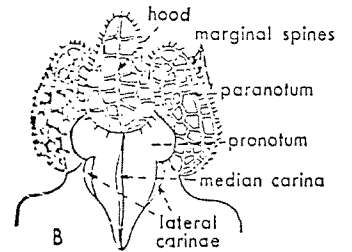
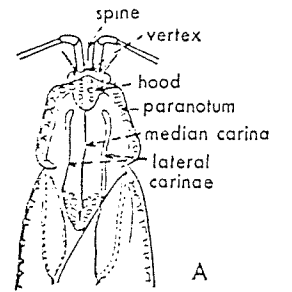
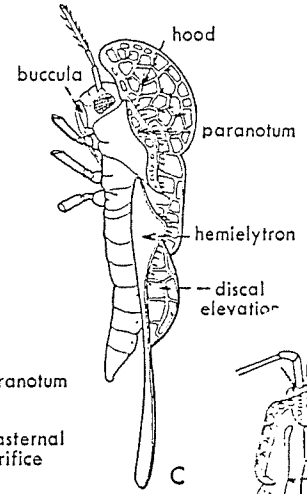
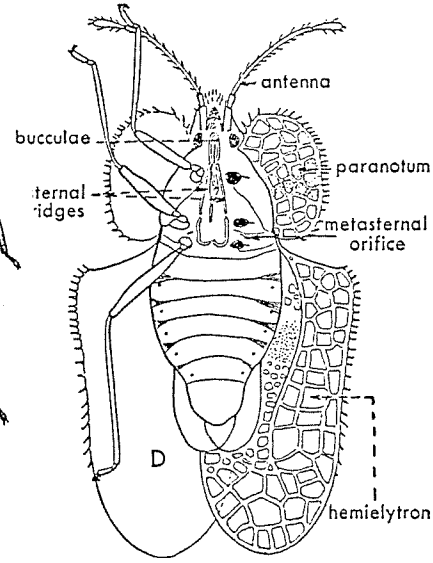
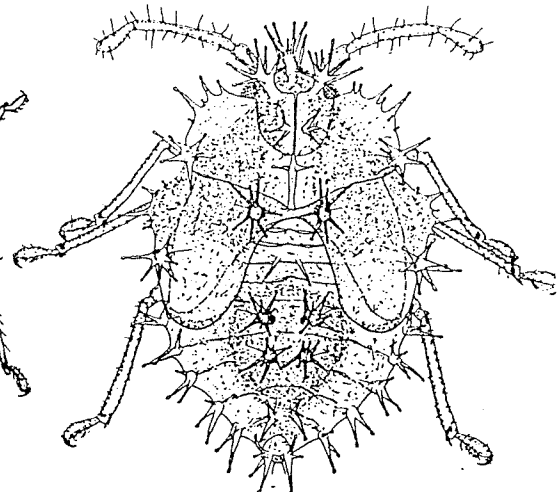
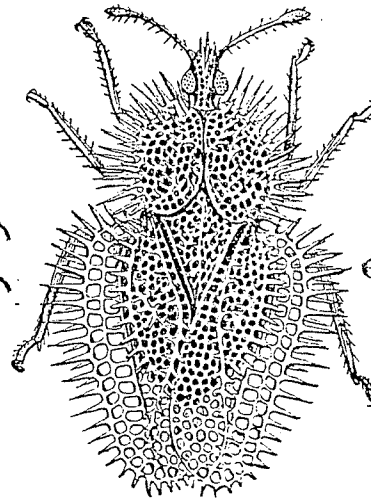
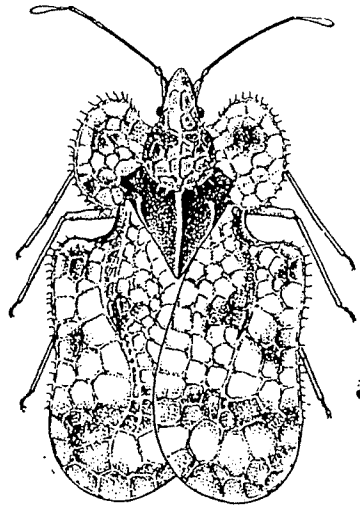
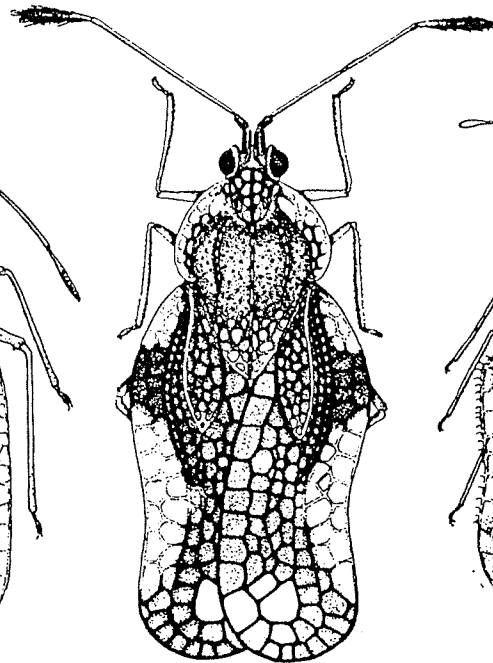
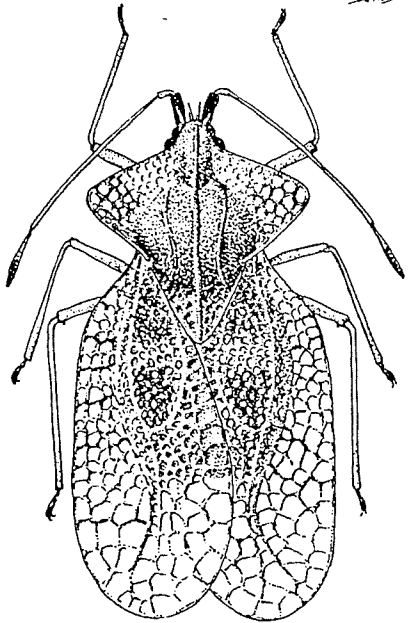
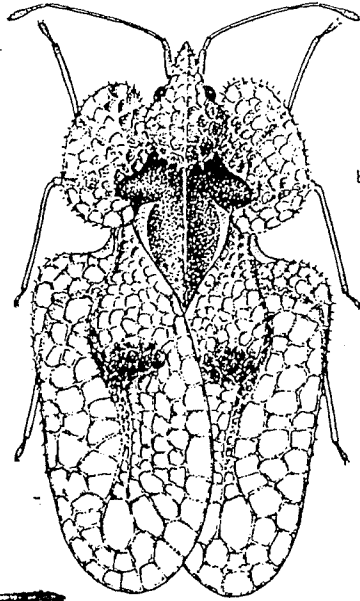
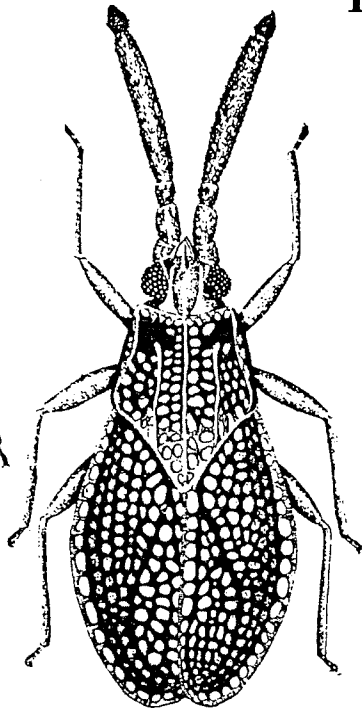
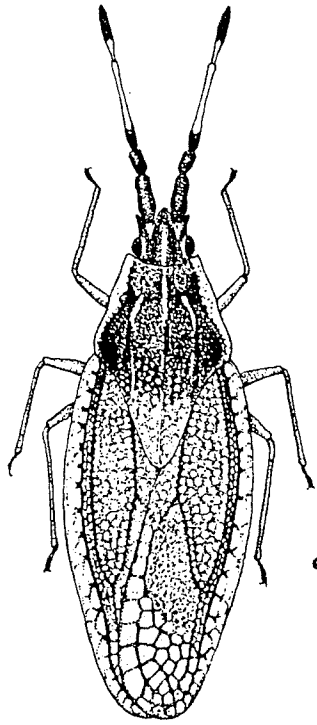


