The cowpea aphid, *Aphis craccivora*, is a key pest of this crop. The lady beetle, *Scymnus syriacus* is a dominant aphidophagous species of the genus *Scymnus* in Iran and especially in northern part of the country. Biology of the lady beetle, *Scymnus syriacus* was studied in densities of 10 and 40 of the third instar nymphs of *A. craccivora* in a growth chamber (25°C, 65 ± 5% RH and a photoperiod of 16 L: 8D). The lady beetle has 4 larval stages, a prepupa and pupal stage. The average larval period in densities of 10 and 40 of the third instar nymphs of aphids was 12.16 ± 0.51 and 9.66 ± 0.25 days, respectively. A significant difference was also observed (p = 0.01). The developmental time of immature stages from egg to adult in densities of 10 and 40 was 19.93 ± 0.47 and 16.63 ± 0.22 days, respectively. A significant difference was also observed (p = 0.01). The average longevity of male and female in density of 10 was 39.86 ± 6.33, 50.86 ± 6.85 days and in 40 was 60.66 ± 7.72, 72.4 ± 6.13 days, respectively with a significant difference (p = 0.05). The average number of eggs laid by female in densities of 10 and 40 was 83.66 ± 18.64 and 460.4 ± 66.11, respectively. They also differed significantly (p = 0.05). It was concluded that the density of 40 preys per day was much suitable for rearing of the predator.

**key words:** *Scymnus syriacus, Aphis craccivora, biology, prey density*