



# Which Creatures Live the Longest?

The key indicator for animals may be total energy expended over a lifetime

**Conventional wisdom** in longevity studies used to be that the life span of a creature was roughly proportional to its body mass and heart rate—the big, slow elephant outlives the quick, small mouse. New research, however, presents a more complicated picture. Bats and birds, for instance, are small but tend to live longer than many larger creatures. Moreover, when scientists look within particular species, size does not correlate well with life span, although fast growth is often associated with reduced longevity. To some degree, resting metabolic rate does

correlate, but for animals total energy expended over a lifetime may be the best indicator of all. Definitive answers in this field can be slow in coming, partly because the studies take a long time to do—a typical Galápagos tortoise, for instance, can outlast a scientist's career. And don't hold your breath for insights into the extreme life span of the bristlecone pine. —Fred Guterl

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