**HEMIPTERA: Cimicomorpha**  
**Family Tingidae**  
**Lace bugs**

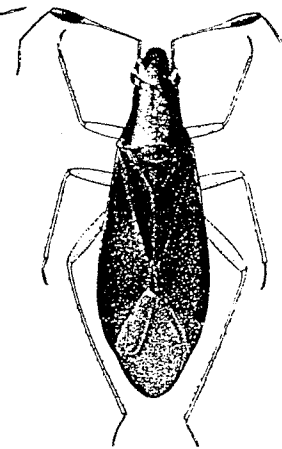
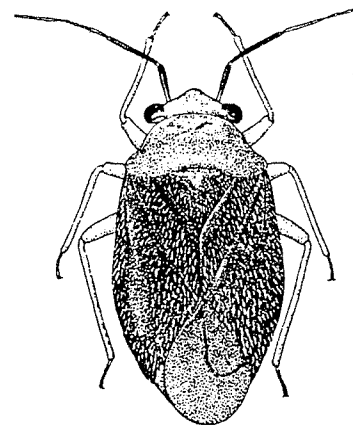
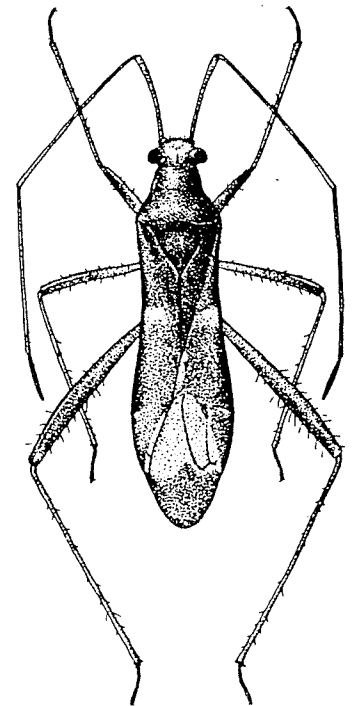
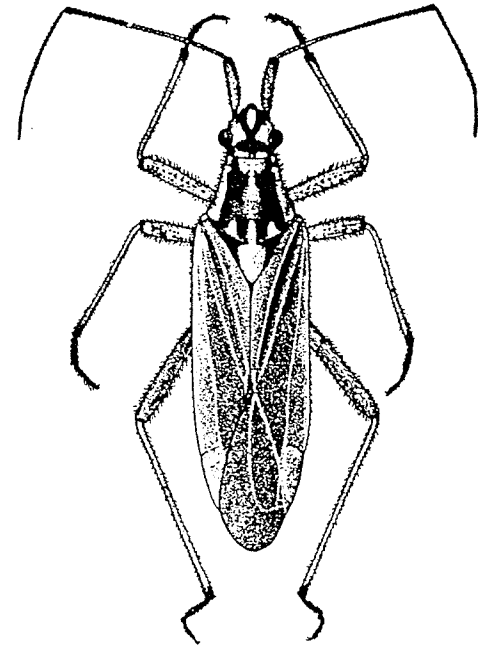
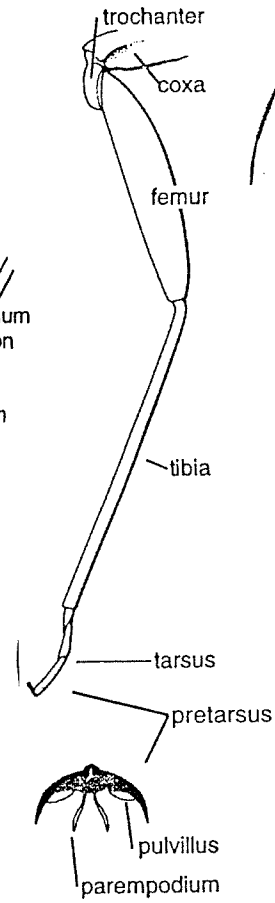
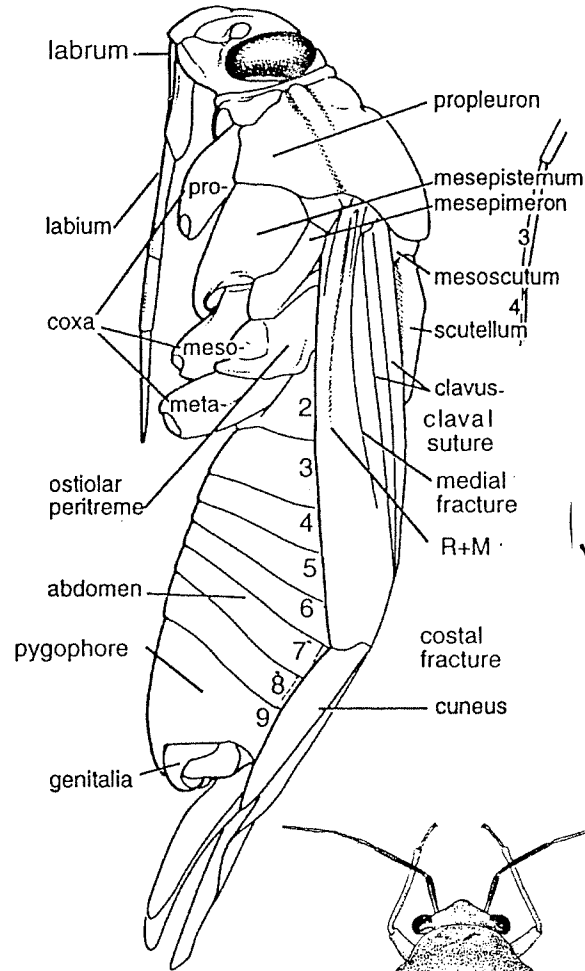
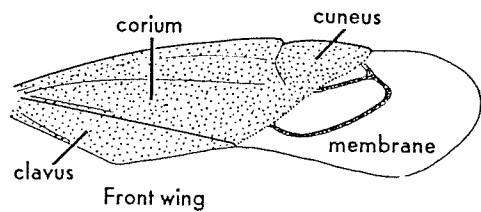
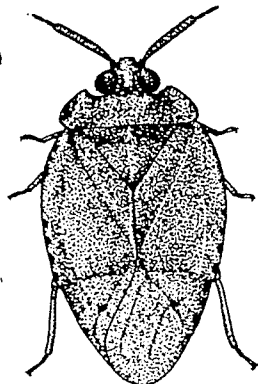
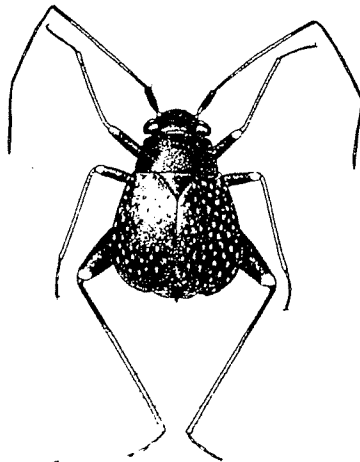
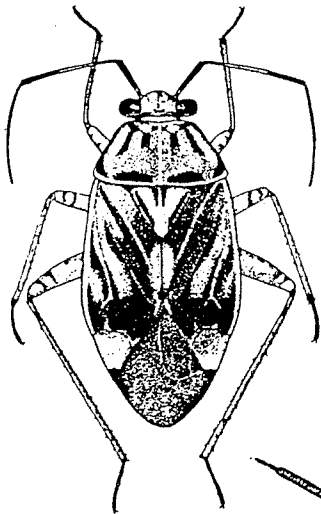
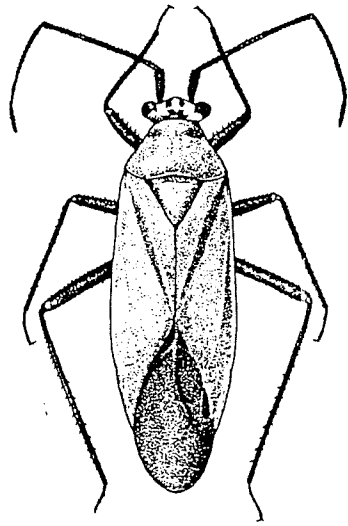
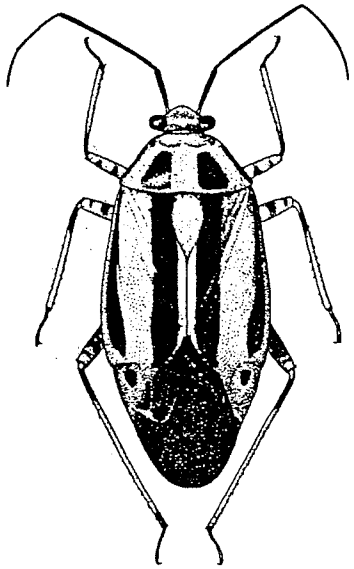


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B

D

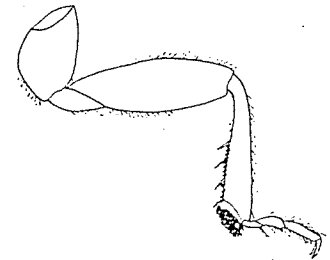
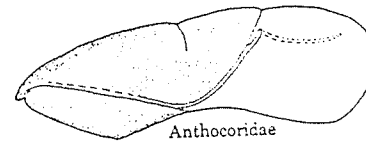
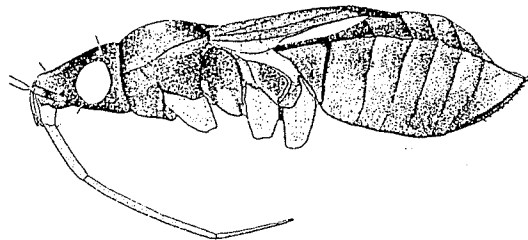
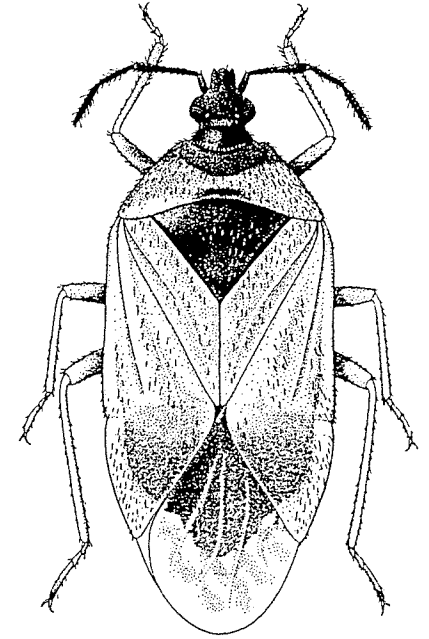
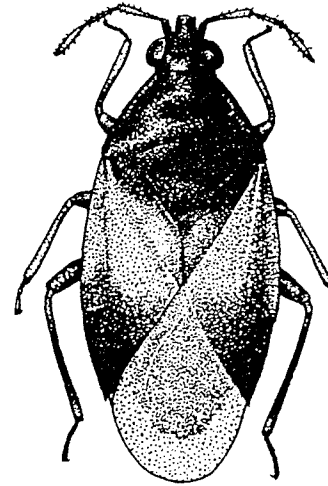
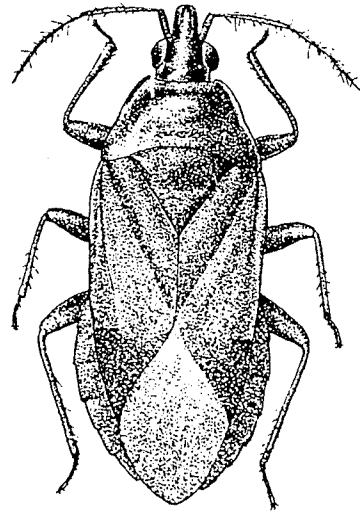
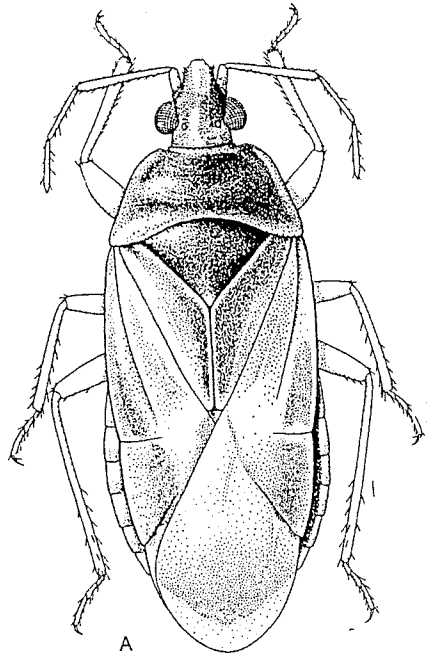
**HEMIPTERA: Cimicomorpha**  
**Family Miridae**  
**Plant bugs**



# HEMIPTERA: Cimicomorpha

## Family Lyctocoridae Lyctocorid bugs

## Family Anthocoridae Minute pirate bugs



**HEMIPTERA: Cimicomorpha**  
**Family Cimicidae**  
**Bed bugs**

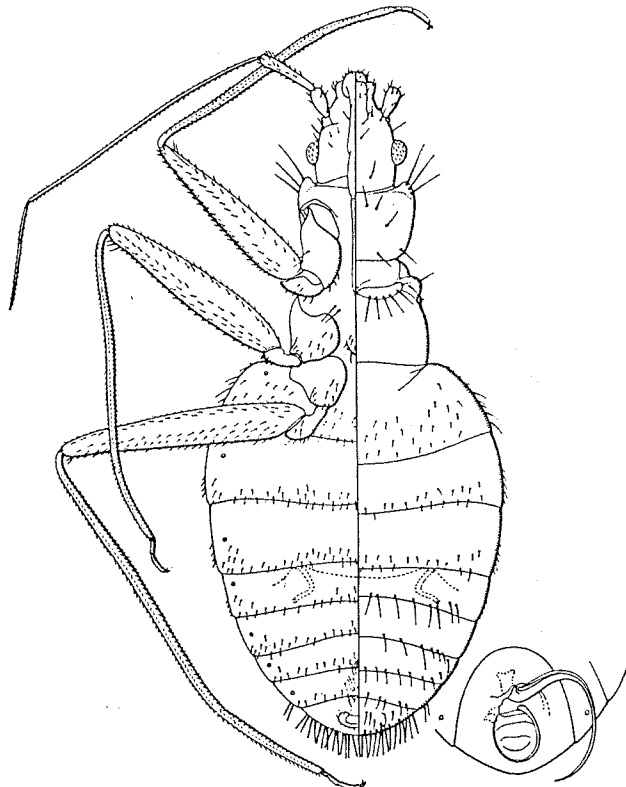
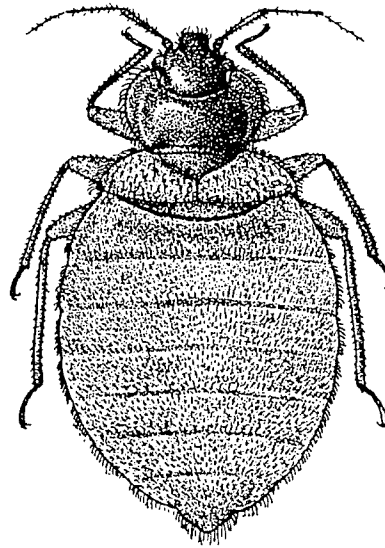


FIG. 12-59.—*Leptocimex duplicatus* Usinger. Female paratype and male genitalia. Mycerinus Pyramid, Giza, Egypt (Usinger 1960).



