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Apple Snail: a Bio Cleaner of the Water Free Surface. GOLNAZ BASSIRI, NICK PHELPS, KHALED SALLAM, Oklahoma State University — Oil spills from tankers represent a threat for shorelines and marine life. Despite continuing research, there has been little change in the fundamental technology for dealing with oil spills. An experimental investigation of the feeding strategy of Apple snails from the water free surface, called surface film feeding, is being studied motivated by the need to develop new techniques to recover oil spills. To feed on floating food (usually a thin layer of microorganisms), the apple snail forms a funnel with its foot and pulls the free surface toward the funnel. High speed imaging and particle image velocimetry were used in the present investigation to measure the free surface motion and to investigate the mechanism used by the apple snails to pull the free surface. The results suggest that the snail pulls the free surface via the wavy motion of the muscles in its funnel.

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