Appl. Ent. Phytophath

Vol. 65, 1. Sep. 1997 and approximately been improduced to the state of t

An Investigation on the sunn pest pheromone glands, biosynthesis of the sex

A. ABDOLLAHI

Plant Pests and Diseases Research Institute

in redisableing to consider discourse Labor ABSTRACT - wordingstrength, 1994, 1, 1997 A. S.

In males of Aelia melanota, pheromone glands are abundant in sternits II to VII but absent from the laterotergites.

In Eurygaster integriceps the distribution of pheromone glands extends from the sternites to laterotergites. Integumental glands are infrequent in females of both species. The sternal patches to be found in A. melanota as gland free areas. There seems to be no link between male sternal pheromone glands and tracheae in other species.

In the case of male pheromone gland activation, after one week, the effect of JH mimic was observed by detecting the smell of vanillin in treated males. In the female study, it is known that application of juvenile hormone stimulates vitellogenesis and consequently enables females to mate and even stimulates them to lay eggs without mating. There seems to be either a direct effect of JH on activation of pheromone glands or stimulation of PBAN (Pheromone Biosynthesis Activating Neuropeptid) by application of juvenile hormone.

References

ABDOLLAHI, G. A. 1985. Review of the researches carried out on sunn pest in Iran and other countries. Tarbiat Modarress Uni. Publication, Tehran, Iran, 45 p.

ABDOLLAHI, G. A. 1988. An investigation on the effect of 10 improved wheat grain varieties on egg deposition of *E. intergriceps* Put. and some consideration on its diapause. Msc. thesis, tarbiat Modarress Uni., Tehran, Iran.

ABDOLLAHI, G. A. 1995. Complementary study on sunn pest sex pheromone. The

- 12th plant protection congress, Karaj, Iran.
- ABDOLLAHI, G. A. 1995. Morphological and Physiological approaches to the control of Heteroptera of economic importance in Iran. Ph. D. thesis University of Wales, Cardiff, 211 p.
- ALDRICH, J. R. 1988. Chemical Ecology of the Heteroptera, Annual Review of Entomology, 33: 211-38.
- BUROV, V. N.; REUTSKAYA, O. E.; SAZONOV, A. P. and SHINYAEVA, L. I. 1982. Sterilization of the sunn bug, *E. integriceps*, with juvenoids. Acta Entomologica Bohemoslov, 79: 444-449.
- CARAYON, J. 1981. Dimorphism sexuel des glandes tegumentaires et production de pheromone chez les Hemipteres Pentatomoidea. Compte Reudu Academie des Sciences (Paris), 292: 867-870 [Fr, en].
- CHAPMAN, R. F. 1982. The insects structure and function, Hoddar and Stoughton, London, Sydnay, Huckland, Toronto, third Edition, 919 p.
- STADDON, B. W. 1990. Male sternal pheromone glands in Acanthosomatid shield bugs from Britain Journal of Chemical Ecology, 16(7): 2195-2201.
- STADDON, B. W. and EDOMONDS, M. G. 1991. Gland regional and spatial pattern in the abdominal sternites of pentatomoid Heteroptera. Annales de société entomologique de frunce (N.S.), 27(1): 189-203.
- STADDON, B. W.; ABDOLLAHI, G. A.; PARRY, J., ROSSITER, M. and KNIGHT, D. W., 1994. Major component in male sex pheromone of cereal pest E. intergriceps put. (Het.: Scutelleridae) identified as a homosesquiterpenoid. Journal of Chemical Ecology, Vol. 20, No. 10, 2721-2731.
- WICKER, C.; PICIMBON, J. F.; FECARD, J. M.; SRENG, L.; CLEMENT, J. and GADENNC, C. 1995. Juvenile black cutworm. Journal of Insect Physiology, Vol. 41, No. 5: 377-382.
- WICKER, C. and JALLON, J. M. 1995. Hormonal control of sex pheromone biosynthesis in *Drosophila melanogaster*. Journal of Insect Physiology, Vol. 41, No. 1: 65-70.
- ZARNEGAR, A. 1995. The possibility of the physiological control of sunn pest by juvenoids. Msc. thesis, Tarbiat Modaress Uni., Tehran, Iran.
- Address of the author: Dr. A. ABDOLLAHI, Plant Pests and Disease Research Institute P. O. Box 1454, 19395. Tehran.