*Cimex lectularius*

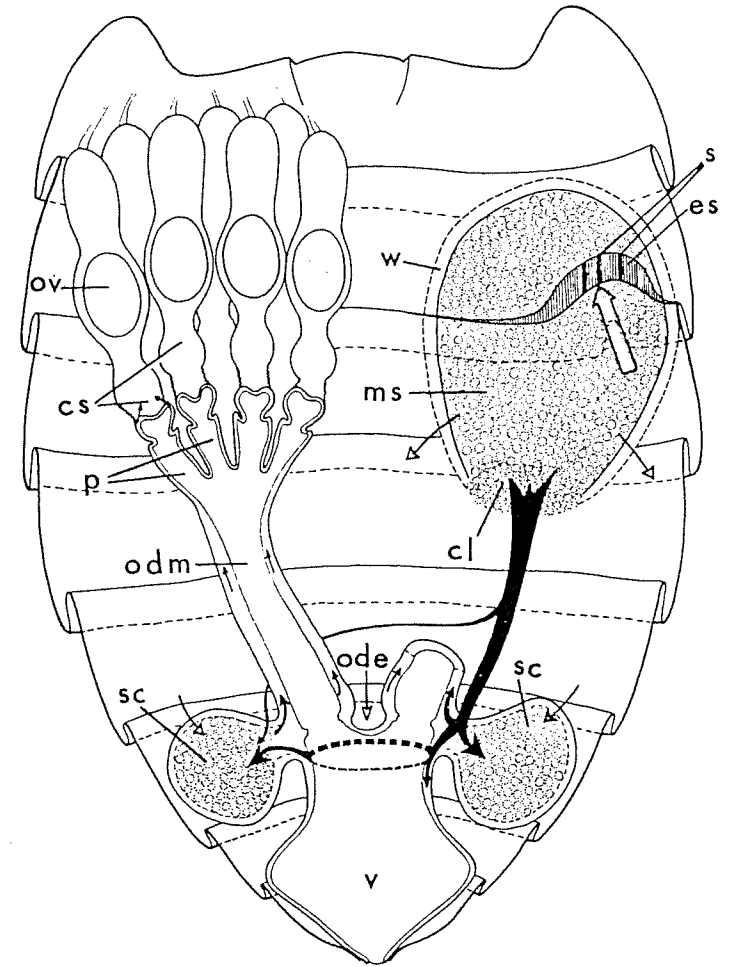


FIG. 7-1.—Diagram of paragenital system and process of insemination in Cimicidae, based principally on *Cimex* "type." Right ovary and nearly all of corresponding lateral oviduct omitted, and spermalege shown farther forward than actually the case in *Cimex*. Short, broad white arrow shows course followed by paramere of  $\sigma$  in reaching ectospermalege (hatched and crossed by 3 black bands representing scars of copulation). Black arrows indicate normal routes of migration of spermatozoa from mesospermalege to bases of ovarioles. Small arrows with white points correspond to migratory routes never or rarely used in *Cimex* but seen in other Cimicidae. Cl, conductor lobe; cs, syncital body; es, ectospermalege; ms, mesospermalege; od e, paired ectodermal oviduct; od m, paired mesodermal oviduct; ov, oocyte; p, pedicel; s, scars or traces of copulation; sc, seminal conceptacle; v, vagina; w, wall of mesospermalege.

**HEMIPTERA: Cimicomorpha**  
**Family Cimicidae**  
**Bed bugs**

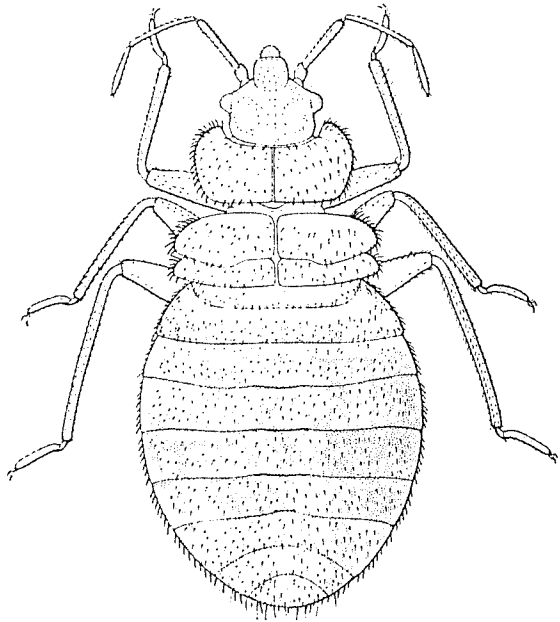
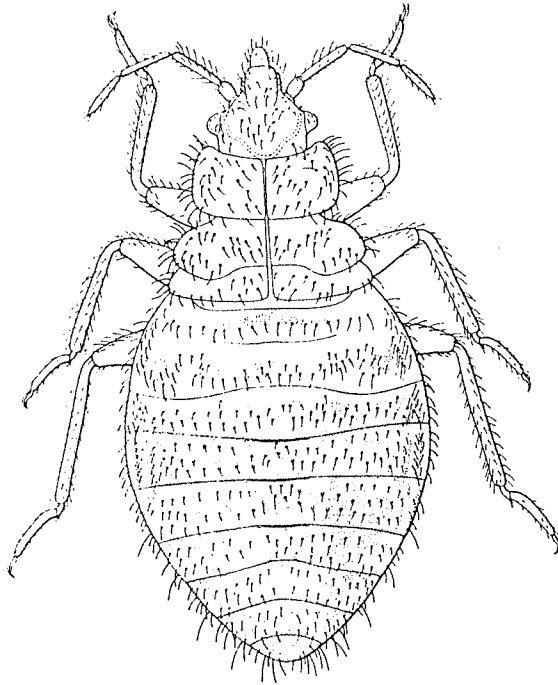


FIG. 13-10.—*Cimex lectularius*. Last-instar nymph.



—*Oeciacus vicarius*. Last-instar nymph.

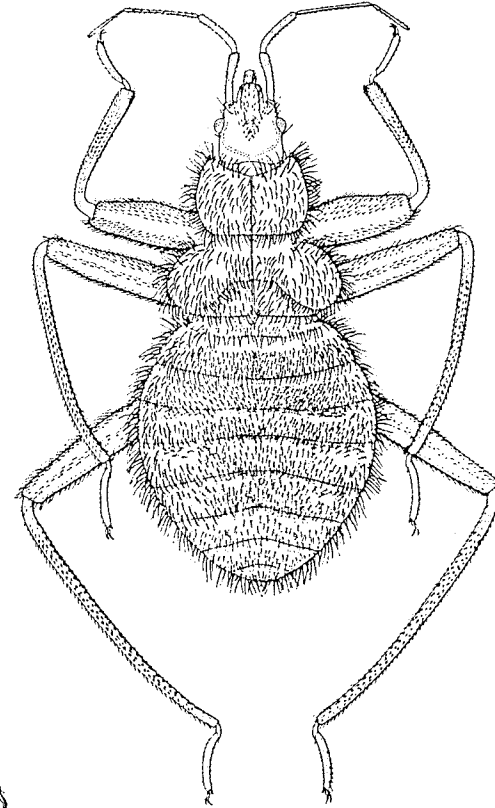
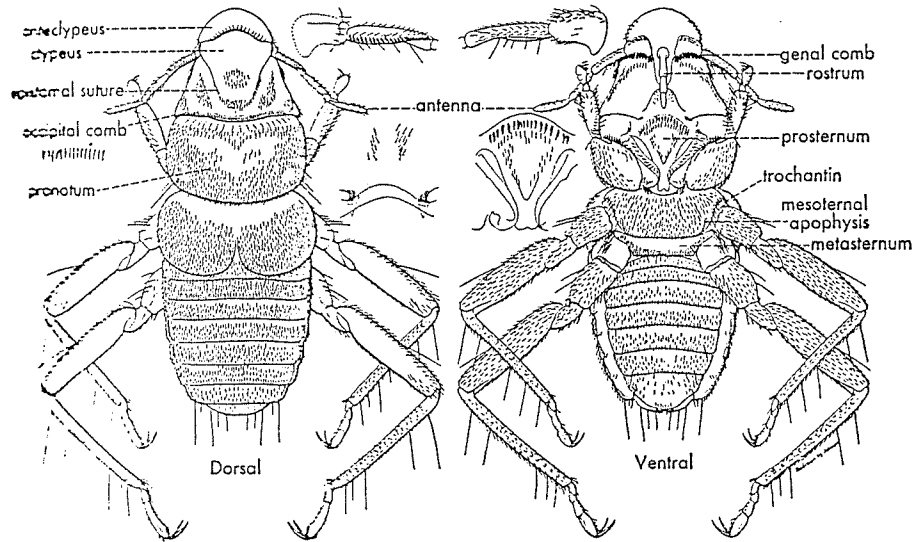
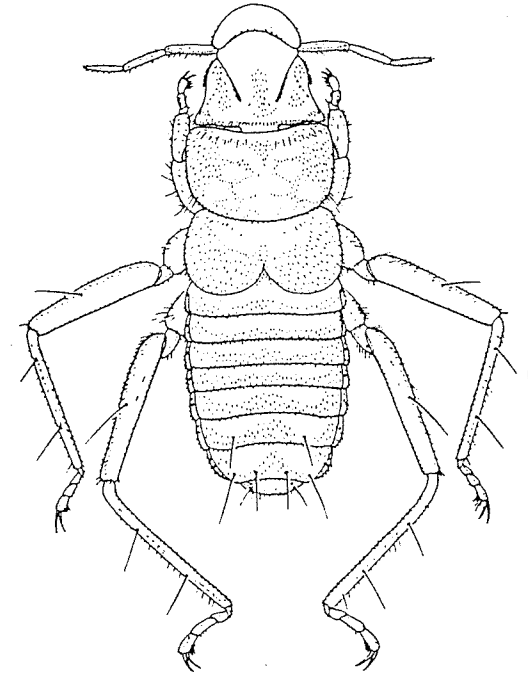
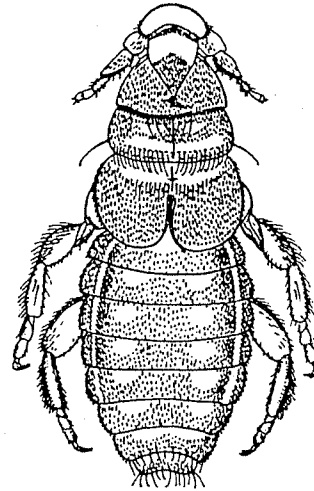
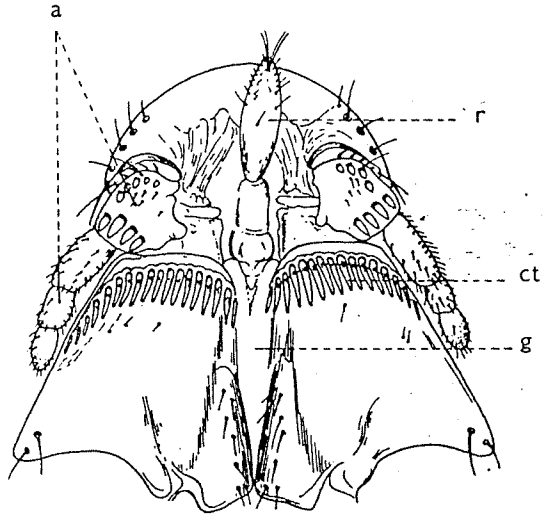


FIG. 13-6.—*Primiticimex cavernis*. Last-instar nymph.

