containers of (9 x 3 cm) and kept on the same temperature for entire period of the experiment.

Preparation of the artificial diet. Five kilogram chicken liver was kept in the oven at 90ºC for 2 h to make it complete dry before blended in to powder form. Complete dry form of chicken liver was the most appropriate for making homogenized powder. Out of total dried material, 500 g blended powder was separated and mixed with 200 mL of sucrose solution (5% wet volume) and again blended for 5-10 min until a paste is formed. The resulting paste was sealed in an aluminum foil packet and stored in frozen form. A single layer of parafilm (insulating material) was wrapped around the cylindrical form of diet materiel. No antibiotic or preservative was used. A 50 g of preserved chicken liver materiel was taken every day and melted in sucrose solution in a test tube using water bath for heating.

The melted material was converted in to small and equal size droplets by using the small capillary tubes. The droplets were placed on parafilm sheet on equal distance. The droplets were prepared every day to avoid the contamination. Small pieces of parafilm were placed in petri dishes to offer them in separate feeding arena.

RESULTS AND DISCUSSION

The natural and artificial diets were tested on five developmental stages of M. sexmaculatus Fab. All four immature stages (first four instars) showed significantly better response in acquiring the high survival rate and faster development when fed on live aphids (M. persicae) compared with artificial diet consisting of dried aphids, frozen aphids of same species and chicken liver diet. The impact of natural diet (La) in average weight gain of $1^{st} - 4^{th}$ instars larvae was much higher over the rest of the treatments (Fig. 1.). The survival percentage was found inferior (25-30%) when the predator fed on Da, Fa and Cl (Fig. 2.). The egg production remain lower in all treatments except the control i.e. natural diet (La).

These results are in concur with Allen (1985) that beef liver was reported as nutritionally adequate diet for predator development but no egg production was obtained. Further, he concluded that the high fats and cholesterol contents are quite important for the fertility and fecundity of predators.

The rate of pupation was much lower in response to all three treatments. Sucrose only could support in survival of the adult up to 35 days. The average longevity was found 166 days on La over highest 63 days on artificial diet. The result of present study not comply with (Hagen, 1962) who has reported longevity on artificial diet much longer over those reared on natural diets.

The difference in the reproduction period was all due to the difference in food intake and predators feeding behaviour. These results contradict with Niijima (1979) who had tested the honey bee brood drone powder and reported 11 successful generations with out any reduction in viability and fecundity.

Fig. 1. Average weight gain by larval instars of Menochilus sexmaculatus

Fig. 2. The percentage survival during various developmental stages in response to four different diets

La = Live aphids, Fa = Frozen aphids, Da = Dried aphid , Cl = Chicken liver

Table I. The effect of various diets on the development and egg production of *Menochilus sexmaculatus* Fab.

Treatments	Pre-Oviposition (POP) Days (S.E)	Oviposition (OP) Days (S.E)	Egg laying /day (S.E)	Longevity Days (S.E)
Live aphids (La)	4.7 ± 0.46	28.5 ± 1.33	30.5 ± 1.59	166 ± 6.4
Frozen aphids (Fa)	18.5 ± 1.2	34 ± 1.84	6.4 ± 0.48	63 ± 3.5
Dried aphids(Da)	21.6 ± 1.6	30 ± 1.66	2.5 0±.065	46.5 ± 4.2
Chicken live (Cl)	0 ± 0.00	0 ± 0.00	0 ± 0.00	42.6 ± 3.8
Sucrose (Su)	0 ± 0.00	0 ± 0.00	0 ± 0.00	36.5 ± 2.69

The present study, however, revealed that the development and reproduction of successive generations of *M. sexmaculatus* is mainly dependent on the live prey. The dried and frozen prey diet prepared from the same species has no role in reproduction. It was also observed that the pre-oviposition, oviposition period and length of stadium was greatly extended in response to artificial diet over natural prey (Table I). A quick growth response to all developmental stages was observed in response to La over Fa, Da and Cl.

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