

INTRODUCTION AND BIOLOGY OF *EPHYDRA AFGHANICA* IN ESFAHAN

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Summary

Rice nursery fly was for the first time observed in very large numbers in Kaabjan Village of Esfahan in 1981. The species was determined by Dr. I.M.White of CIE as *Ephydra afghanica* Dahl a new species to Iran. It is about 4mm long with broad head and small eyes. Body dark brown, faintly dusted with grayish mesonotum and scutellum along median portion shining metallic blue green. Legs yellow except mid and hind coxae grayish dusted and tarsi darkened toward their articulations. Larvae have eight pairs of abdominal prolegs each with 2-3 rows of 4-5 small hooks and found in masses of algae on which they feed on the surface of floating leaves. Pupae are brownish with the last 2 prolegs forming a well developed clamp for holding on to the rootlets (figs 1, 2, 3, 4 in Farsi text).

The fly overwinters as quiescent eggs in the soil. By the start of growing rice in nurseries the larvae hatch and begin to develop. Laboratory experiments at ambient temperature showed that incubated period is 1-2 days, first, 2nd and

3rd larval stages periods are 3-4, 2-3 and 4-5 days respectively. The life cycle from egg to appearance of adult lasts 16-19 days. In field a period of adult to adult was 20-30 days and consequently this fly spends four generations in rice fields each year.

References

- AYATOLLAHI, M. 1971. Importance of the study of *Diptera* and their role in the biological control in Iran. **Ent. Phyt. Appliq.** 31: 20-29 (in Farsi with English summary).
- DAHL, R. 1971. Contributions to knowledge of the fauna of Afghanistan *Ephydriidae, Diptera*. Abst. 400, **Rev. of Appl. Ent.** ser. A.Vol.62.
- KASYANOV, A. I. 1967. *Diptera* as pests of rice in Russia. Zashch. Rast. Pt.9 PP33-34 Abst. 171, **Rev. of Appl. Ent.**, Vol. 58.
- NASR, S.A., A.L. ISA, M.T. KIRA, & A.M. EL-TAN TAWY 1971. Biological studies on the rice field fly, *Ephydra macellaria* Egger. **Agricultural Research Review** 49: 23-29.
- NOVODED, M.E. 1971. Pests of rice. Zashchita Rastenit, 16:5, 12-13. Abst. 3694, **Rev. of Appl. Ent.** Vol.62.
- WIRTH, W.W. 1971. The brine flies of the genus *Ephydra* in North America (*Diptera: Ephydriidae*). **An. Ent. Soc. Am.** 62: 357-377.
- WIRTH, W.W. 1975. A revision of the brine flies of the genus *Ephydra* of the old world (*Diptera: Ephydriidae*), **Ent. Scan.** 6:11-44.
- ZAZOU, M, H., A.K.M. EL-NAHAL, and M.A. BISHARA 1971. Studies on the control of the rice field fly *Ephydra macellaria* Egger and the blood worm *Chironomus sp.* (*Diptera*). **Bull. Ent. Soc. Egypt** No 5:13-17.

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