Attraction of swimming microorganisms by solid surfaces
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HOWARD BERG, Harvard — Swimming microorganisms such as spermatozoa or
bacteria are usually observed to accumulate near surfaces. Here, we report on an
experiment aiming at measuring the distribution of smooth-swimming E. coli when
moving in a density-matched fluid and between two glass plates. The distribution
for the bacteria concentration is found to peak near the glass plates, in agreement
with a simple physical model based on the far-field hydrodynamics of swimming
cells.

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