Bigwigs as coauthors: a response to Leimu *et al.*

I read with interest the letter by Leimu *et al.* (*Front Ecol Environ* 2008; **6[8]**: 410–11) – *Does it pay to have a 'bigwig' as a coauthor?* The statistics provided by the authors are interesting; however, it concerned me when they advised young, lower-profile scientists, based on the correlative results, to "either try to have

fewer collaborators, including a bigwig, or many lower profile collaborators". The notion seems to be that having a bigwig as a coauthor results in a higher citation rate and that those who are not bigwigs can just go out and "link up" with one of these high-status scientists to enhance their publication profiles. The underlying assumption is that bigwigs have name recognition, which leads to their papers being cited more often. Leimu and colleagues believe the results are due to "author status" – an interesting leap to causality, based on some empirical data. Let me suggest a different cause for the reported patterns – bigwigs are bigwigs because their work has made a major contribution to their respective fields of study. Further, bigwigs are more careful about what papers they do or do not coauthor, choosing to collaborate only on papers that present important results. In that case, a "lower profile author" might certainly try to involve a bigwig in his/her research and publication process, but the bigwig will only participate if the line of research is truely novel and substantive in regard to advancing the field. The paper will then be cited often, not because of author status, but because of the importance of the work.

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How big are bigwigs?: a reply to Havens

In our recent letter, we showed that papers with less than four authors, but with a "bigwig" author (*h* index ≥35) among them, had higher citation rates than papers with an equivalent number of authors but no bigwigs. This bigwig-related benefit in citations was, however, not apparent for papers with four or more authors. We proposed two explanations for these intriguing findings: bigwigs enhanced citation rates by (1) increased quality or relative merit of a paper or (2) a name-recognition effect (ie names of senior, well-established scientists attract citation as such). Both explanations are reasonable and equally likely. A lower level of contribution by the bigwigs in multi-authored papers might explain why no bigwig benefit was observed for these papers.

In a response to these findings, Havens reiterates the first of these two explanations. We acknowledge this as one of at least two alternatives. The bigwig benefit may reflect both the actual quality of a study and the citation behavior of the community. The assumption that citation rates accurately reflect the importance and quality of work may not be as robust as is often assumed. Subjective factors not related to merit and quality, such as nationality or status of institution, can also influence citation rates (Leimu and Koricheva 2005a, b).

Havens proposes that bigwigs achieve status through contributions to a field, and therefore the bigwig effect we describe simply reflects the increased quality of a study. This raises an interesting point: since we compared studies published in a single "mid-ranking" journal (*Oecologia*), the papers published therein should ideally be comparable – in terms of quality and merit – and their citation rates should not differ depending on whether a bigwig is involved or not, if bigwigs merely affect the actual merit. Moreover, if the papers with bigwigs as authors are genuinely "better", why are they not always published in high-status journals (ie if a bigwig always publishes exceptional work, why do they sometimes publish in journals with varying impact?)? Furthermore, the benefit of many (>4) authors supersedes the bigwig benefit, which suggests that – at least from a citation perspective – having more authors either invokes another bias (how can that many people be wrong?) or makes papers even better in quality than those with bigwig authors. More importantly, true progress in evaluating the relative merit of research published in our community should transcend merely counting up numerical measures. We propose that citations are not necessarily a perfect proxy for quality, but a means to examine patterns of literature usage, with the goal of increasing transparency in how we select and value one another's work. The fact that bigwigs do not always publish in top-tier journals should be obvious, because everything tried and published is not always perfect, but is sometimes riskier, and thus arguably more useful to ecology – regardless of the number of citations it accrues.

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Leimu R and Koricheva J. 2005a. What determines the citation frequency of ecological papers? *Trends Ecol Evol* **20**: 28–32.

Leimu R and Koricheva J. 2005b. Does scientific collaboration increase the impact of ecological articles? *BioScience* **55**: 438–43.

Erratum

In Ellis and Ramankutty (2008: **6[8]**: 439–447), the descriptive class "residential irrigated cropland" was accidentally omitted from the key of Figure 2a on page 443. A corrected version of the figure is available at www.frontiersinecology.org/errata/