



Photograph courtesy Born Free Foundation

[Hoelzel, R.A., M. S. Shivji, J. E. Magnussen and M.P. Francis. 2006. Low worldwide genetic diversity in the basking shark \(*Cetorhinus maximus*\). *Biology Letters*.](#)

Big and Fearsome, but Vulnerable

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By HENRY FOUNTAIN

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Basking sharks may be among the largest fish in the world (they can be more than 30 feet long), but they are hardly monsters of the deep. They spend much of their time slowly swimming in coastal areas around the world, feeding on plankton.

Their slow movements make them an easy target. They have been hunted for their liver oil, fins, cartilage and meat, although hunting them is now banned in some countries. They are also very slow reproducers: it takes one to three years of gestation to produce a few pups.

Because of all that, they are listed as vulnerable by the World Conservation Union. But there is little data on basking shark populations.

A study by A. Rus Hoelzel of Durham University in England and colleagues fills in the blanks a bit. While the study, published online last month by the journal *Biology Letters*, doesn't give population numbers, it shows that the sharks have low genetic diversity, which could make them more vulnerable to disease or environmental change.

The researchers analyzed mitochondrial DNA from 62 tissue samples and found little variation among sharks from all parts of the world. This was unusual; often populations of the same species from different oceans will vary greatly.

The analysis showed that the population expanded about 85,000 years ago and then hit a bottleneck, probably in the last 10,000 years, that led to the reduced diversity. As to what might have caused the bottleneck, the researchers suggest that a warming period might have disrupted the sharks' food source enough to cause a major die-off.
