


**OFFSHORE DRILLING:
BLACK GOLD?**

The United States debates its exploration of the sea for oil and gas.

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simply by adjusting a paper's size, place and timing of exposure sounds worrying at a time when citation statistics are increasingly being used, both formally and informally, as indicators of performance. Stanek points out that the 'h index'⁵, a measure of the cumulative impact of a researcher's published output, has become a fetish among some scientists. "You will become obsessed with it," he advises young scientists in his paper, and will start "telling other astronomers that your *h* is bigger than their *h*".

"There is definitely too much obsession with citations and other indices," Stanek says. This is partly because they are easy to calculate regardless of whether they actually mean very much. But he confesses to using them himself.

Stanek treats his results semi-humorously, using them with earlier studies to draw up a set of guidelines for how graduate students

might manage their publications and citations to greatest advantage as their careers progress. "Make sure you submit your papers to [Arxiv] just after 4 p.m. US Eastern time on Wednesday," he suggests, for example.

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But his study highlights some important questions. One is whether — in the face of new dissemination channels such as preprint servers and an increased sensitivity to citation indices — it is realistic to regard citations as an accurate measure of achievement.

Another question is how long a paper ought to be. If length really does matter, will that encourage researchers simply to inflate their results unnecessarily? Many of the greatest past discoveries, such as the structure of DNA, were reported extremely concisely. "Most astronomical publications in the nineteenth century were very short observation reports, a few paragraphs

at most," says Dietrich. But Stanek has no problem with length, saying that he prefers papers to "be as self-contained as possible — and I have seen a lot of short papers that are not".

Yet Dietrich thinks the risk of encouraging people to inflate their papers with waffle is small. "Writing a bloated paper is considerably more work, and incurs the risk of diluting an interesting work to the point that readers don't find the interesting aspects. Also, referees and editors are usually very critical of bloat. The best tactic is still to write a good paper, and a bloated paper is not a good paper." ■

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2. Simkin, M. V. & Roychowdhury, V. P. *Complex Syst.* **14**, 269 (2003).
3. Schwarz, G. J. & Kennicutt, R. C. Jr Preprint at <http://arxiv.org/abs/astro-ph/0411275> (2004).
4. Dietrich, J. P. Preprint at <http://arxiv.org/abs/0712.1037> (2007).
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compare microarray-based tests with traditional prenatal diagnosis techniques.

Scientists worldwide are trying to decrease uncertainty by pooling their samples in databases of copy-number aberrations, including Canada's Database of Genomic Variants, DECIPHER in the United Kingdom, and the European Union-funded ECARUCA. The databases help scientists link rare DNA changes to conditions ranging from autism and schizophrenia to kidney disease.

Eventually, scientists and doctors hope to understand why changes in gene copy number cause disease. But Eichler warns that this will require studies with perhaps tens of thousands of patients, as well as consultations with patients and their families for follow-up analyses, something that isn't part of most large genome-wide association studies today.

It will also require US geneticists to share samples as freely as their European colleagues, says Eichler, who is grateful to his European collaborators, but laments his US colleagues' reluctance to pool their resources on a large scale. Ledbetter is trying to coax US geneticists to share with the help of a grant from the American College of Medical Genetics Foundation in Rockville, Maryland. Eichler hopes the plan will succeed: "We are going to need a sea change." ■

Erika Check Hayden

1. Mefford, H. C. *et al. New Engl. J. Med.* Advance online publication doi:10.1056/NEJMoa0805384 (2008).
2. Stefansson, H. *et al. Nature* **455**, 232–236 (2008).
3. International Schizophrenia Consortium *Nature* **455**, 237–241 (2008).

SNAPSHOT Long-lost ancestor

This pale-yellow, eyeless creature is so bizarre that naturalist E. O. Wilson named it "the ant from Mars". *Martialis heureka*, a native of the Brazilian Amazon, is the founding member of a new subfamily of ants, which split off from the ant family tree early in its evolution.

"It could represent a relict species that retained some ancestral morphological characteristics," says discoverer Christian Rabeling, a graduate

student in integrative biology at the University of Texas in Austin.

Ants evolved from wasps, so it was long assumed that any living ancestral species would be wasp-like and similar to a Cretaceous ant fossil discovered in the 1960s by Wilson and his colleagues. But *Martialis* stunned entomologists by looking completely different — genetic analysis confirms that it doesn't fit into the known taxonomy of ants (C. Rabeling *et al. Proc. Natl*

Acad. Sci. USA doi:10.1073/pnas.0806187105; 2008). It has long, delicate mouthparts, for munching soft invertebrates perhaps. And, compared with its sturdy front legs, the rear two sets are thin and spindly (the three other legs in the specimen shown were lopped off for DNA analysis). "It doesn't even look like it could walk at all," says Brian Fisher, an ant expert and curator of entomology at the California Academy of Sciences in San Francisco.

Amber Dance



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