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S W Schultz* (sschultz@providence.edu), Providence College, Providence, R.I., RI 02918, and
E A Grove, G Ladas and **E Camouzis**. *Periodicities which Preserve and Periodicities which Destroy Boundedness.*

It is known that every positive solution of the difference equation with positive $b > 0$

$$x(n+1) = b + x(n-2)/x(n), \quad n=0,1,\dots$$

is bounded. In this note we study the difference equation

$$x(n+1) = b(n) + x(n-2)/x(n), \quad n=0,1,\dots$$

We show that every positive solution of this equation is bounded when $b(n)$ is a period-2 sequence of positive real numbers.

We also show that there exists prime period-3m sequences $b(n)$ of positive real numbers such that the equation has unbounded solutions. (Received February 26, 2009)