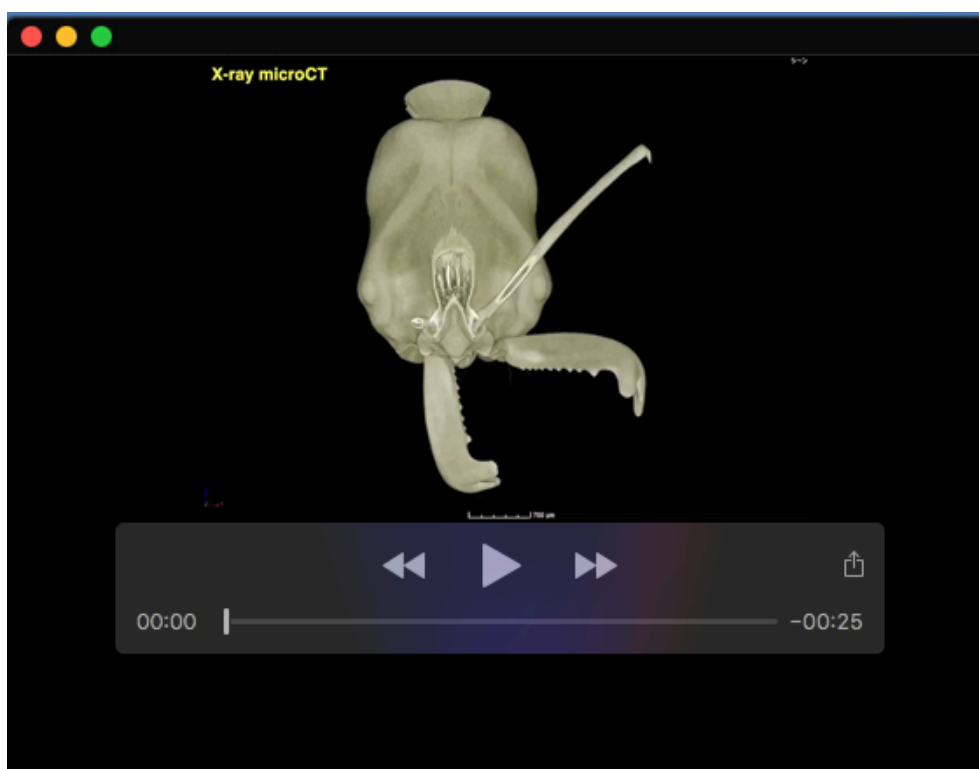


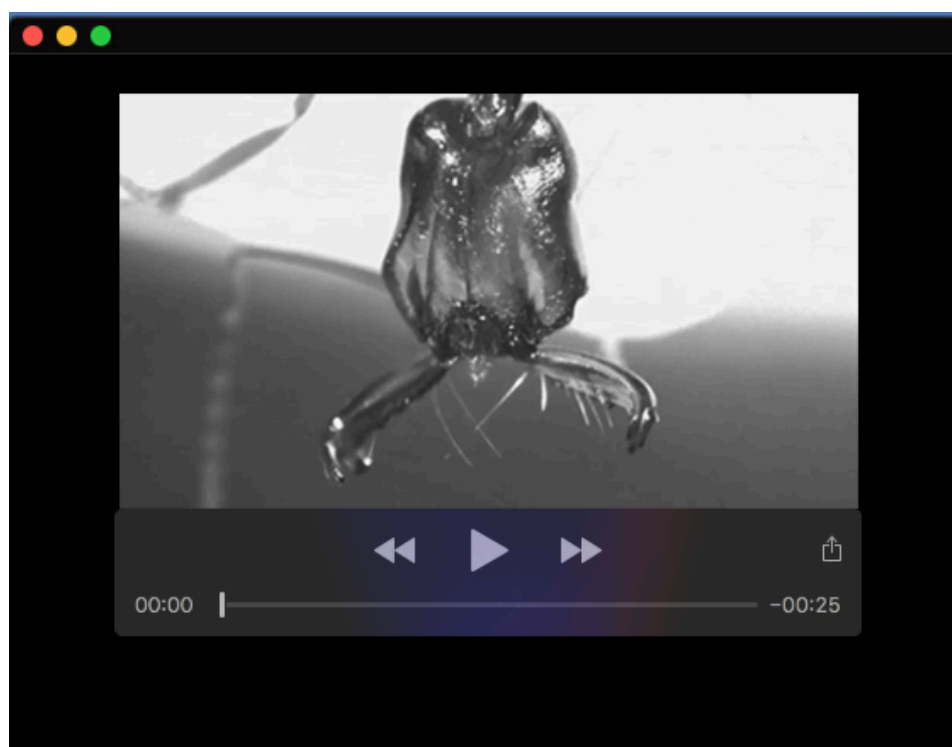
**Movie 1.** Highspeed movie of mandible powered jump captured at 10,000 fps.



