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A brood-parasites dynamics model

We consider a Common Cuckoo dynamics deterministic model. It is a brood-parasite which lays its egg in the nest of other bird species and use host individuals to raise its young. We present a Common Cuckoo and a host species dynamics deterministic model taking into account a discrete set of offsprings and their care. All individuals have pre-reproductive, reproductive, and post-reproductive age intervals. Individuals of reproductive age are divided into single and those who care of young offsprings. All individuals of pre-reproductive age are divided into young (under maternal care) and juvenile classes. Juveniles can live without maternal care but cannot produce their offsprings. It is assumed that after the death of mother all her young offsprings die. The model consists of integro-partial differential equations subject to the conditions of the integral type. Number of these equations depends on a biologically possible maximal number of eggs laid by a hen of host species in a nest. Separable solutions and numerical results will be discussed.

REFERENCES

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