PRELIMINARY STUDY ON PENTATOMIDS IN WEST AZERBAIJAN PROVINCE OF IRAN (HETEROPTERA)

M. Nateq Golestan*, Mohammad H. Safaralizadeh**
and Alimorad Sarafrazi***

* Department of Entomology, Agricultural Faculty, Islamic Azad University-Birjand Branch. Birjand, IRAN.
** Department of Entomology, Agricultural Faculty, Urmia University. Urmia, IRAN.
*** Department of Insects Taxonomy Research, Plant Pests & Diseases Research Institute, Tehran, IRAN. P.O.Box 19395-1454.

ABSTRACT: Pentatomids as well as lygaeids are the third largest families of true bugs which include 760 genera and about 4000 species. A faunistic study was carried out during 2002-2003 in west Azerbaijan province and specimens were collected from 13 regions of the province. Totally 22 genera and 35 species of Pentatomininae and Podopinae subfamilies were collected and identified mainly focusing on male genitalia and some other morphological characters. One species and one genus are recorded from Iran for the first time.

KEY WORDS: Heteroptera, Pentatomidae, faunistic, true bugs, West Azerbaijan province, Iran.

Among the 8 subfamilies of Pentatomidae, the Pentatomininae and Asopinae are the most important pests and biological control agents respectively. Other subfamilies are plant feeders and their foods are various plant species. Economically, injurious species of Pentatomininae subfamily are the most notable secondary pests which will outbreak in the near future because of irregular use of chemical poisons and less recognition of the pest.

MATERIALS AND METHODS

West Azarbaijan has located in the northwestern part of Iran. It covers an area of 39,487 km². The climate of west Azarbaijan is largely influenced by the rainy winds of the Atlantic Ocean and Mediterranean. Cold northern winds affect the province during winter and cause heavy snow.

This province encompassing vast and fertile plains, high mountains, enjoying moderate and healthy weather, rivers with high volume of water, vineyards, orchards, luxuriant forest and rangelands, mountain outskirt with wonderful flora, magnificent wildlife and beautiful shores around the lake with different recreational facilities, which all together form one of the most beautiful and spectacular region in Iran.

Sampling performed by the ways of common sampling, including net working, light trap and collecting by observation (Borror et al., 1989), and also the specimens mostly collected from intact regions including pastures and plains and also fields and gardens.

The most important part of the body which used for identification is the male genital organ which has sclerotic structure. Methods of Slater (1950), Kelton (1959), Ashlock (1967) were used for extraction of the organ (Tuxen, 1970).

After that genital organs of male (pygophore and parameres) and female (spermtheca and genital plates) were sand out and supplied constant preparation.
Then for specimens identification was used from various identification keys especially Palearctic region (Bei-Beinko, 1964; Lodos et al.1998; Stichel, 1961) and also other researches in the world (China & Miller, 1989; Borror et al., 1989) and Iran (Modarres Awal, 1981; Safavi, 1959, 1973, 1974, 1976). Finally important genital organs in identification were drawn. All material is collected by authors and preserved in the Museum of Plant Pests & Diseases Research Institute, Tehran, Iran.

RESULTS

Podopinae

Ventocoris trigonus Kryn. *  
Urmia (Shohada): 2 females, 1350m., 12.VII.2002, Mountain foots, On Ficus sp.

Ventocoris oblongus (Hv.) *  
Miandub (Ghotar): 2 females, 1370m., 8. VII. 2003, Under Astragalus sp.

Ventocoris fischeri (H.-S.) *  

Tholagmus flavolineatus (F.) *  

Graphosoma semipunctatum (F.) *  

Graphosoma stali Hv. *  

Graphosoma lineatus (L.) *  
Graphosoma melanoxanthum Hv.

Pentatominae

Mustha spinosula (Lef.) *

Apodiphus amygdali (Gm.) *

Carenoplistus acutus (Sgn.)

Sciocoris sulcatus Feib. *

Sciocoris cursitans F. *

Aelia melonata Feib.

Aelia acuminata (L.) *

Stagonomus amoenus Brulle.*

Eysarcoris inconspicuus H.-S. *

Palomena prasina (L.) *

Holcostethus inclusus Dohrn.*
Holcostethus vernalis Wolft. *

Carpocoris purpureipennis (Deg.) *

Carpocoris mediterraneus Tam. *
Khoy (Zavieh): 1male, 1770m., 5. VII. 2002. The near of field.

Carpocoris fuscispinus Boh. *

Carpocoris pudicus (Pd.) *

Dolycois baccarum (L.)

Antheminia pusio Kol *

Codophila varia F. *

Acrosternum millieri (Ms. & Rey.) *

Rhaphigaster nbeulosa Poda *
Piezodorus lituratus F.

Eurydema ornata L. *

Eurydema fieberi Fieb. *

Eurydema oleracea L. *

Bagrada confusa Hv. **

Trochiscocoris hemipterus Jak. ***

DISCUSSION

The sampling was performed in all part of the province uniformly because of there is various climates in this province. Among collected 36 species, 28 * species and 2** species and 1** genus were reported for the first time in province (*) and Iran (**) respectively.

The species of Graphosoma lineatum and G. melonoxyanther are similar morphologically, but red or orange and shine yellow respectively. Also these two species are certainly distinguished via genital organs of male.

The most abundant genus of this family is Carpocoris which collected about 200 specimens belonging to four species. Among these species, C. podicus was easily distinguished but the others were distinguished to comparing morphological characters and genial organ of male. The genus and species Trochiscocoris hemipterus (Jak.) which collected from Bukan Township in the south province is the first time report from Iran. Outstanding character of T. hemipterus (Jak.) is loss of membran wing. In the male, parameres is similar to knife and there is two dorsal and ventral sharp processes in median part, apical corners of pygophores are swollen and distinct.

* New Record of species for the fauna of Western Azerbaijan Province
** New Record of species for the fauna of Iran
*** New Record of genus for the fauna of Iran
Bagrada confusa Hv. which collected from Kaboudan isle in Lake Urmia, is the first time report from Iran, and a part of anterior parameres is narrow and strongly curved. Pygophore miss notches proximal to apical corners and the median process is bifid.

ACKNOWLEDGEMENTS

The authors are greatly grateful to the Dear Dr. A. Abrahimi and other members of the Insect Taxonomy Research Department, Plant Pests & Diseases Research Institute, Tehran, for all cooperation received during the identification.

LITERATURE CITED