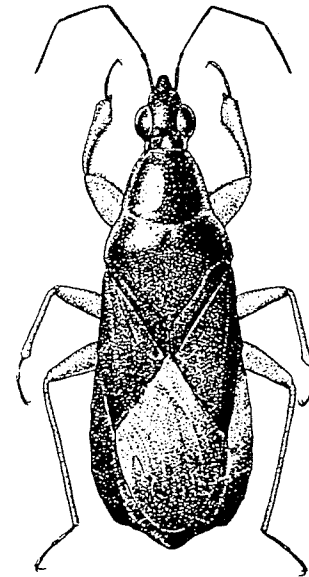
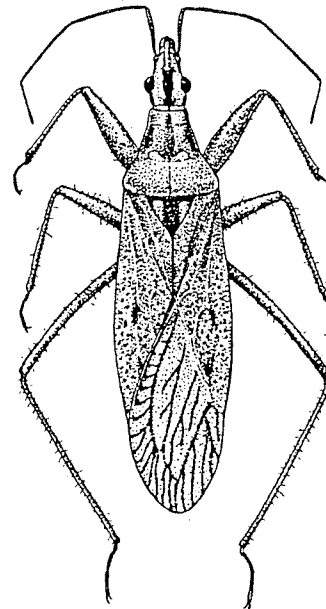
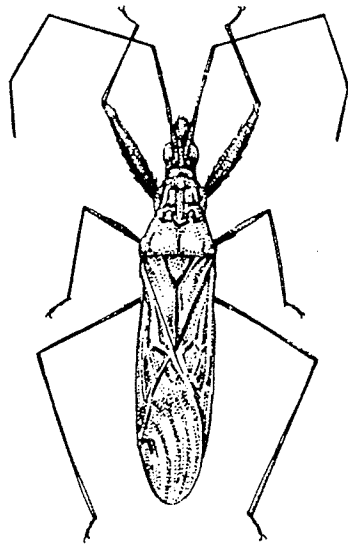
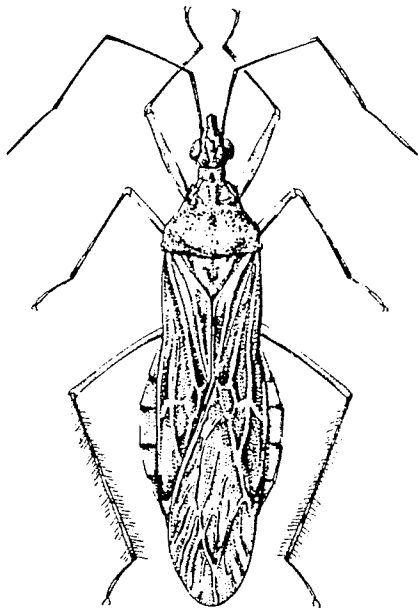
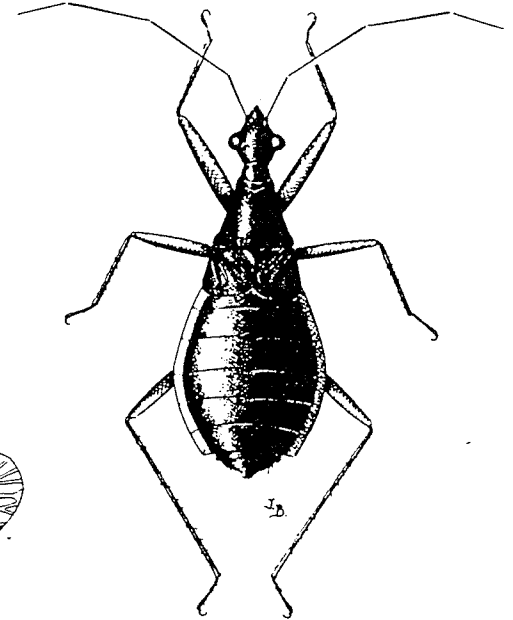
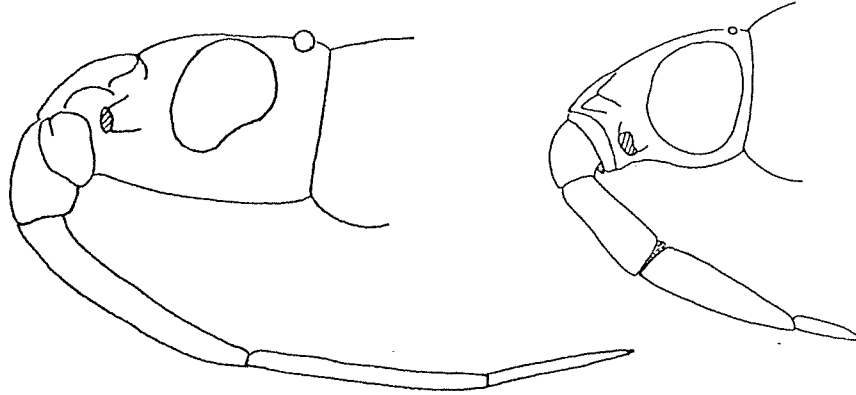
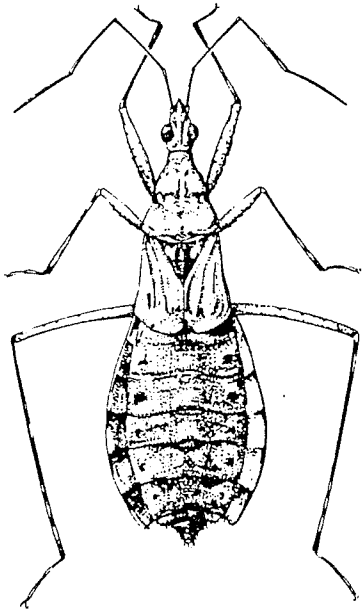
**HEMIPTERA: Cimicomorpha**  
**Family Polyttenidae**  
**Bat bugs**



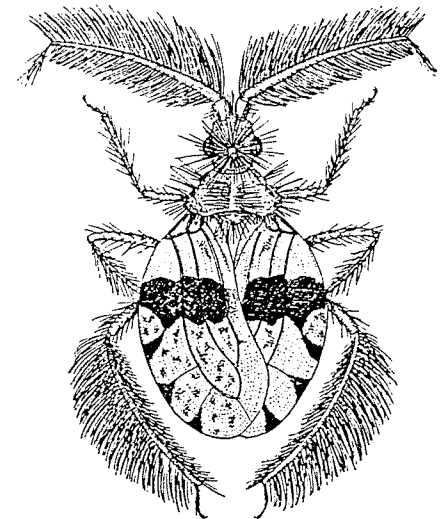
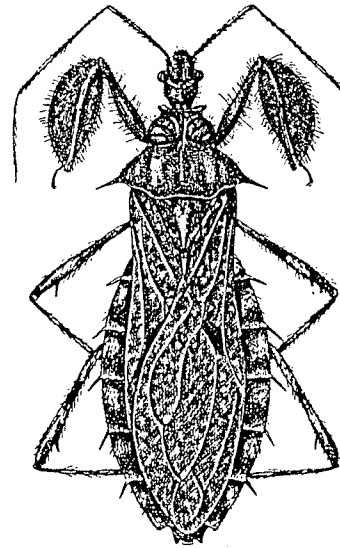
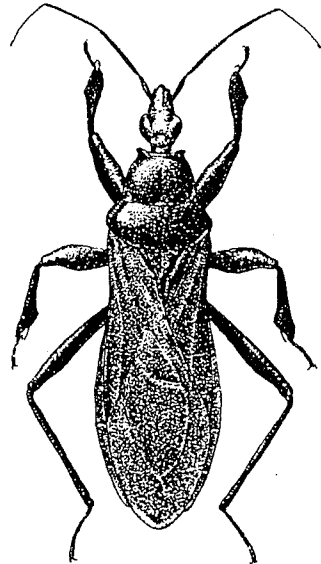
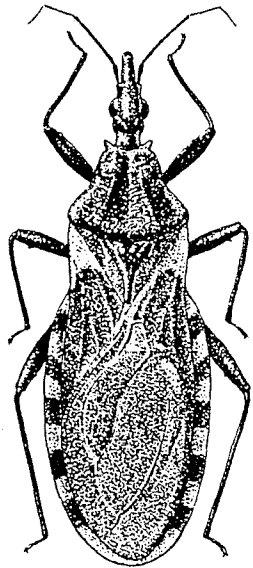
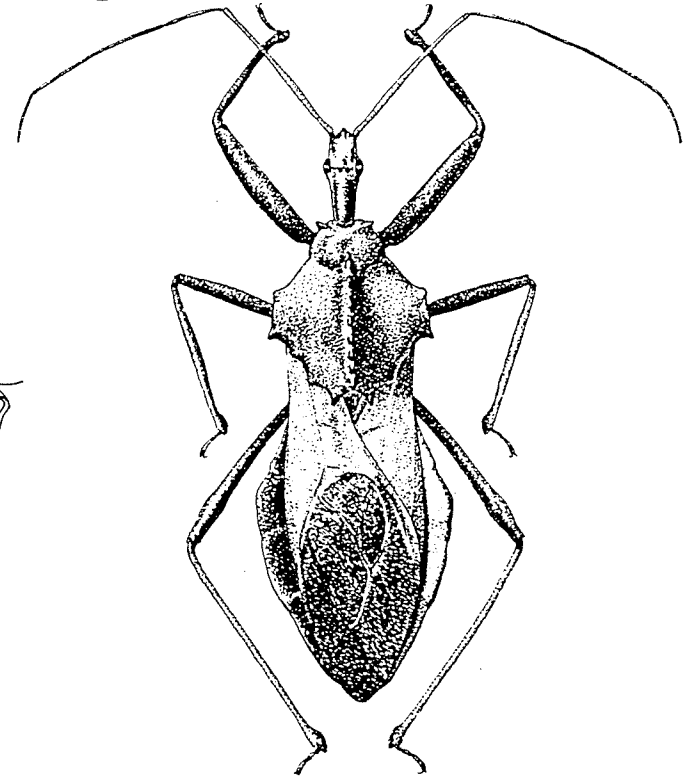
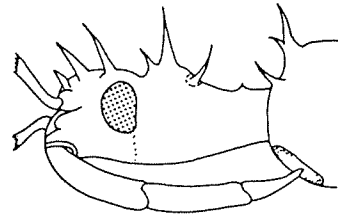
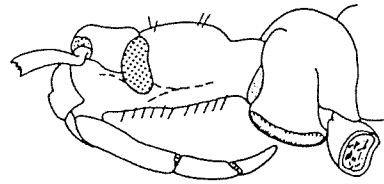
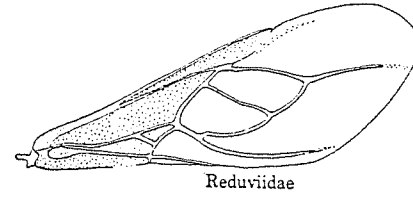
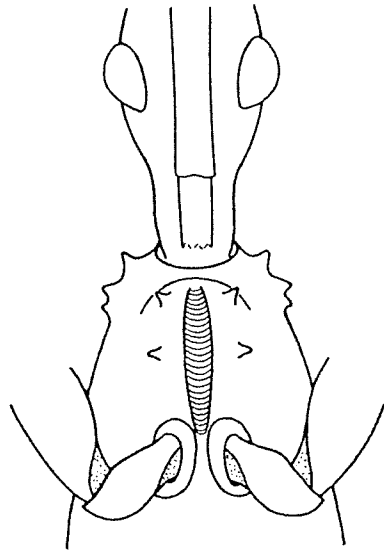
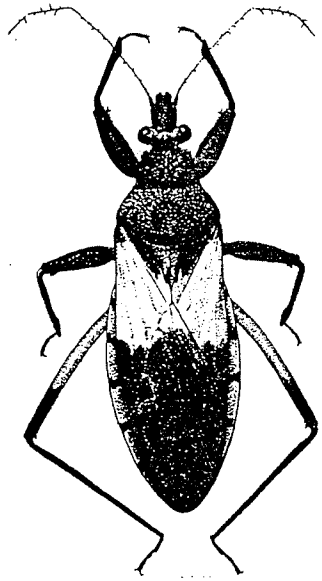
*Hesperoctenes eumops*

The bat bug, *Hesperoctenes impressus* Horvath, a South American ectoparasite of free-tailed bats. (Redrawn from Ferris, 1939.)

