

## **Reappraisal of the role of big, fierce predators!**

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**Abstract:** The suggestion in the early 20th century that top predators were a necessary component of ecosystems because they hold herbivore populations in check and promote biodiversity was at first accepted and then largely rejected. With the advent of Evolutionary Ecology and a more full appreciation of direct and indirect effects of top predators, this role of top predators is again gaining acceptance. The previous views were predicated upon lethal effects of predators but largely overlooked their non-lethal effects. We suggest that conceptual advances coupled with an increased use of experiments have convincingly demonstrated that prey experience costs that transcend the obvious cost of death. Prey species use adaptive behaviours to avoid predators, and these behaviours are not cost-free. With predation risk, prey species greatly restrict their use of available habitats and consumption of available food resources. Effects of top predators consequently cascade down to the trophic levels below them. Top predators, the biggies, are thus both the targets of and the means for conservation at the landscape scale.  
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