpret them. Museums have policies and protocols for keeping materials in the public trust, but accessibility to privately owned fossil collections can be a problem.

For example, the existence of an important early bat fossil in a private collection was long known, but it was only after a second specimen was acquired and made available by a museum that researchers published a description of it (N. B. Simmons *et al. Nature* **451,** 818–821; 2008). Another example is the unique fossil of a supposed four-legged 'snake', also privately owned, that was made temporarily available through a private German museum and then withdrawn after its description was published (D. M. Martill *et al. Science* **349,** 416–419; 2015).

We suggest that the enthusiasm of private collectors for their valuable and spectacular fossils should instead be harnessed by researchers, to the benefit of both parties. For example, scientists can invite collectors to participate in their projects and be co-authors on the publications (R. R. Reisz *et al. Sci. Nat.* **102,** 50; 2015), or they can name the new species after the collector (S. P. Modesto *et al. Proc. R. Soc. B* **282,** 20141912; 2015) — all on the condition that the specimen is donated to an institution with public right of access.

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Species can be named from photos

As an international group of taxonomists who study a range of taxa, we consider that you misconstrued the case of a new insect species that was described on the basis of photographs (see *Nature* **535,** 323–324; 2016).

The species was described without a preserved type specimen, the individuals having escaped before preservation (S. A. Marshall and N. L. Evenhuis *ZooKeys* **525,** 117–127; 2015). The *International Code of Zoological Nomenclature* allows for this — the authors (included here as signatories) followed the letter and the spirit of the *Code*, giving a description and a formal species name. It was based on material that supported their conclusions and an explanation of the circumstances to justify naming a species without an extant type. Peer reviewers judged the data sufficiently reliable to anchor a species name.

As you point out, a physical specimen has features that might not be captured in a photo. However, types are name-bearers, not "standards for species delimitation" (D. S. Amorim *et al. Zootaxa* **4137,** 121–128; 2016). Significant knowledge about a species may build up before we can properly preserve a name-bearing type. The *Code* allows for the naming of those species.

More than 90% of the planetary biota still awaits description. We need to adopt new technologies while recognizing that museum specimens and nomenclatural stability are crucial for taxonomy.

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China's sponge cities to soak up rainwater

China's Sponge City programme aims to improve resilience to urban expansion and climate change by enabling cities to save and resupply rainwater. It is crucial for cities such as Beijing and Jinan, which suffer water shortages even after severe flooding. However, several hurdles must be overcome to get it working efficiently.

The programme will involve some 30 pilot cities this year (see www.mohurd.gov.cn). They will create a 'sponge' infrastructure to detain runoff, control flooding, recharge groundwater and reuse storm water. The project still has to recruit enough planners, designers and construction workers to support this colossal initiative. Time is short for completing technical training.

Plans and technology will need to be customized for individual cities, where local weather conditions and the degree of urbanization can vary considerably; a blanket strategy will not work.

Once in place, the sponge infrastructure should be combined with conventional drainage systems, particularly in areas of medium- and high-intensity urbanization.

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Clearing the way for reef destruction

Agricultural practices are accelerating the health decline of Australia's Great Barrier Reef, affecting marine and terrestrial ecosystems (see also S. L. Maxwell *et al. Nature* **536,** 143–145; 2016). Last month, intensive opposition from the agricultural lobby blocked new legislation by the Queensland government that would have protected the reef's catchment areas from land clearing — despite support for the legislation from almost 500 scientists (go.nature.com/2cnlftg).

Broadscale land clearing tripled after the state relaxed its vegetation regulations in 2013 (see go.nature.com/2cjn6zm). Subsequent assurances by the state that it would reduce land clearing contributed to last year's decision by the United Nations Educational, Scientific and Cultural Organization not to add the Great Barrier Reef to its 'World Heritage In Danger' list.

The new regulations would have protected the pristine woodlands of Cape York and reduced terrestrial runoff, promoting recovery of those parts of the Great Barrier Reef that have been severely affected by unprecedented coral bleaching.

Preserving what remains of the reef's world-renowned biodiversity depends on urgently forging effective agreements with Queensland's agricultural sector.

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Avoid bias against junior researchers

I disagree with Joy Burrough-Boenisch's proposal that journal reviewers and editors, as well as English-language editors, should be informed when papers are to be assessed as part of a higher degree (*Nature* **536,** 274; 2016).

The (student) status of an author is irrelevant to whether the science is of sufficient quality to justify publication. A declaration of student status could entrench bias against junior scientists who already have few, if any, publications on which to build a reputation.

I also question whether service providers who assist in the publication process warrant listing in a PhD thesis statement. Editors, for example, improve the quality of the science through appropriate peer review and — along with copy editors and English-language editors for translated texts — optimize its presentation through clarification and technical correction. However, they are not part of the scientific advance that justifies publishing the paper in the first place.

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