**HEMIPTERA: Cimicomorpha**  
**Family Nabidae**  
**Damsel bugs**

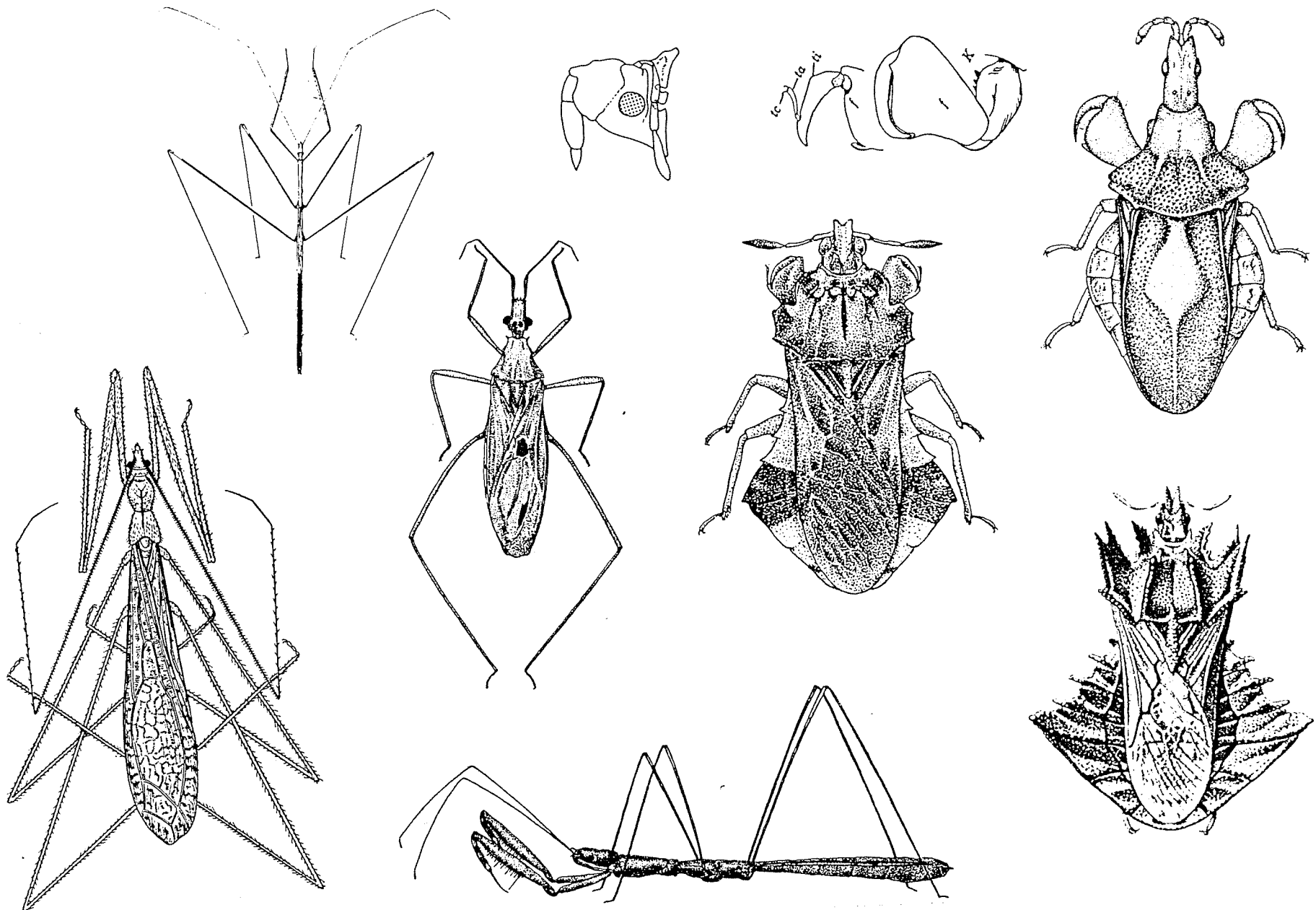


**HEMIPTERA: Cimicomorpha**  
**Family Reduviidae**  
**Assassin, Ambush, and Thread-legged bugs**

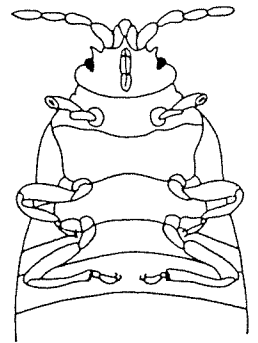
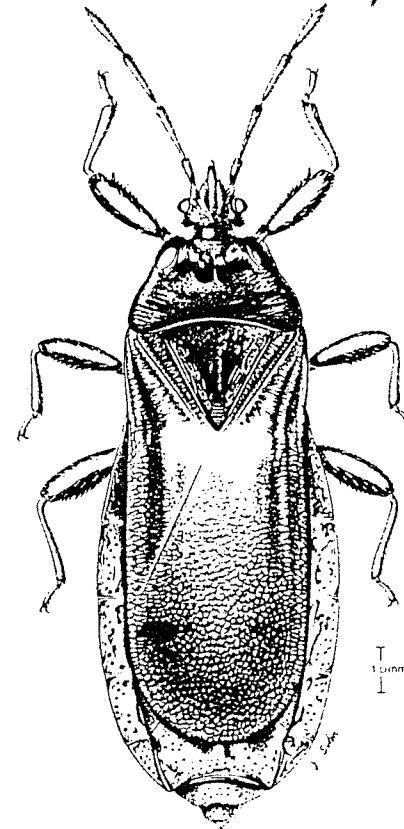
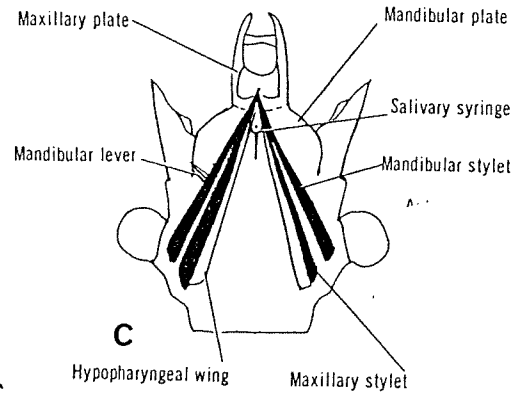
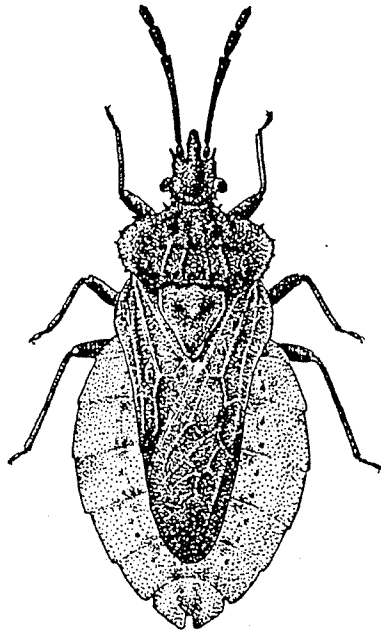
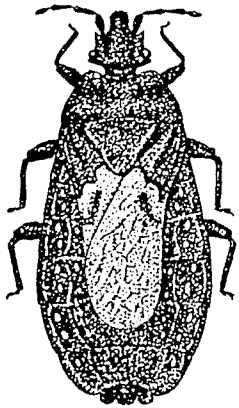
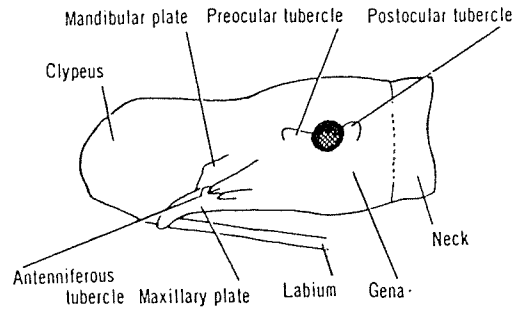
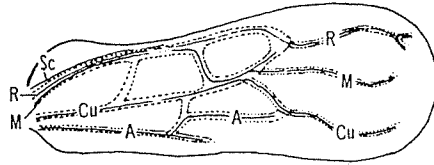
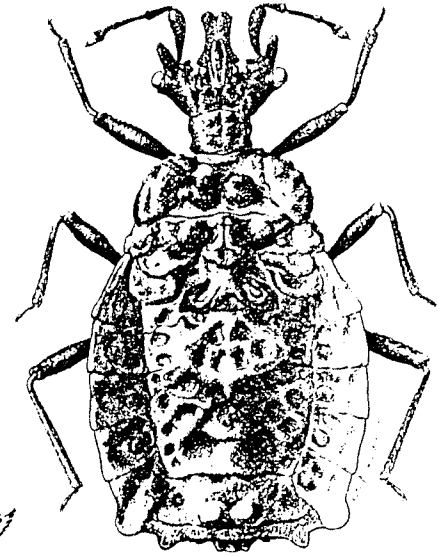
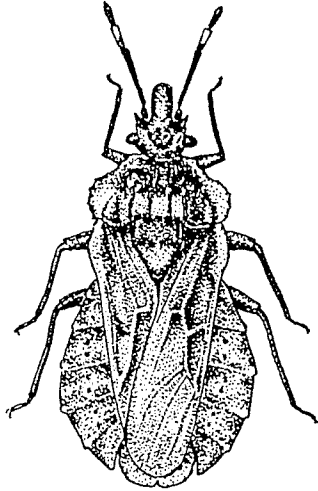
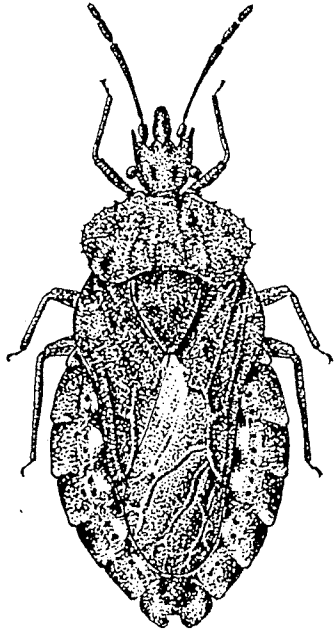




