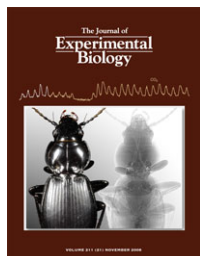


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Cover: Some insects rhythmically compress large segments of their tracheal systems. The image on the right is a composited, high-resolution x-ray radiograph of the carabid beetle *Pterostichus stygicus*, a species that displays this behavior. Socha and colleagues (pp. 3409–3420) used synchrotron x-ray phase contrast imaging to visualize internal tracheal dynamics in living *P. stygicus* beetles. Concurrent respiratory recordings show that one function of rhythmic tracheal compression is to convectively expel air from the body. Photo by Jake Socha; x-ray image by Jake Socha and Wah-Keat Lee.

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