Ziyad AlSharawi* (alsha1zm@alsharawi.info), Department of Mathematics & Statistics, Sultan Qaboos University, PC 123 Al-Khoud, Muscat, Oman, and R. Abu-Saris and M. Rhouma. The dynamics of Pielou’s equation under the effect of harvesting. Preliminary report.

In this talk, we discuss the dynamics of Pielou’s equation $x_{n+1} = \frac{K\mu x_n}{K+(\mu-1)x_{n-t}} - h(x_n, \ldots, x_{n-t})$.

When $t = 0$, we obtain the Beverton-Holt model, and some results concerning periodic harvesting in periodically fluctuating environment will be given. When $t = 1$, we discuss some characteristics of persistent solutions and the persistent set, particularly when $h(x_n, \ldots, x_{n-t})$ is constant or proportional to $x_n, x_{n-1}$. Also, some comparison between the various scenarios will be given. (Received September 03, 2010)