Human impacts on the planet have never been greater; agriculture is now the major global land use, with correspondingly large increases in disturbance and changes to the global nitrogen and water cycles [1]. Effects on floras have been predictable, with robust, fast-growing, short-lived, fecund and effectively dispersed species characteristic of disturbed, nutrient-rich habitats doing well, whereas slow-growing, long-lived and poorly dispersed species characteristic of nutrient-poor habitats are generally in retreat [2,3].

Paralleling the research documenting the traits of plants exploiting these disturbed and nutrient-rich environments has been an effort to determine the characteristic traits of invasive alien plants. This research has revealed

| Letters |

Why research on traits of invasive plants tells us very little

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that, when compared with natives or non-invasive aliens, invasive aliens grow faster, have higher leaf nutrients, higher specific leaf areas, shorter life cycles, devote more resources to reproduction and produce more seeds that are better dispersed and germinate faster [4–6]. In other words, invasive alien plants usually have the same general suite of traits exhibited by most successful plants in the world today, irrespective of their alien or native status. This conclusion is consistent with studies that showed that invasive aliens exhibited the same set of traits as did expanding, successful natives [7], that aliens and natives exhibit similar successional dynamics [8] and that natives of disturbed, fertile habitats are indistinguishable from aliens of similar habitats [9].

The simplest interpretation of these findings is that, in the modern, human-dominated landscape, there is an increasingly sharp distinction between plant ‘winners’ and ‘losers’, and that this distinction often owes rather little to native or alien status. It is certainly true that some introduced plant species benefit from leaving behind enemies, such as herbivores and pathogens [10], but being enemy free is never a permanent condition because natural selection inevitably favours the evolution of new enemies that can exploit this new resource [11,12]. We think that plant success in the world today is less a function of geography of origin but more basically, one of which species have the good fortune to have the suite of traits that will enable them to exploit the increasingly disturbed and eutrophic 21st-century landscape. These winners have included, and will continue to include, both native and non-native species.

Traditionally, ecologists have tended to view the encounter between non-native species and new environments as unique to the invasion process. However, with global changes in nutrient, climate and disturbance regimes, all species can be considered to be inhabiting novel environments, suggesting that the distinction between native and non-native species is becoming less ecologically meaningful. Looking ahead, a more ecologically sensible approach might be to try to identify traits and life histories that are proving to be advantageous (or disadvantageous) in the rapidly changing world for all species. Similarly, given that species that are threatening human health, or causing economic or ecological harm, include both native and non-native species, a more economically sound and, ultimately, more effective approach to managing these species, and their undesirable effects, might be for society to develop and implement a more unified legislative and enforcement infrastructure to deal with harmful species in general.

References

Letters Response
Unfortunately, linguistic injustice matters
Miguel Clavero1,2

In a previous letter [1] I argued that the absolute dominance of the English language in scientific communication has led to linguistic injustice, arising for two main reasons: (i) non-native English-speaking scientists (NoNES) support all the costs of having a English as a common scientific language; and (ii) while native English-speaking scientists (NES) benefit for free from having a common language, they are in an advantaged position in any scientific discussion due to linguistic skills. Guariguata et al. [2] replied that there is no sharp difference between NoNES and NES, basically because the more one studies and practices English, the better he or her English will become. Of course, I agree with this, although I think there is no relationship between this statement and the linguistic injustice problem. The fact that some NoNES, with a lot of work and great merit, are able to overcome linguistic barriers does...