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Letter to the Editor

The search for novelty continues for rewilding

We agree wholeheartedly with Derham et al. that the term *rewilding* requires explicit explanation, and that the refinement of new terms is fundamental to scientific advancement – hence our determined, but ultimately unsuccessful, attempt to identify the unique elements of *rewilding* that distinguish it from *restoration* (Hayward et al., 2019). We fail to understand why Derham et al. claim that scientific progress would grind to a halt if all definitions were concrete, complete and universally accepted. There are many definitions of scientific terms that similarly require refinement, and these improve our understanding of processes and theories, rather than hinder scientific progress through confusion. Indeed, we highlighted the problems associated with poorly defined language that led to the creation of clearly defined terms in the reintroduction and statistical fields (Hayward et al., 2019). Yet Derham et al.' reference two more definitions of *rewilding* (in Jepson's (2019) optimistic narrative and Corlett's (2016) proposal to ignore historical states) that, coupled with the Australian version of *rewilding* that emphasises small mammals in fenced, urban areas (Sweeney et al., in press), just increase the degree of confusion about what is unique about *rewilding* compared to *restoration*. This is particularly true when these versions reference existing definitions that are explicitly linked to *restoration*. For example, Dietl et al. (2015) use *rewilding*, under the umbrella of *restoration*, for reconstructing current ecosystems using the fossil record and extinct species replacements, potentially leading to the phrase *Pleistocene rewilding restoration*, where *restoration* would suffice.

Derham et al. also acknowledge that attempting to define terms can be progressive. We agree again, but wonder how many attempts are needed to create a definition of *rewilding* that distinguishes it from *restoration* before we accept that *restoration* already encompasses the process of translocating animals to restore ecological processes? Rebranding science that is well established for the sake of novelty is duplicative and destructive, rather than progressive and helpful. To claim *restoration* is vague and ambiguous (Derham et al., 2019) ignores the fact that the Society for Ecological Restoration have a clear and accepted definition (presented in Hayward et al., 2019).

Derham et al.'s rebuttal has failed to add clarity to this debate. *Rewilding* remains the repackaging of a proportion of the multi-decade long professional practice of *restoration* ecology. Indeed, 2019 saw the United Nations General Assembly term the upcoming decade (2021 – 2030) as the decade of ecosystem *restoration* (not *rewilding*) and a recent review of the value basis of conservation legislation found no legal mandate for rewilding in contrast to massive support for "conservation" and "restoration" (Cretois et al., 2019). At its worst, *rewilding* is not "progressive" but rather ignores the strong scientific body of work and socio-ecological understanding provided by the field of *restoration* ecology. At its best, *rewilding* is a new marketing catch phrase that generates headlines and draws popular attention to the conservation need to restore species and ecological processes, similar to the effect of the introduction of the term "biodiversity" in driving conservation efforts in the 1980s. At risk here is that vague definitions may lead to fuzzy objectives that fail to realize the full potential for diverse positive outcomes while increasing risks of incurring negative side effects for species, ecosystems, or people. However, rather than a novel contraction of relevant terms, any term with the word "wild" is inherently problematic given the long debated, ambiguous and highly subjective baseline from which "wild" is defined and its complicated implications for management. Thus, we re-encourage professionals working in this field and the broader public to abandon this terminology in favour of more precise terminology similar to recent efforts in the reintroduction biology and conservation translocation fields (Hayward et al., 2019). At the very least, this request for clarity by those involved in rewilding projects to build on the considerable momentum and knowledge provided by the established field of restoration ecology is surely something we can all agree on.

Derham et al. point out that *restoration* is driven by human values and use this as a feature to distinguish it from *rewilding* that is 'motivated by non-human values'. However, humans are ultimately the organisms who elect to place value on non-human forms, so concern for non-human values *is* a human value, and cannot therefore be invoked to distinguish *restoration* from *rewilding*. Thus, *rewilding* is not some radical alternative for valuing wild animals or version of compassionate conservation, rather, it is a vague allusion to the subjective terms of "re-" and "wild" that have no direct benchmarks against which to measure success. Indeed, how wild does a system or species have to be for it to be *rewilded*? We also need to accept that the entire globe is now affected and driven by humans, and so excluding human values will only lead to uninformed conservation.

A Web of Science Core Collection search reveals 13,852 references to ecological *restoration* since 1985 (up to 1492 annually), compared to 285 references to *rewilding* since 1999, so *restoration* is clearly an established term in conservation science. It could be argued that these 285 references indicate that the *rewilding* cat is out of the bag, but with 14 distinct definitions, it is clear that nobody holding the bag knows what kind of cat it is, and if or how it differs from the pre-existing *restoration* cat. Unfortunately, Derham et al.'s response to our paper has offered nothing to clarify what *rewilding* is and how it differs from *restoration*, hence we reiterate our call to remove *rewilding* from the restoration lexicon (Hayward et al., 2019) and consolidate global efforts to get on with the challenge of conserving biodiversity.

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