Recent breakthroughs of Agol, Wise, Kahn-Markovic and others have led to a staggering amount of new knowledge about the structure of 3-manifolds and their fundamental groups. In particular, every closed hyperbolic 3-manifold is now known to be finitely covered by one which is a “twisted product” of a surface with a circle (technically, a fiber bundle). This was conjectured by Bill Thurston in the early 80s, but not widely believed until recently. I’ll tell some of the story of how we know it to be true.