**HEMIPTERA: Cimicomorpha**  
**Family Reduviidae**  
**Assassin, Ambush, and Thread-legged bugs**

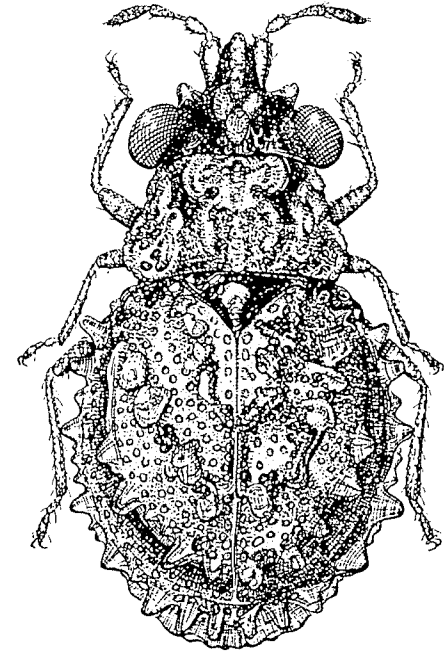
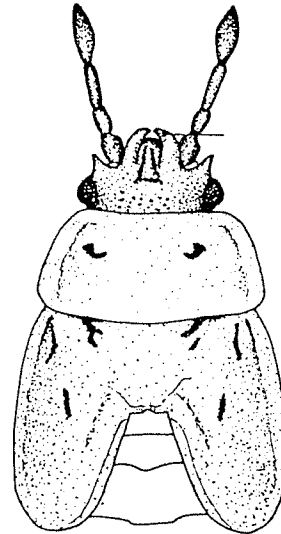
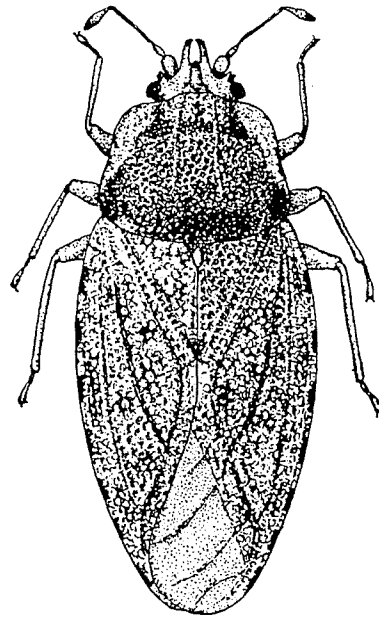
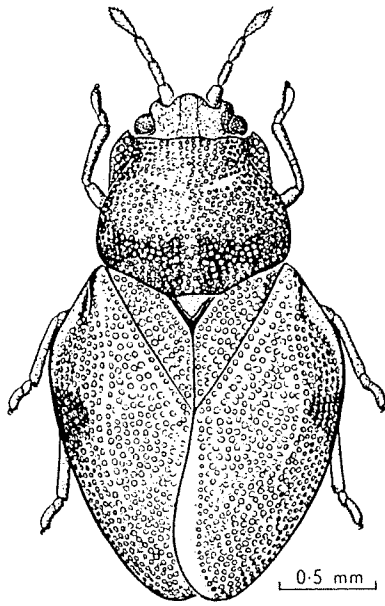
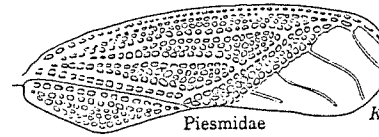
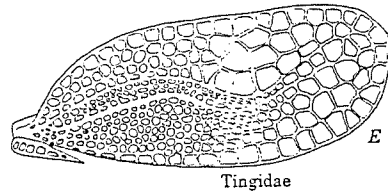


**HEMIPTERA: Pentatomomorpha**  
**Family Aradidae**  
**Flat bugs**



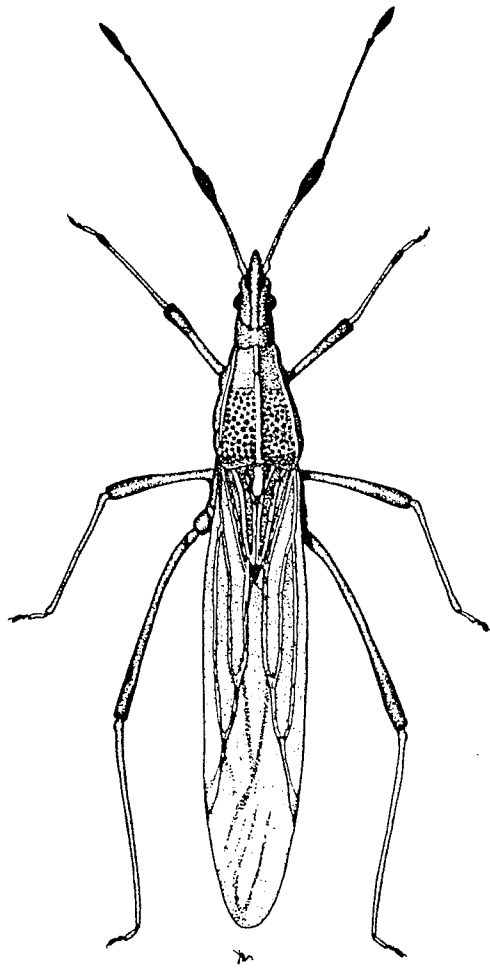
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**HEMIPTERA: Pentatomomorpha**  
**Family Piesmatidae**  
**Ash gray leaf bugs**

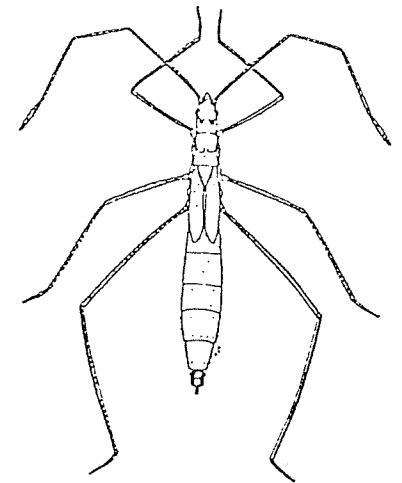
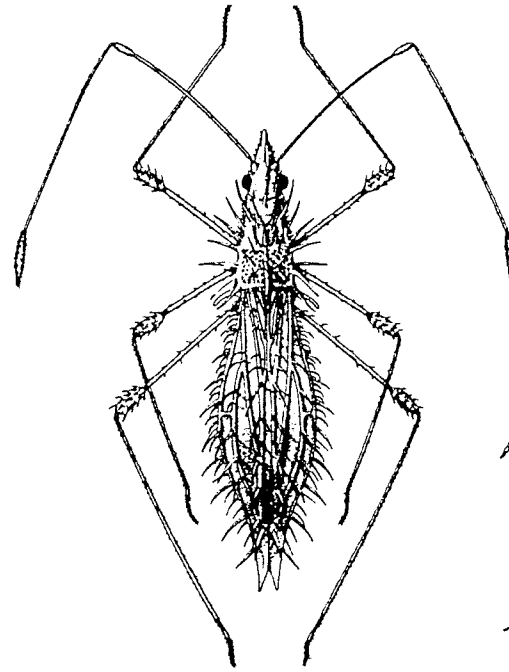
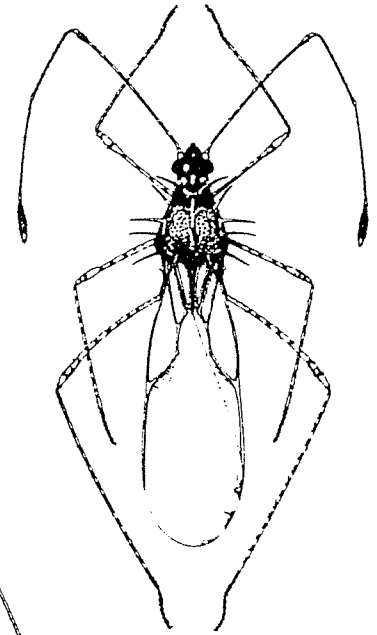
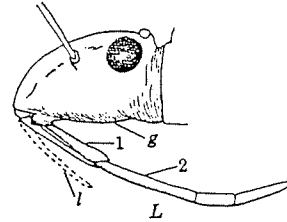
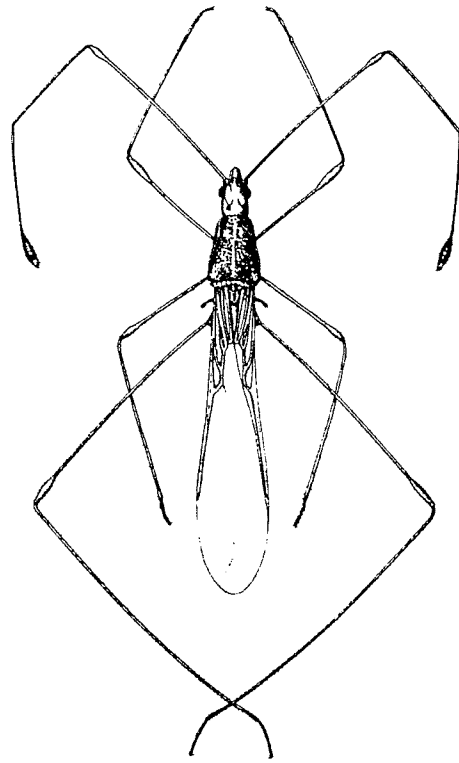


*Piesma quadratum* nymph, fore body.

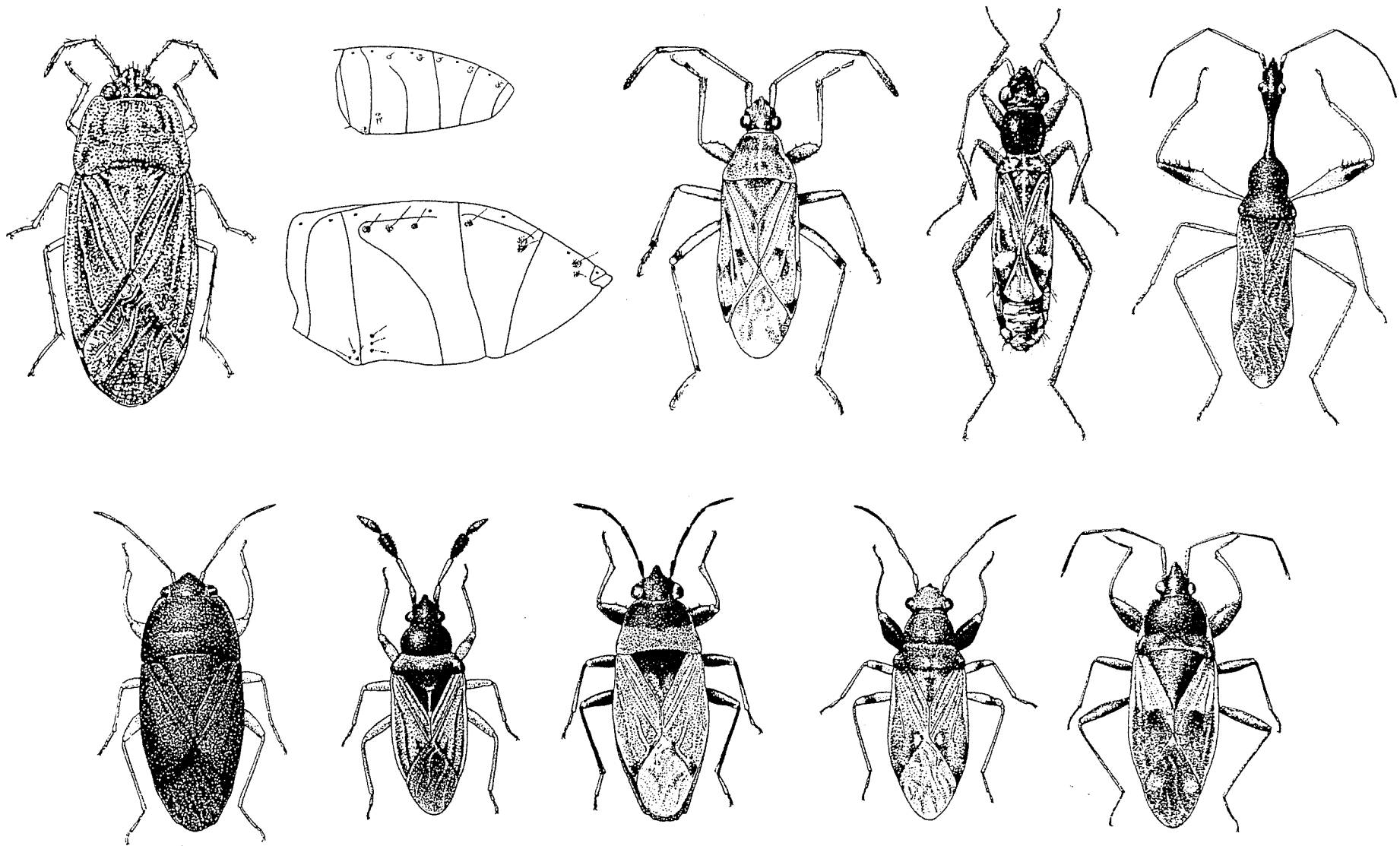
**HEMIPTERA: Pentatomomorpha**  
**Family Berytidae**  
**Stilt bugs**



