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**George Livadiotis\*** (glivadiotis@swri.edu), 6220 Culebra Rd., Div.15, San Antonio, TX 78238, and **Leila Assas, Brian Dennis, Saber Elaydi and Eddy Kwessi.** *Host-Parasitoid Discrete Models with strong Allee Effect.*

We introduce a discrete-time host-parasitoid model with the strong Allee effect on the host. We adapt Elaydi-Sacker model for the Allee effect on the host and Nicholson-Bailey model for the parasitism. Our model includes positive density factors due to the Allee effect, negative density factors due to intraspecific competition, and factors due to parasitism using the Poisson distribution. It is shown that there are two scenarios, the first where we have no interior fixed points and the second where we have one interior fixed point. In the first scenario, either both host and parasitoid will go to extinction or there are two regions, an extinction region where both species go to extinction and an exclusion region in which the host survives and tends to its carrying capacity. In the second scenario, either both host and parasitoid will go to extinction or there are two regions, an extinction region where both species go to extinction and a coexistence region where both species survive. More complicated dynamics with two interior fixed points characterize a generalized model, where the probability of parasitism is described by a kappa distribution. Recent developments on kappa distributions and their statistical framework are essential for interpreting the new scenarios. (Received September 13, 2014)