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Biodiversity

Biodiversity may be a buzzword, but as a concept it sits at the heart of ecological research. Some ecological communities, such as pristine coral reef systems, are astonishingly rich in the number and types of species that they support, whereas others are relatively species poor. Natural communities also differ greatly in the proportion of species performing different ecological functions. What determines such differences and how these differences are related to ecosystem functioning are questions that have occupied the minds of ecologists for decades.

But these questions are so much more pressing now. We live at a time of rapid environmental change, resulting largely from our own activities, and a concomitant, accelerating rate of habitat loss and species extinctions. Like children playing with fire, we do not fully understand, and therefore cannot predict, the ultimate consequences of tampering with global biodiversity. This collection of reviews — the second in our new section called 'Nature Insight' — focuses on the science of biodiversity.

We are pleased to acknowledge the financial support of the Center for Applied Biodiversity Science (CABS), a division of Conservation International, in producing this Insight. The content is in accord with the philosophy that biodiversity conservation is a human-centred pursuit that must be underpinned by solid science. Of course, *Nature* carries sole responsibility for all editorial content and rigorous peer-review.

This Insight is deliberately broad in scope, covering underlying concepts, pure and applied research, and biodiversity loss from the human perspective. We hope that scientists, policy-makers and general readers alike will find the reviews both informative and thought provoking. Given that environmental change and biodiversity loss is a global concern, and understanding that not everyone will have easy access to the print version, this Insight is freely available to all readers, regardless of subscriber status, on our website at www.nature.com.

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overview:

- 208 Causes, consequences and ethics of biodiversity**
D. Tilman

review articles:

- 212 Getting the measure of biodiversity**
A. Purvis & A. Hector

- 220 Global patterns in biodiversity**
K. J. Gaston

- 228 The diversity–stability debate**
K. S. McCann

- 234 Consequences of changing biodiversity**
F. S. Chapin III, E. S. Zavaleta, V. T. Eviner, R. L. Naylor, P. M. Vitousek, H. L. Reynolds, D. U. Hooper, S. Lavorel, O. E. Sala, S. E. Hobbie, M. C. Mack & S. Díaz

- 243 Systematic conservation planning**
C. R. Margules & R. L. Pressey

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