*Berytidae: Berytinus minor.*

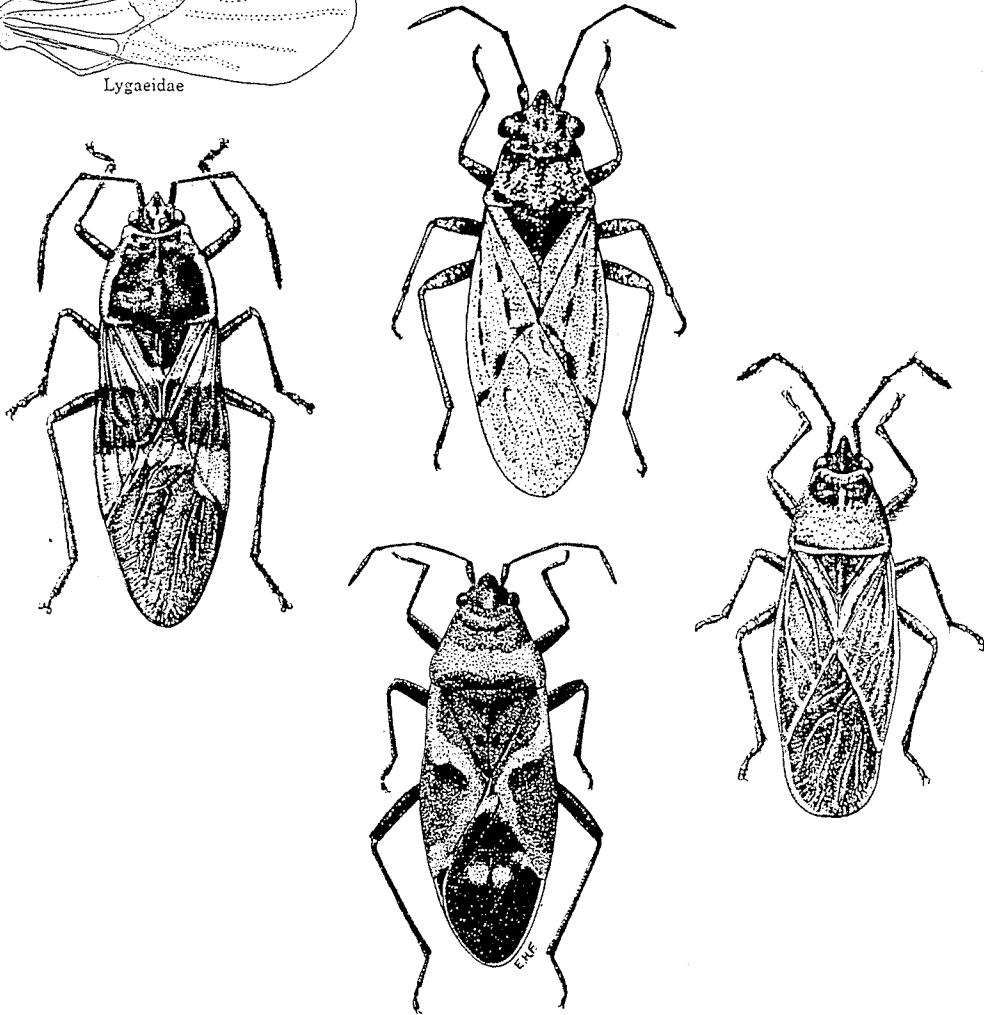
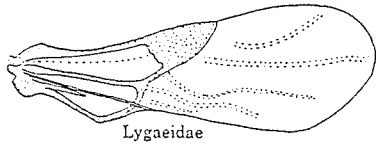


**HEMIPTERA: Pentotomomorpha**  
**Family Rhyparochromidae**  
Rhyparochromid bugs

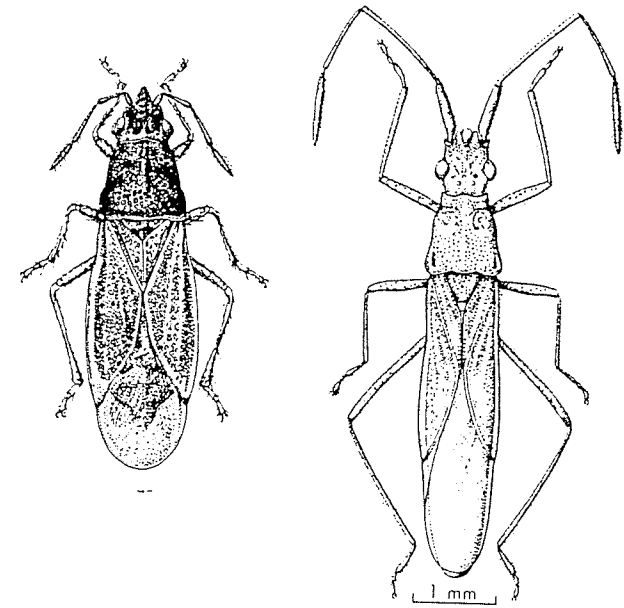
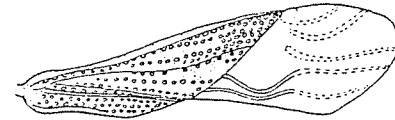


# HEMIPTERA: Pentatomomorpha

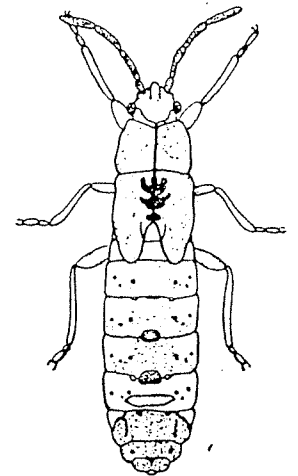
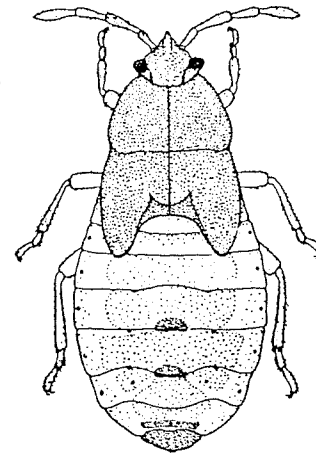
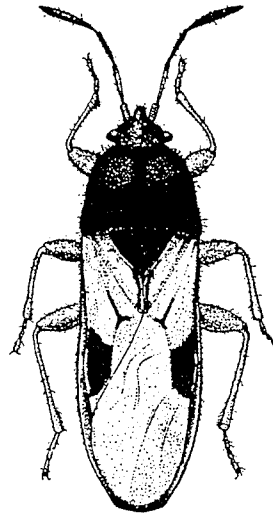
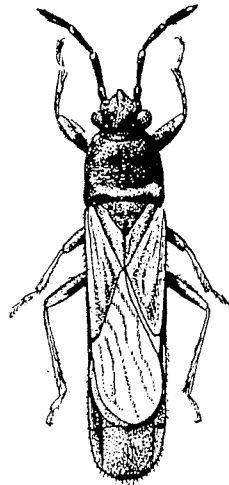
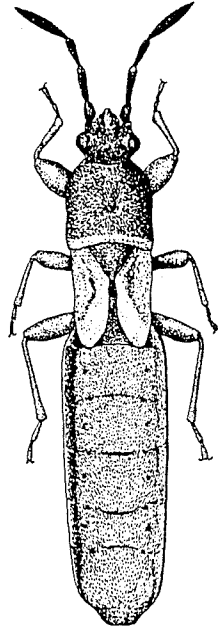
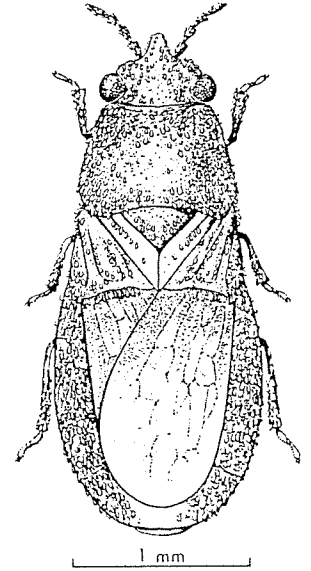
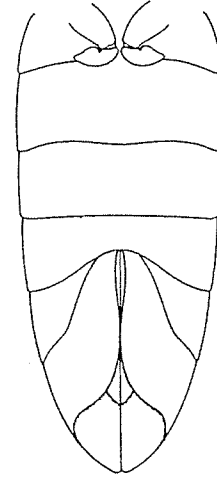
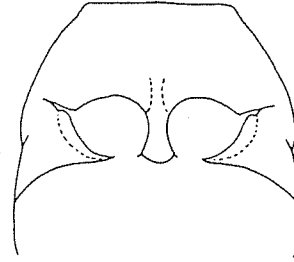
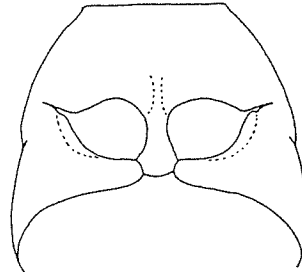
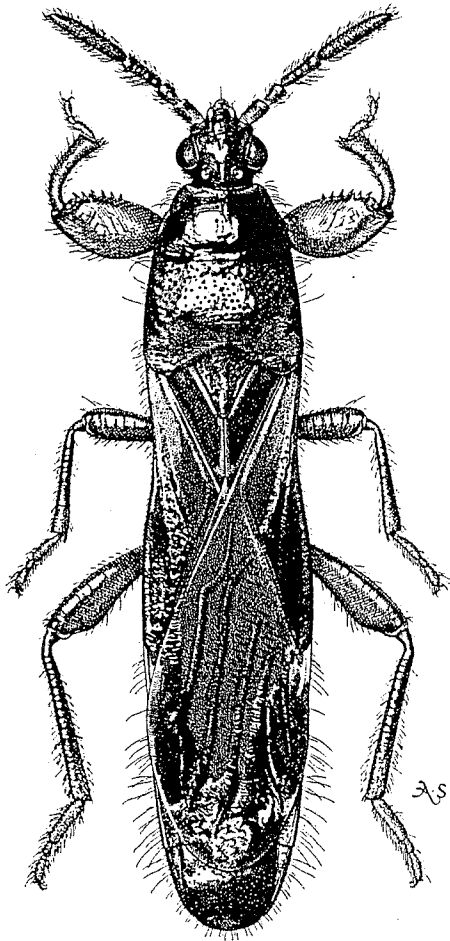
## Family Lygaeidae Seed bugs



