SUMMARY

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1. *Hydrometra butleri* the candidate species taken in the present study, predates more of small sized prey than the other.

2. Relatively, females show an increased rate of predation than the males.

3. Among different types of habitat, circular ones are least preferred for predation by *Hydrometra*, known from laboratory treatments.

4. Though the prey death rate is directly proportional to period of starvation, variations are not phenomenal.

5. With increase in prey density from 25 to 50, the increase in predatory performance was quite distinct.

6. The trend in predatory performance of females and males was similar though female dominated males in increased predation.

7. Without exception, oviposition in *H. butleri* is terrestrial, laid on the glass wall of aquarium and on projecting vegetation.

8. The trend in oviposition and oviproduction was relatively high at 29°C than at other temperatures.

9. Oviposition occurs everyday over a period of time at all temperatures.

10. Continuation of oviposition is inversely proportional to temperature.

11. At very high temperature (38°C), oviposition was almost absent.

12. The survival rate of female was relatively higher than those of males over a wide range of temperature.

13. Hatching success in each batch of eggs was almost uniform from 23° to 32°C with a higher value at 29°C.

14. *Hydrometra butleri* Hungerford and Evans is redescribed as reported in closely allied species.

15. The venter of sixth abdominal segment of male is considerably swollen.

16. *H. butleri* showed similarity in growth pattern of body parts among males and females.

17. There was a remarkable growth of tibia in all the three pairs of legs, which was related to the marsh treading quality in the water surface.

18. Increased activities of male was noted during the mating process.

19. Number of eggs laid in the early batches was more than the latter ones.

20. Scanning Electron Microscopic study on the egg chorion showed an increased surface area by the presence of depression and longitudinal ridges to avoid loss of water molecules.

21. The eclosion process lasted 21.41 ± 1.92 minutes from the initiation of the first rupture of egg chorion till emergence.

22. Among the successive instars, there was a decline in the percentage of emergence of adults from fifth nymphal stages.

23. The bug takes a minimum time to lay the egg of a single batch and it was almost the same throughout the oviposition.

24. An unique behaviour of cleaning the rostrum and antennae after feeding, the legs and abdomen after mating was exhibited by the hydrometrid.

25. Time spent by *H. butleri* for feeding was highly negligible than the others, irrespective of the sex and the nutritional status.

26. Locomotion and resting are the two activities of the bug for which the time spent was at a higher range.

27. Mating was noticed to be a repeated behaviour.