

The superiority of silk as a textile fibre has been recognized from time immemorial, the luxurious look: sleek feel and lustre of silk fabric are unquestionably inimitable. The demand for silk is constantly increasing in the world market and this provides excellent opportunities for any producer country to diversify and optimize any source of production. African countries that enjoy congenial climate for rearing wild silkmoths have great scope and opportunity to promote sericulture. Studies were carried out during 2005-2007 on the ecology and economic potential of wild silkmoth *Anaphe panda* (Boisduval) which occurs in the Kakamega Forest, western Kenya. Silkworms feed on *Bridelia micrantha* (Hochst). Egg clusters were present from mid-October to mid-May: silkworms appear from December to September: pupae are present from mid-April to January and adults occur from early October to April. Eggs hatch after 40 to 55 days depending on the temperature. Seven larval instars occur with a growth prodigious from 3 mg at 1st instar to more than 3,000 mg at the 7th instar. The duration of larval development depends on temperature and ranged from 83 to 118 days. The duration of the pupal stage ranged from 107 to 178 days depending on the brood. Pupal and adult sex ratios are not even. A moth life span ranged from 4 to 7 days. The factor that contributes most to egg mortality appears to be egg parasitism, and in the Kakamega Forest, eggs were mainly parasitized by two chalcids: *Telenomis gowaevi* Graham and *Pleurotropis telenomis* Lima. Eggs in the mixed indigenous forests (forest with indigenous and exotic species) seemed to be more affected than those of the indigenous forest (forest with indigenous species only), and the infection rate was also significantly different ($P = 0.0025 < 0.05$) between the mixed indigenous and indigenous forests. Higher mortality rate was observed from the 1st to 4th instar, but a highly significant difference was observed between the unprotected and the protected silkworms. Nevertheless, the lowest mortality rate was observed from the 5th to 7th instars. High mortality rate of silkworms was observed in the mixed indigenous forest compared to the indigenous forest. The survival rate observed during the larval developmental period was significantly higher for the protected than for the unprotected silkworms. Protection with net sleeves seemed to minimize the instantaneous risk and effectively increased the survival of the silkworm. The tachinid fly *Exorista cardinalis* Fabr and the ichneumon wasp *Cryptus leucopygus* Granenhorst were found to be parasitoids at the larval stage. *A. panda* cocoon nests were found to be infested by various dipteran and

hymenopteran parasitoids. Geographical information systems (GIS) and Poisson distribution revealed that distribution of the host plant *B. micrantha*: cocoon nests and egg-clusters were not uniformly distributed in the indigenous and mixed indigenous forests. A bamboo structure was found on *A. panda* fine structure filament, and this structure is characteristic and unique as compared with all other cocoon filaments of lepidopteran insects. By processing *A. panda* cocoon nests into silk shirts, the net income was multiplied twenty-four times. Therefore, wild silkworm farming could be a supplementary activity carried out by farmers for income generation while at the same time conserving biodiversity.