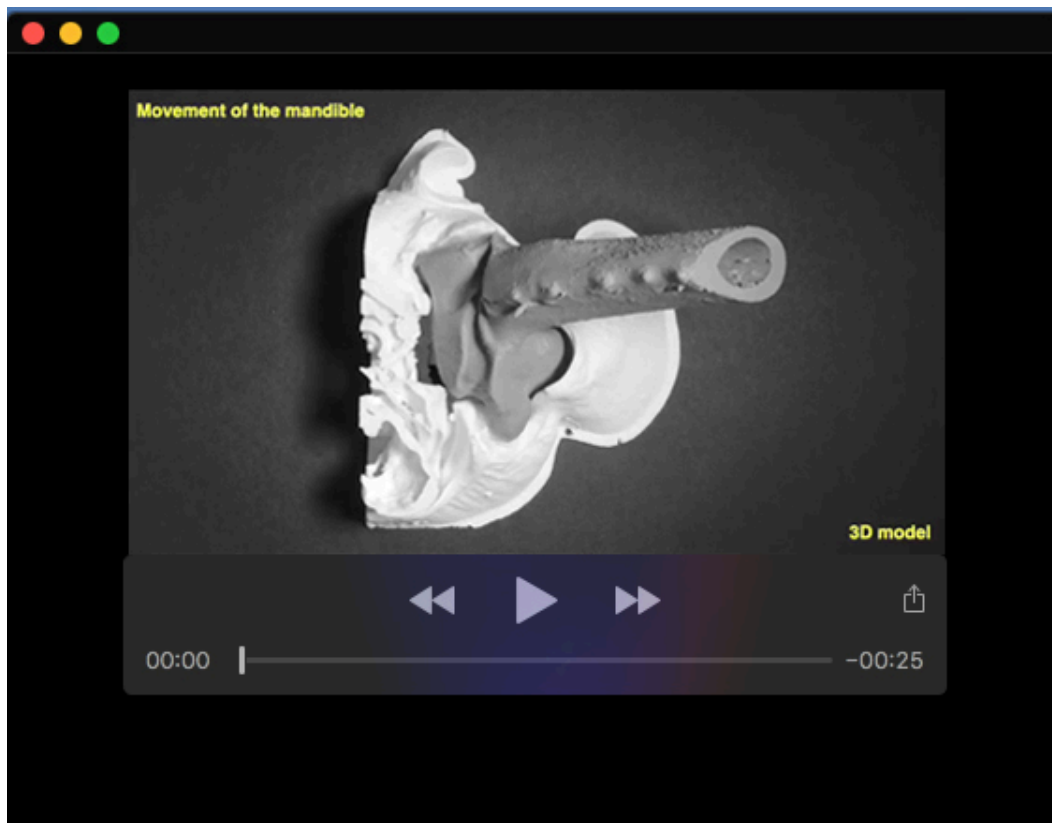
**Movie 2.** Movie of the X-ray micro-CT images of the trap-jaw ant.



**Movie 3.** X-ray live imaging during the ultra-fast movement of the mandible of the trap-jaw ant.



**Movie 4.** 3D model of the mandibular joint. Digital data of the micro-CT images were converted into STL files and then printed out using a 3D printer. The movie was made using a series of snapshot of the 3D model with different positions of the mandible.



**Movie 5.** Movement of the mandibular joint was recorded from the ventral side. During the loading phase, the rail and the groove of the ball were rigidly engaged.