962-01-494   **Douglas E. Ensley*** (`deensl@ship.edu`), Department of Mathematics, Shippensburg University, Shippensburg, PA 17257. *Euler's Observations on a Classic of Recreational Mathematics.*

A classic of recreational mathematics is the so-called Josephus problem which is traceable to folklore in the oral tradition. The problem has been known by various names for over one thousand years, but the underlying story is the basically the same: If some number of people, good guys and bad guys, are to stand in a circle, how should they be arranged so that after every second (kth) one is eliminated until the good guys are left? Like any good mathematics problem that passed through the eighteenth century, Leonhard Euler had something incredibly lucid to say about it. In his "Observationes circa novum et singulare progressionum genus" (*Opera Omnia*, Series 1, Volume 7, 246–261), Euler gives an analysis of the problem that foreshadows the modern recursive approach that makes the question appealing for study in discrete math and computer science books such as Donald Knuth's Fundamental of Algorithms series. In this talk I plan to discuss a bit of the history of the problem, present Euler's contribution in some detail and then remark upon the modern treatment of this problem to put Euler's ideas in perspective. (Received September 14, 2000)