Swimming in mud NEIL BALMFORTH, University of British Columbia, DUNCAN HEWITT, University of Cambridge — We extend G.I. Taylor’s classic problem of the swimming of a flexible sheet in a viscous fluid driven by waves propagating down its length. In particular, we add a yield stress to the problem and calculate how the swimming speed is modified for waves of both low and high amplitude. We examine the flow patterns created around the swimmer as it locomotes and comment on designing strategies for optimal progress.