

Is Mendelian genetics too outdated for the classroom?

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

The past year has seen prolonged celebrations of the work of Gregor Mendel, linked to the 150th anniversary of the paper that reported his experiments with hybrid peas. Mendel's experiments are central to biology curricula across the world. By contrast, the criticisms levelled at Mendel's ideas by W. F. R. Weldon, Linacre professor at the University of Oxford, UK, are a footnote.

From 1902, Weldon's views brought him into increasingly bad-tempered conflict with Mendel's followers. In basic terms, the Mendelians believed that inherited factors determine the visible characters of an organism, whereas Weldon saw context — developmental and environmental — as being just as important, with its influence making characters variable in ways that Mendelians ignored.

The problem is that the Mendelian 'genes for' approach is increasingly seen as out of step with twenty-first-century biology. If we are to realize the potential of the genomic age, critics say, we must find new concepts and language better matched to variable biological reality. This is important in education, where the reliance on simple examples may even promote an outmoded determinism about the power of genes.

In a recent two-year project, we taught university students a curriculum that was altered to reflect what genetics textbooks might be like now if biology circa 1906 had taken the Weldonian rather than the Mendelian route. These students encountered genetics as fundamentally tied to development and environment.

Read full, original post: [Teach students the biology of their time](#)