

ON THE PROTUBERANCES PRESENT ON THE LATERAL OVIDUCTS OF POULTRY LICE, *LIPEURUS LAWRENSIS TROPICALIS* PETERS (PHTHIRAPTERA: ISCHNOCERA)¹

A.K. Saxena, G.P. Agarwal²

ABSTRACT: The protuberances present on the lateral oviduct of *Lipeurus lawrensis tropicalis* contain 4-6 large glandular cells which are secretory in function as the accessory glands are absent.

The morphology of lateral oviducts of some of the mallophagan species has been described by Snodgrass (1899), Strindberg (1916 a & b, 1918 & 1919) and Blagoveshtchensky (1959). In general, the lateral oviducts are simple tubes in Mallophaga except in *Goniodes dissimilis* and *Cuclotogaster heterographus* where protuberances are reported to be present on the outer wall of oviducts (Blagoveshtchensky, 1959).

While dealing with the reproductive organs of *Lipeurus lawrensis tropicalis* it is found that the lateral oviducts of these lice have several protuberances throughout their outer wall thus giving a rough appearance to the lateral oviducts. Histologically these protuberances are hollow out-growths (out pockets) formed by the evagination of basement membrane (fig. 1). The muscular coat at this place is either absent altogether or very feebly developed. Each outpocket contains a group of 4-6 large, oval glandular cells occupying the evaginated area (fig. 1). Each cell contains fuchsinophilic cytoplasm and a round to oval nucleus with a centrally placed nucleolus. While the epithelial cells of the lateral oviducts are tall, columnar and are compactly arranged, each contains a dense cytoplasm, and is surrounded externally by muscular sheath formed by circular muscle fibres.

Though the presence of such protuberances is reported in *G. dissimilis* and *C. heterographus* by Blagoveshtchensky (1959), in the absence of any information on its histology, any function of these could not be assigned by him. In *L. lawrensis tropicalis* it is noticed that the lumen of the lateral oviduct is filled with a kind of secretion (fig. 1) which is lightly eosinophilic in nature. This shows that these cells perform the function of secretion in the absence of accessory glands in this species.

The authors are thankful to the Head, Department of Zoology, Banaras Hindu University for laboratory facilities and to the State Council of Science and Technology, U.P. for financial help under grant No. SCST/4779/B.H.U.(43)/77.

¹Received July 14, 1979

²Department of Zoology, Banaras Hindu University, Varanasi-221005, India.

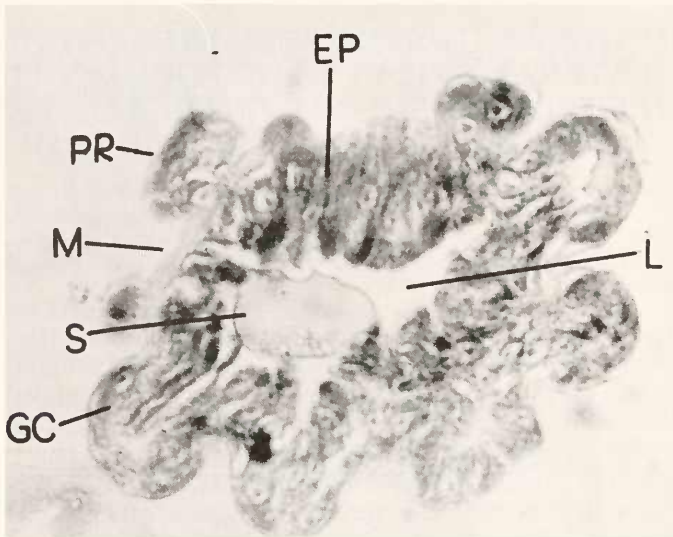


Fig. 1. Transverse section of the lateral oviduct of *Lipeurus lawrensis tropicalis*. x 630. EP — Epithelium of lateral oviduct, GC-Glandular cells present in the outpockets, L-Lumen of lateral oviduct, M-Musculature, PR-Protuberance, S-Secretion.

REFERENCES

- Blagoveshtchensky, D.I. 1959. Nasekomyje puchoedy. Fauna SSSR, Moskva — Leningrad, 1 (1) : 1-203.
- Snodgrass, R.E. 1899. The anatomy of Mallophaga. Occ. Pap. Calif. Acad. Sci., 6 : 145-224.
- Strindberg, H. 1916a. Zur Entwicklungsgeschichte and Anatomie der Mallophagen. Z. wiss. Zool., 115 : 382-459.
- Strindberg, H. 1916b. Studien uber die ectodermalen Teile der Geschlechtsorgane einiger Mallophagengattungen. Zool. Anz., 48 : 84-87.
- Strindberg, H. 1918. Typstudien uber die Geschlechtsorgane einiger Mallophagengattungen. Z. wiss. Zool., 117 : 591-653.
- Strindberg, H. 1919. Die Geschlechtsorgane von *Ornithobius bucephalus* Gieb. und *Goniodes falcicornis* N. Zool. Anz., 50 : 219-235.

***ORIOUS INSIDIOSUS* (SAY)
(HEMIPTERA: ANTHOCORIDAE)
BITING WHITE-FOOTED MICE¹**

William L. Krinsky, Andrew B. Carey, Marion G. Carey²

ABSTRACT: *Orius insidiosus* (Say) was found attached to living White-footed mice (*Peromyscus leucopus*) in Old Lyme, Connecticut. This is the first observation of this species attacking a vertebrate other than man.

Two specimens of the anthocorid bug, *Orius insidiosus* (Say) were collected from living White-footed mice (*Peromyscus leucopus*). Two mice were trapped in Sherman traps in Old Lyme, Connecticut on 23.ix.78. One mouse was trapped in an open area that had herbaceous vegetation of low stature (<1 m); the other mouse was trapped in a wooded area. A single anthocorid bug was collected from each mouse. The bugs were attached and appeared to have their mouthparts embedded in the skin of the animals.

O. insidiosus is known to be a predator of small insects and insect eggs on crop plants (Dicke & Jarvis, 1962) and on several occasions, it has been reported biting man (e.g. Tucker, 1911; Malloch, 1916; Riley & Johannsen, 1932).

We believe this is the first report of *O. insidiosus* attacking a vertebrate other than man.

ACKNOWLEDGMENTS

We would like to thank Dr. James A. Slater, University of Connecticut, Storrs, for confirming our identification of the anthocorid bugs and we thank him and Dr. Richard C. Froeschner, Smithsonian Institution, for reviewing the manuscript.

LITERATURE CITED

- Dicke, F.F. and Jarvis, J.L. 1962. The habits and seasonal abundance of *Orius insidiosus* (Say) (Hemiptera-Heteroptera: Anthocoridae) on corn. *J. Kans. Entomol. Soc.* 35: 339-344.
- Malloch, J.R. 1916. *Triphleps insidiosus* Say sucking blood (Hem., Het.). *Ent. News* 27: 200.
- Riley, W.A. and Johannsen, O.A. (1932) — *Medical Entomology*, 1st Ed. McGraw-Hill Book Co., Inc., New York and London. p. 150.
- Tucker, E.S. 1911. Random notes on entomological field work. *Can. Ent.* 43: 22-32.

¹Received December 7, 1979

²Section of Medical Entomology, Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, Connecticut 06510.