

**IN VIEW OF THE REVERSAL TIME OF DOMINANCE IN AN
ENEMY-AMMENSAL SPECIES PAIR WITH UNLIMITED AND
LIMITED RESOURCES RESPECTIVELY FOR STABILITY BY
NUMERICAL TECHNIQUE**

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Abstract

This paper deals with a mathematical model of an Ammensal-enemy species pair surviving with limited and unlimited resources respectively where the death rate of enemy species is greater than its birth rate under the condition where the natural growth rate of Ammensal species is greater than the natural growth rate of enemy species. This model is characterized by a pair of first order non-linear coupled differential equations. The nature of variation of reversal time (t^*) of dominance for stability is established by classical Runge-Kutta method of fourth order. Some observations are identified from the relationship between the reversal time of dominance and the carrying capacity of Ammensal species.

Key Words : Equilibrium point, Equilibrium state, Stability, Carrying capacity, Reversal time of dominance.