

Review Form 1.7

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_110044
Title of the Manuscript:	The impact of predator-dependent prey refuge on the dynamics of a Leslie-Gower predator-prey model
Type of the Article	Original Research Article

Review Form 1.7

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</p>	<p>General Remarks The paper is well written but contains mathematical results that are too simple to be important to the scientific community. The title is suitable, the abstract comprehensive and the manuscript scientifically correct. The References are fine.</p> <p>Additional Remarks:</p> <p>1) The paper must be strengthened with some additional results to become more interesting to the general reader. I, therefore, strongly suggest that the authors include at the end of the paper, a section studying numerically a nonautonomous perturbation on the right side of their second equation of the form $+\epsilon \sin(\omega t)$ for $\epsilon=0.001, 0.01$, etc. small, to model the effects of a seasonal variation of the prey population.</p> <p>2) These equations must now be solved numerically and plotted on a Poincare Surface of Section for the values $x(t_n), y(t_n)$ at times $t_n = n(2\pi/\omega)$, i.e. multiples of the period of the perturbation $T = 2\pi/\omega$. The equilibrium point will now become a stable T-periodic solution of the problem attracting again all other initial conditions in its neighborhood. Question: What happens to this picture now as $\epsilon = 0.5, 1, 2$, etc.? Does the value of ω change the results? Set $\omega=0.1, 0.5, 1, 2, \dots$ Do you see any difference in the Poincare plots?</p> <p>1) The authors should include in the end of the paper an additional Section 4 summarizing the Conclusions of their study.</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Minor Remarks: The English is fine. There are, however, some corrections to the text, the equations, and the Figure 2, that I list below:</p> <p>1) First line of first paragraph of the page should read "In the past decade, many scholars have shown great interest in predator-prey systems."</p> <p>2) 3 lines below erase "will".</p> <p>3) In eqns. (1.2) – (1.4) replace dx/dy by dx/dt</p> <p>4) "Refugia" is the plural of "Refugium". Since you are not writing for experts in Latin, please replace it with "refuge".</p> <p>5) I don't understand what is plotted in Fig. 2. What are the x, y vertical coordinates in this figure? Are they the (x,y) coordinates of the stable equilibrium point? This must be clarified.</p>	
<p>Optional/General comments</p>		

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Review Form 1.7

Reviewer Details:

Name:	Tassos Bountis
Department, University & Country	University of Patras, Greece