

1. Record Nr.	UNINA9910459925603321
Titolo	The importance of species : perspectives on expendability and triage / / edited by Peter Kareiva and Simon A. Levin ; contributors, Sally E. B. Abella [and twenty-seven others]
Pubbl/distr/stampa	Princeton, New Jersey : , : Princeton University Press, , 2003 ©2003
ISBN	0-691-09004-1 1-4008-6677-4
Descrizione fisica	1 online resource (446 p.)
Disciplina	333.95/16
Soggetti	Conservation biology Species diversity Endangered species Biodiversity conservation Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Papers presented at a symposium held in honor of Robert Treat Paine, upon the occasion of his retirement from the University of Washington.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front matter -- Contents -- Contributors -- Preface -- Foreword -- Part I. Using Experimental Removals of Species to Reveal the Consequences of Biodiversity Depletion -- Introduction -- 1. Native Thistles: Expendable or Integral to Ecosystem Resistance to Invasion? / Louda, Svata M. / Rand, Tatyana A. -- 2. The Overriding Importance of Environmental Context in Determining the Outcome of Species-Deletion Experiments / Menge, Bruce A. -- 3. Species Importance and Context: Spatial and Temporal Variation in Species Interactions / Harley, Christopher D. G. -- 4. Effects of Removing a Vertebrate versus an Invertebrate Predator on a Food Web, and What Is Their Relative Importance? / Schoener, Thomas W. / Spiller, David A. -- 5. Understanding the Effects of Reduced Biodiversity: A Comparison of Two Approaches / Wootton, J. Timothy / Downing, Amy L. -- Part II. The Anthropogenic Perspective -- Introduction -- 6 . Models of Ecosystem Reliability and Their Implications for the Question of

Expendability / Naeem, Shahid -- 7. Predicting the Effects of Species Loss on Community Stability / Doak, Dan / Marvier, Michelle -- 8. One Fish, Two Fish, Old Fish, New Fish: Which Invasions Matter? / Ruesink, Jennifer L. -- 9. Ecological Gambling: Expendable Extinctions Versus Acceptable Invasions / Wonham, Marjorie J. -- 10. Rarity and Functional Importance in a Phytoplankton Community / Schindler, Daniel E. / Chang, Gary C. / Lubetkin, Susan / Abella, Sally E. B. / Edmondson, W. T. -- 11. Community and Ecosystem Impacts of Single-Species Extinctions / Simberloff, Daniel -- Part III. Linkages and Externalities -- Introduction -- 12. Social Conflict, Biological Ignorance, and Trying to Agree Which Species Are Expendable / Leigh, Egbert Giles -- 13. Which Mutualists Are Most Essential? Buffering of Plant Reproduction against the Extinction of Pollinators / Morris, William F. -- 14. The Expendability of Species: A Test Case Based on the Caterpillars on Goldenrods / Root, Richard B. -- 15. An Evolutionary Perspective on the Importance of Species: Why Ecologists Care about Evolution / Palumbi, Stephen R. -- 16. Recovering Species of Conservation Concern-Are Populations Expendable? / Ruckelshaus, Mary / McElhany, Paul / Ford, Michael J. -- 17. Virus Specificity in Disease Systems: Are Species Redundant? / Power, Alison G. / Flecker, Alexander S. -- Conclusion: Bob Paine's Contributions to the Science of Assessing Species Importance: Past, Present, and Future? -- References -- Index

Sommario/riassunto

A great many species are threatened by the expanding human population. Though the public generally favors environmental protection, conservation does not come without sacrifice and cost. Many decision makers wonder if every species is worth the trouble. Of what consequence would the extinction of, say, spotted owls or snail darters be? Are some species expendable? Given the reality of limited money for conservation efforts, there is a compelling need for scientists to help conservation practitioners set priorities and identify species most in need of urgent attention. Ecology should be capable of providing guidance that goes beyond the obvious impulse to protect economically valuable species (salmon) or aesthetically appealing ones (snow leopards). Although some recent books have considered the ecosystem services provided by biodiversity as an aggregate property, this is the first to focus on the value of particular species. It provides the scientific approaches and analyses available for asking what we can expect from losing (or gaining) species. The contributors are outstanding ecologists, theoreticians, and evolutionary biologists who gathered for a symposium honoring Robert T. Paine, the community ecologist who experimentally demonstrated that a single predator species can act as a keystone species whose removal dramatically alters entire ecosystem communities. They build on Paine's work here by exploring whether we can identify species that play key roles in ecosystems before they are lost forever. These are some of our finest ecologists asking some of our hardest questions. They are, in addition to the editors, S.E.B. Abella, G. C. Chang, D. Doak, A. L. Downing, W. T. Edmondson, A. S. Flecker, M. J. Ford, C.D.G. Harley, E. G. Leigh Jr., S. Lubetkin, S. M. Louda, M. Marvier, P. McElhany, B. A. Menge, W. F. Morris, S. Naeem, S. R. Palumbi, A. G. Power, T. A. Rand, R. B. Root, M. Ruckelshaus, J. Ruesink, D. E. Schindler, T. W. Schoener, D. Simberloff, D. A. Spiller, M. J. Wonham, and J. T. Wootton.