1077-40-1124 **Thomas J Osler*** (osler@rowan.edu), Mathematics Department, Rowan University, 201 Mullica Hill Road, GLASSBORO, NJ 08028. *The devil's series, did it fool Euler?* Preliminary report.

Euler ends his paper [1], with a very general series which we call the "devil's series". Any series which does not contain zero terms is a special case of this devil's series. We show that the sum of this series can be expressed as A + B. Euler gives only A as the sum of the devil's series and ignores B. There is a large class of series for which Euler's sum is correct. We locate this class of series. We end with a conjecture as to why Euler did not reveal the full sum of the series.

[1] Euler, L. , "Exercitatio analytica, cum imprimis seriei maxime generalis summatio traditur". (An analytic exercise, for which a most general summation of series is given.), E 685. Originally published in Nova Acta Academiae Scientarum Imperialis Petropolitinae 9, 1795, pp. 41-53. Opera Omnia: Series 1, Volume 16, pp. 266-281. On the web at http://eulerarchive.maa.org/ (Received September 16, 2011)