1077-92-1466 **Andrew Nevai*** (anevai@math.ucf.edu), Department of Mathematics, P.O. Box 161364, Orlando, FL 32816, and **Robert Van Gorder** (rav@knights.ucf.edu), Department of Mathematics, P.O. Box 161364, Orlando, FL 32816. *The influence of a resource subsidy on predator-prey interactions.*

We study the influence of a donor-controlled resource subsidy on predator-prey interactions. The prey increases logistically, the subsidy appears arithmetically, and the predator experiences satiation. In one model, the prey and subsidy are found together, and in a second they are spatially separated. Criteria for feasibility and stability of the different equilibrium states are discussed. Implications for a biological system involving arctic foxes (predator), lemmings (prey), and seal carcasses (subsidy) are considered. (Received September 19, 2011)