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THE COVER

The peacock spider (Maratus volans) is a tiny jumping spider native to eastern Australia, deriving its name from the brightly colored flaps on the male's abdomen that it extends in a fan-like shape during courtship. The full courtship dance, which also includes waving his third pair of furry, striped legs, can be viewed in a popular nature video on YouTube: <http://youtu.be/9GgAbyYDFeg>. Many extreme structures in the living world are attributed to sexual selection and sexual reproduction. Divergence of structures toward extremes and the rise of new species can be detected by studying areas of the genome that are rapidly evolving. Not only are visible features, such as the peacock spider's fan, subject to past or present rapid evolution, the process also affects the proteins that moderate sperm–egg interactions. In “Rapid Evolution in Eggs and Sperm” (pages 210-217), Katrina Claw compares and contrasts sperm and egg morphology and biochemistry across the tree of life, and explains why and how this diversity evolved. (Cover art by Emma Skurnick.)