AB Discusses the controversial status of the Lamarckian hypothesis of acquired traits within the emergence of neo-Darwinism. It is argued that W. McDougall challenged the implicit mechanistic principles of neo-Darwinism by seeking support for the Lamarckian position with its more purposive and teleological aspects. The present author discusses McDougall's 1927 report on a series of experiments designed to test the Lamarckian hypothesis, 3 succeeding papers (1930, 1933, and 1938) written by McDougall, and a series of attempted replications by others that extended into the 1950s. These papers provide a commentary on the Lamarckian hypothesis, neo-Darwinism, and the fallibility of experiments in testing hypotheses. They also provide a reflective picture of McDougall.