# Supporting Information

## King et al. 10.1073/pnas.1118669109

Fig. S1. Overlap of pelvic fins during benthic locomotion. Each colored line represents the location of the leading edge of a pelvic fin in a single frame; the trial is 115 frames long. The regions of overlap indicate when the fin is contacting the substrate. Note that the location of substrate contact changes along the length of the fin in each step. The arrow indicates the direction of travel. (Scale bar, 1 cm.) This figure corresponds to the trial in Figs. 1*A* and 2 *A* and *C* and to Movie S1.
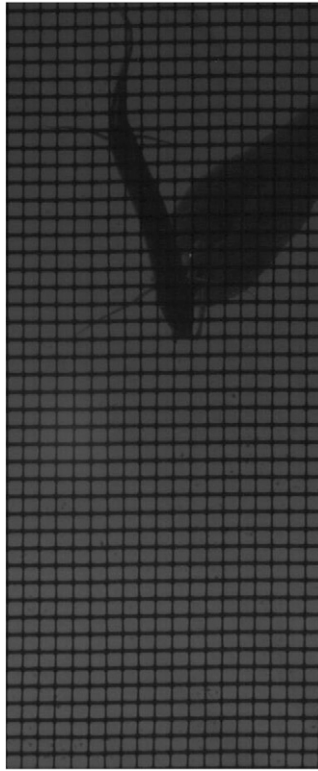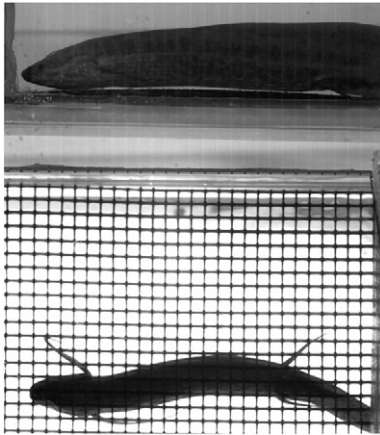
Movie S1. This movie shows the lungfish *Protopterus annectens* locomoting underwater in ventral view. Note that the pelvic fins alternate, and the pectoral fins do not move rhythmically. This movie corresponds to Figs. 1*A* and 2 *A* and *C*. Each square of the grid in this movie is 1 cm.
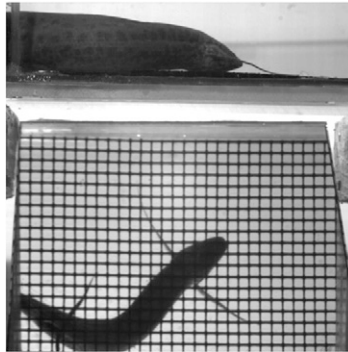
Movie S1
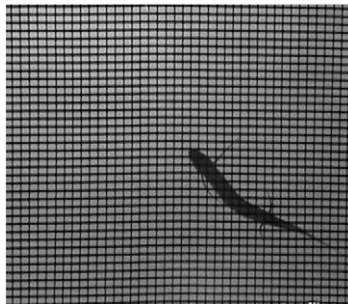
Movie S2. This movie shows the lungfish *P. annectens* locomoting underwater in ventral view. Note that the pelvic fins begin by alternating, then make a discrete transition to a synchronous gait. This movie corresponds to Figs. 1*B* and 2 *B* and *D*. Each square of the grid in this movie is 1 cm.

Movie S2

Movie S3. This movie shows the lungfish *P. annectens* locomoting underwater in simultaneous lateral and ventral views. In lateral view, the lifting of the body is evident, as is the range of motion of the pelvic fin, including movement in front of and above the articulation with the body. Each square of the grid in this movie is 1 cm.

Movie S3

Movie S4. This movie shows the lungfish *P. annectens* locomoting underwater in simultaneous lateral and ventral views. Here we show an example of the effectiveness of the pelvic fins in lifting the body. Each square of the grid in this video is 1 cm.

Movie S4