



The *Boa constrictor* is an invasive species in some parts of Mexico.

Edited by Jennifer Sills

## Mexico's invasive species plan in context

In their Letter “Mexico’s ambiguous invasive species plan” (10 March, p. 1033), L. M. Ochoa-Ochoa *et al.* claimed that the Mexican invasive species list (1) is incomplete and ambiguous. They were not considering the list in the appropriate context.

The invasive species list is neither static nor exhaustive, and it is not intended to offer management guidelines. Rather, the purpose of the list is to provide the legal basis that allows alien invasive species programs, on a case-by-case basis, to prevent, control, and eradicate the most noxious alien invasive species through specific legal tools (2–4). It is also a key element to effectively implement the National Invasive Species Strategy (4, 5).

The list is the product of more than 5 years of work to identify legal gaps and gather data from scientific literature, taxonomic updates, and expert consultations. Several methods were used, including risk assessments that considered existing baseline information, native ranges, introduced ranges, dates of introduction, pathways, and impacts, as well as the uncertainty associated with the data sources [(6) and chapters 6 and 7 in (7)]. The results were reviewed by more than 50 alien invasive species specialists—from government, nongovernmental organizations, and academia—and benefited from a 1-month public consultation, in which experts and the general public shared their concerns (8).

There is room for improvement, but the identification of known invasive species in the current version of the list fills an important legal void. Thanks to the list, Mexico’s island alien invasive species program (5) is empowered to efficiently deal with invasive exotic and feral mammals, including the *Boa constrictor*, mentioned by Ochoa-Ochoa *et al.* The list does not, nor does it have to, include all aquatic species, mainly because the legal responsibility for such species is split between the Ministry of Agriculture, Livestock, and Fisheries and the Ministry of Environment. Omitted species can be considered through other means. For example, recent risk assessments for ornamental fish species (6, 7) have led to a ban on importing and cultivating live specimens of the invasive *Pangasius*. Thus, the list can be expanded or be part of a series of lists which, placed in a broader spectrum to tackle alien invasive species, can be translated into public policies and cross-cutting strategic actions. **Jordan Golubov,<sup>1\*</sup> Alfonso Aguirre-Muñoz,<sup>2</sup> Roberto Mendoza,<sup>3</sup> Federico Mendez<sup>2</sup>**

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## Community network for deaf scientists

We are a community of scientists who have personally experienced the barriers imposed by hearing loss described by G. Buckley *et al.* in their Letter “Building community for deaf scientists” (20 January, p. 255). They propose an institutional hub for deaf and hard-of-hearing (D/HH) trainees to build their scientific careers. We have created an alternative model of distributed academic peer networking that has grown and evolved over the past 25 years. This model has enabled us to overcome personal and professional barriers while promoting the inclusion of numerous D/HH scientists at all levels of biomedical research. The majority of the network is composed of hearing-impaired members of the Association for Research in Otolaryngology (HI-ARO). The HI-ARO community originated in 1992 with just three D/HH scientists and has grown globally to more than 60 members, including undergraduates, professors, audiologists, physicians, graduate students, medical residents, postdoctoral fellows, and leaders in health care and industry.

Our experience indicates that the diversity of challenges hearing loss creates is manageable by the deployment of strategies that facilitate effective communication between hearing and D/HH scientists. Speech, cued speech, sign language, and other communication modalities are all valued. This distributed model of integration requires each D/HH member to make a career-long commitment to mentorship of others with hearing loss to propagate successful solutions to individual challenges

that are surmountable with inspired and motivated input. Quality mentorship is vital for trainees and junior scientists to achieve career goals (1–3) and is perhaps more critical for D/HH scientists who intrinsically face communication challenges (4).

The unique experiences, skills, and expertise of each D/HH scientist in our community empower the model and have advanced scientific understanding across the wider biomedical community. Most of us meet in person at the annual meeting of the ARO (as well as other professional conferences), where our network has secured equal access to podium and poster sessions through sign language interpreters, hearing-assistive technology, and real-time captioning. The efficacy of our distributed model of peer support, mentorship, and integration with the wider scientific community is validated in

part by those members of HI-ARO who have become academic faculty (4–6), secured competitively funded national research awards, and published influential manuscripts in high-impact journals [e.g., (7–10)].

Given the demonstrated success of this distributed model of mentorship, we believe that federal and philanthropic efforts to increase diversity should not be limited to a proposed hub model in a single geographic area that focuses primarily on trainees. An alternative approach is to scale up our distributed model of mentoring D/HH pre- and postdoctoral trainees, with a particular focus on junior faculty competing for research awards who will serve as the next generation of mentors. The distributed model will continue to raise awareness of the societal cost of hearing loss and energize the trajectories of D/HH scientists globally.

The distributed and hub models are not mutually exclusive and an open dialogue to investigate their synergistic alignment may be highly beneficial.

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Chorus cicada  
(*Amphipsalta zelandica*)

## OUTSIDE THE TOWER

# Nature's treasure hunt

Late March is the end of the cicada season in New Zealand. But the summer has been unusually wet in Auckland, and the insects' constant singing is still going strong in Henderson Park, where a larger-than-usual crowd of visitors has gathered for the 2017 edition of Bioblitz. The goal of this event is to inventory all living things on a site within a 24-hour window. Participants go on a treasure hunt for plants, animals, and fungi, then bring specimens to an army of volunteer scientists who provide taxonomic identification as well as anecdotal scientific background about the collected organisms. Parents and children alike are looking high and low for critters. One of the big hits this year is cicadas and the empty skins that they leave behind when they transform into flying adults. Visitors at my soil fauna stall gasp with surprise as I show them a live cicada nymph: "So this is what they look like! I have only ever seen empty cases!" Their amazement grows as I explain that to find living nymphs, they would have to dig—the juveniles live underground and only come out when it is time to metamorphose. A more daring kid lets the insect nymph crawl in her hands and giggles when the unsettled creature pinches her skin. Later, the same child returns, dragging her dad to my stall, determined to teach him the life cycle of cicadas. A Bioblitz exposes the public to otherwise unnoticed biodiversity and has the potential to develop a sense of awe for a natural world that is increasingly removed from people's daily urban life. As I watch this little girl teaching her dad about the wonders of nature, I feel we may finally have the upper hand in the battle to conserve biodiversity.

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