Here is one of the most provocative, wide-ranging, and delightful books ever written about our environment. Paul Colinvaux takes a penetrating look at the science of ecology, bringing to his subject both profound knowledge and an enthusiasm that will encourage a greater understanding of the environment and of the efforts of those who seek to preserve it.

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Add both to Cart. There are Darwinian doubts about a surging world population that will be checked by natural selection. He shows the results of the most colossal of all experiments—doubling concentration in a short time of one of the planet’s most important gases.

The Ocean System. The Regulation of the Air. The predictions made in the s already look out of date. Other than this small criticism of one chapter, I heartily recommend this book. And it seems that the scary, ferocious Tyranosaurus rex—largest predator that ever lived—is a myth. It was a lazy carrion-eater. Ah well, sorry, Rex, you looked great in Jurassic Park!

Mar 25, Tim Robinson rated it it was amazing
Shelves: science.

A clear and compelling description of what ecology actually is: a theoretical framework more like economics than botany, with “budgets” and widely applicable “strategies” and empirical laws supported or refuted! Ecology, like quantum mechanics, has its Exclusion Principle: each niche sustains exactly one species.

The population size of a species is determined by the width of its niche, and not by its breeding strategy. And the width of the niche often comes down to a single limiting resource: the space available for breeding territories or supply of some mineral. Predator population is often influenced by the population of its prey, but the reverse is rarely true. Competition between species is nowhere nearly as intense as you might think, as each has its own niche and species evolve to minimize the overlap of their niches.

Mar 22, Cristina rated it it was ok.

Aug 16, John Hewlett rated it really liked it.

This book by famed ecologist Paul Colinvaux could have just as easily been called “Why Things Are the Way they Are” as only a small fraction of the book concerned the specific topic of “why big fierce animals are rare.”

It addressed issues of community ecology and competition with heavy emphasis on the competitive exclusion principle. Though dated it was an interesting retrospective look at the state of ecology in the s.
due to the characteristic of being fierce and big of the fierce big animals, their rate of extinction are increased. In the large taxa, the extinction rates are common and great. Animals such as myriad organism including Cretaceous bivalves Jablonski and Raup and Cenozoic mammals MacFadden are greatly faced by this predicament of extinction. Regarding the American interchange, body mass was the main contributing factor to the extinction of these animals. This factor was associated with the probability of extinction following the American biotic interchange. If you read only one chapter from this book, read the chapter titled "Peaceful Coexistence. Nature is arranged so that competitive struggles are avoided. A species lives triumphant in its own special niche. Natural selection is harsh only to the deviant aggressor who seeks to poach on the niche of another. Consider something even more potentially relevant to discussions of humans' warlike nature: wolves cull the young, old, and sick large herbivores, because if the pack took on a healthy adult, "some of the wolves would get hurt, and a hurt wolf can hunt no more. Natural selection see to it that the strain of brave aggressiveness in wolves is purged from the wolf gene pool because such individuals would incur more than an average share of being fatally hurt. Colinvaux, in his concluding chapter, says we "Change our niches without changing our breeding strategy. Fortunately, we've seen evidence that empowering and educating women has led to them choosing smaller families. The Arctic Guide. Far from Land. Browse titles from Princeton UP. Register No. Willkommen bei. Bestellen Sie jetzt in Euro auf nhbs. Now, I just don't know how much is still relevant, and what the current understanding of how nature works is compared to what it was back 4 decades ago. I do know I'm not convinced by the author's argument, in the last chapter, about how human animals live and human societies grow. But it's a fairly easy read, and the author's voice is engaging and relatively light. And he keeps saying things in fresh way, in a way that helps us think, in an idiom that sticks. For example, consider herbivores as hunters of plants. As far as the genes of the plants can cope, cows etc. Also, it's a great read because the author admits that science is a process. It looks for deeper answers and is not satisfied with intuitive understandings or data that doesn't fit popular theories. As he puts it at one point, "Ecologists are still inclined to argue about these things, but it does look as if we might have the general answer to these questions, all the same.