



**Cover:** Mangrove rivulus (*Kryptolebias marmoratus*) are amphibious fish that survive for weeks out of water and move on land by tail-flip jumping. Amphibious fishes must support their bodies against gravity while on land, a challenge not experienced in water. Turko et al. (pp. 3621–3631) show that the gill skeleton of mangrove rivulus stiffens out of water under normal gravity, but not under simulated microgravity. Gill proteomics indicated that these fish use mechanisms to achieve bone stiffening similar to those known in mammals. Skeletal responses to gravity may therefore represent an ancestral trait rather than a tetrapod innovation. Photo credit: Sherri and Brock Fenton.

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