

Editorial

Innovations, Tradition, and the Future of Ecology

Piotr Tryjanowski

Department of Zoology, Poznan University of Life Sciences, 60-625 Poznan, Poland; piotr.tryjanowski@gmail.com

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A new space

With great enthusiasm, we open a new chapter in the world of science, presenting *Ecological Innovations*. This journal aims to become a space where tradition meets innovation—a meeting point where knowledge about ecological systems, cultivated over generations of researchers, intersects with cutting-edge technologies and bold visions for the future. We believe that only through such a dynamic synthesis can we meet the challenges of the modern world and advance ecology as a vibrant, interdisciplinary, and forward-looking science.

On the shoulders of giants

For centuries, science has progressed through the work of those who dared to look further, building upon the knowledge and discoveries of their predecessors. Ecology, as a relatively young discipline, stands firmly on the shoulders of giants, drawing strength from classical theories of evolution, systems ecology, and biodiversity studies. Their contributions enable us today to understand how ecosystems function, evolve, and adapt to changing conditions. However, scientific progress requires more than safeguarding existing knowledge. To truly expand our understanding of nature, we must push the horizon, venturing beyond the boundaries of established frameworks. As Isaac Newton wrote, “If I have seen further, it is by standing on the shoulders of giants.” Yet, this vision must be active, creative, and filled with the courage to ask questions that have not yet been posed [1].

Where tradition meets the future

The ecosystems we study are testimonies to nature’s ingenuity—witnesses to the power of adaptation and innovation. Some have evolved over millions of years, while others, in nearly unchanged forms, have persisted since the Precambrian. These “living fossils” are as fascinating as dynamic, young ecological systems, where adaptive processes continue to shape biodiversity [2]. Innovation in ecology is not solely about adopting new technologies such as artificial intelligence or data-driven modeling. It is also about the intellectual meeting of the past with the present—where tradition and contemporary thought come together to reinterpret age-old questions in the context of today’s dynamic changes. By combining diverse perspectives—from classical ecological theories to modern analytical methods—we can better understand how nature responds to the challenges of a rapidly changing environment.

Expanding horizons

Scientific inquiry is not about abandoning traditional thinking but about its creative evolution. Innovations are born where bold questions meet rigorous methodology, and new technologies unlock possibilities that once seemed unreachable. Expanding horizons means continuously searching—whether in data analysis or in interpreting patterns observed in nature—and asking the questions that inspire further exploration.

In nature, innovation arises through evolution—a relentless search for optimal solutions in changing conditions. Science follows a similar path: it thrives on experimentation, the reinterpretation of known results, and the pursuit of new research avenues. This is the approach we seek to champion within the pages of *Ecological Innovations*.

An invitation to collaborate



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Ecological Innovations aims to be a platform open to diverse ideas, perspectives, and methods. We invite authors from across scientific disciplines to share the results of their research, regardless of scale—ranging from precise analyses of “Small Data” to comprehensive studies leveraging vast datasets [3].

We are particularly interested in works that not only address existing questions but also pose new ones. We encourage the exploration of interdisciplinary topics that link ecology with technology, policy, social aspects of conservation, or even the philosophy of science. In this way, we hope to foster the growth of ecology as an open, dynamic, and future-ready discipline.

A thought to take forward

We invite you to co-create this unique project. *Ecological Innovations* is more than a journal—it is a community of researchers, practitioners, and thinkers who believe that innovations in ecology can change the world. Join us as we collectively push the boundaries of knowledge and inspire the next generation of scientists.

References

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