## **EDITORIAL NOTE**

## **Editor's note**

**Daniel Simberloff** 

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Michel Pascal died suddenly, at the age of 65, 3 days after submitting the revised manuscript of the following paper. Michel was a towering figure in invasion biology and management—his many successes in eradicating introduced rats from islands worldwide earned him the nickname "El Ratator." His published papers and book chapters number over 200 (of which 90 treat invasions), and he authored numerous important reports. The book Invasions Biologiques et Extinctions: 11,000 Ans d'Histoire des Vertébrés en France by Michel and his coauthors Olivier Lorvelec and Jean-Denis Vigne is a monumental treatment showing the complex and important role of invasions in the development of the current French and European vertebrate fauna. Michel was a "renaissance man," a type that is very rare in this age of increasing specialization. He had catholic knowledge of vertebrates (including fishes)-their ecology, behavior, parasites, and phylogeny—and surprisingly good knowledge of invertebrates and plants as well. Michel was also well informed on the history of ancient human migrations and their ecological impacts, and his discussions and publications brimmed with historical and philosophical as well as biological insights. His interest in invasions was spurred by his long concern with the ecology of islands and conservation of their populations (especially seabirds) and ecosystems—including those in the Mediterranean, West Indies, eastern Atlantic, and Pacific. Michel was an indefatigable field researcher, thriving on extended expeditions to remote islands such as Kerguelen, Clipperton, and Santos. His publications from this research were buttressed with many public appearances and with endless fascinating tales of his experiences with which he regaled and informed his many colleagues. He often employed his exquisite sense of humor in a self-deprecating way that exemplified the remarkable modesty of this highly accomplished scientist.

Although Michel richly deserves the title of "El Ratator," his contributions to invasion biology extend far beyond research on impacts of introduced rats on islands and figuring out how to get rid of them. He studied impacts of the small Indian mongoose, and on the small West Indian island of Fajou he effected one of the first mongoose eradications. He conducted important research on feral housecats in the Kerguelen Islands. In addition to the book on the long history of vertebrate invasions in France, Michel contributed to syntheses on impacts of all mammal invasions in Europe and on impacts of both animal and plant introductions to New Caledonia. A hallmark of Michel's eradication projects was meticulous follow-up on the impacts of the eradications, and thus the elucidation of the full and sometimes surprising range of impacts of the invasions. Michel participated in many workshops and conferences on general questions about invasions as a whole and approaches to managing them. Several of these resulted in multi-authored important papers that are part

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of his oeuvre. His infectious enthusiasm and his determination not only to study invasions but to do something about them inspired his many colleagues, who will greatly miss him.

Michel was particularly excited about the following paper, perhaps the last of several he will have contributed to Biological Invasions. If there is such a thing as a "typical" paper of such a diverse and prolific scientist, this one would qualify. Michel's coauthors are a distinguished international team, as are those of many of his publications, and they report the arduous yet successful eradication of ship rats from two Tunisian islands. They then laboriously gathered copious subsequent data, both to confirm the success of the eradications and to understand the consequences for nesting seabirds, which turned out to be rapid and

striking. The analysis demonstrating this impact and attempting to pin down the precise cause is extremely rigorous and careful not to extend reasoning beyond what the data actually show, again a feature of all of Michel's publications. Finally, there is an added aspect of great interest, and this is what particularly excited Michel: the rats had been present for 1,500 years, yet their eradication led to a rapid increase in a previously suppressed and threatened native species, and no evident negative effects. Michel viewed this result as a cautionary note with respect to the generally evolving view that eradicating long-established invaders would likely not only be exceedingly difficult but might well cause more harm than good.

Daniel Simberloff, Editor-in-Chief