## Family Cymidae Cymid bugs

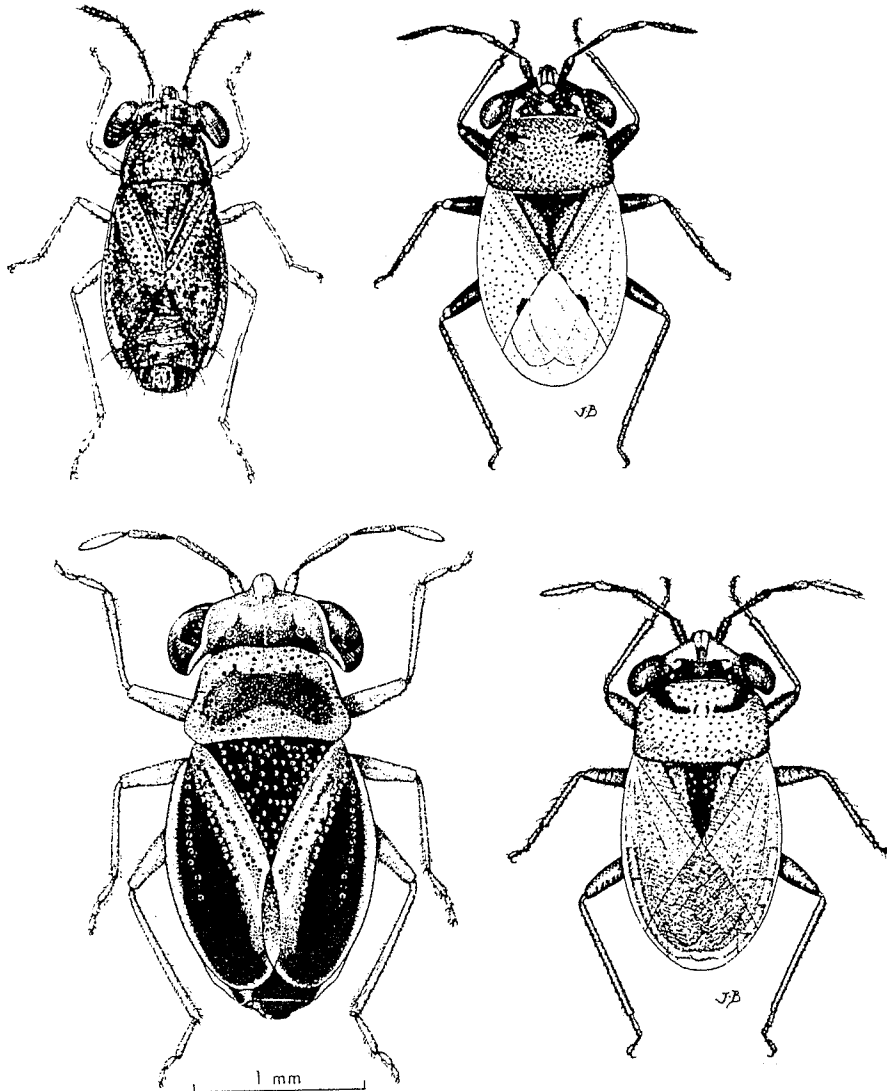


**HEMIPTERA: Pentatomomorpha**  
**Family Blissidae**  
Chinch bugs

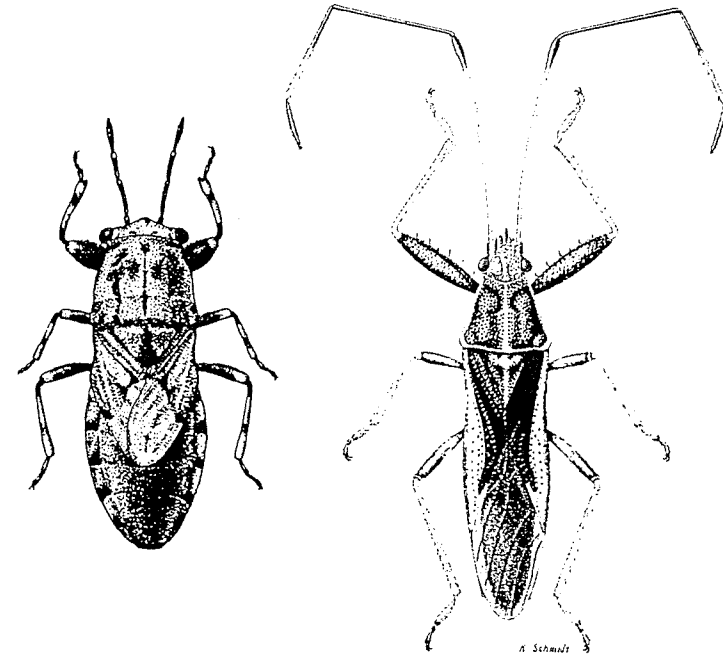


# HEMIPTERA: Pentatomomorpha

## Family Geocoridae Big-eyed bugs

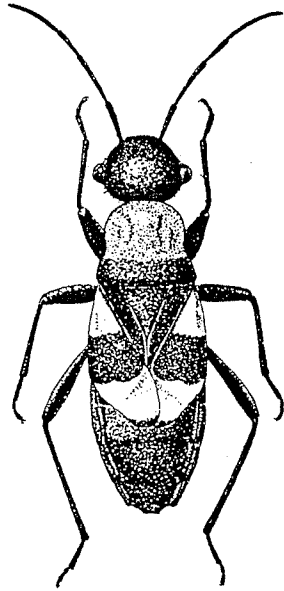


## Family Pachygronthidae Thick-armed bugs

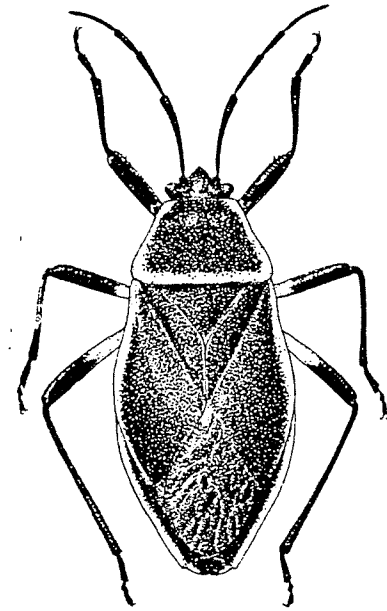
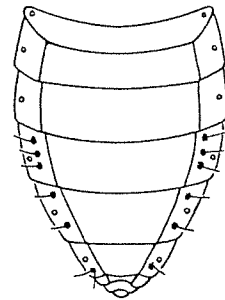
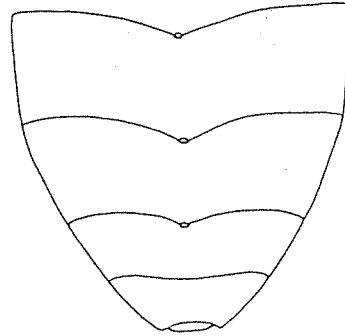
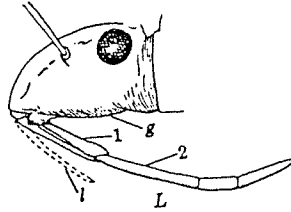




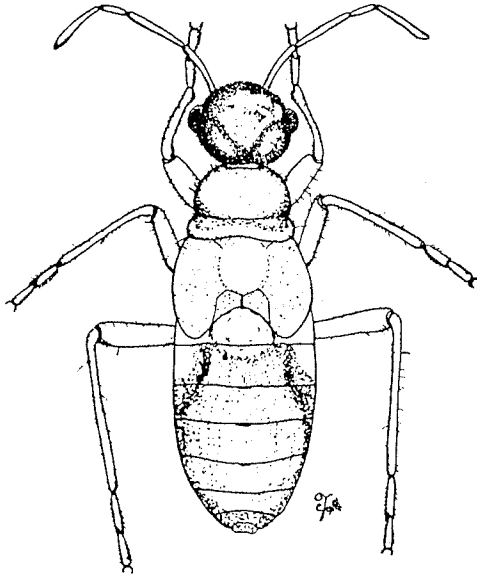
**HEMIPTERA: Pentatomomorpha**  
**Family Largidae**  
**Largid bugs**



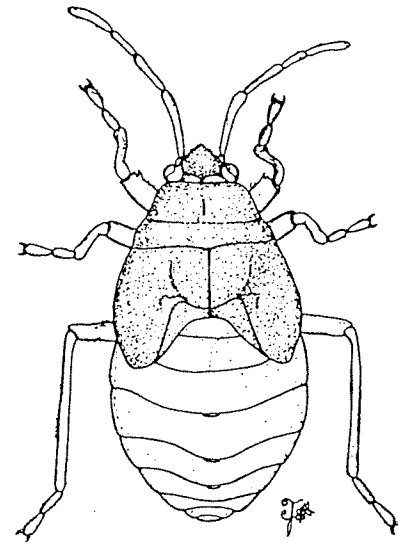
*Araphe carolina*



*Largus succinctus*

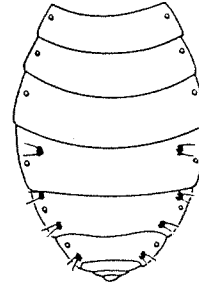
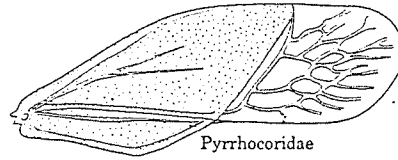
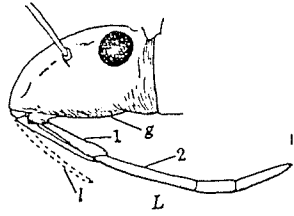


Largidae. Largid bug, *Arhaphe* sp.

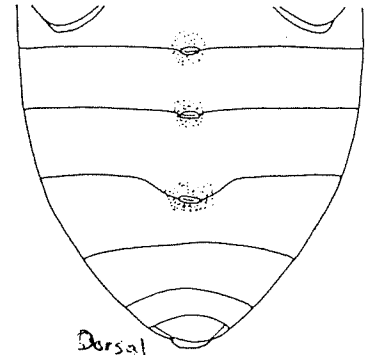


Largidae. Largid bug, *Largus* sp.

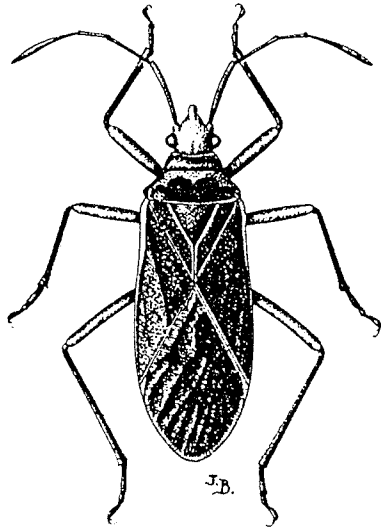
**HEMIPTERA: Pentatomomorpha**  
**Family Pyrrhocoridae**  
**Red bugs**



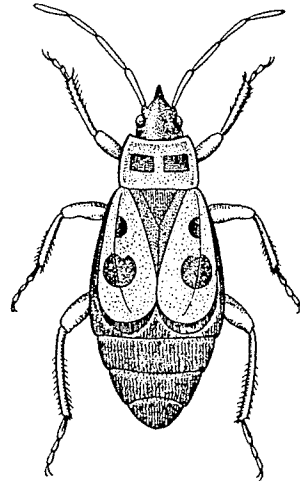
Ventral



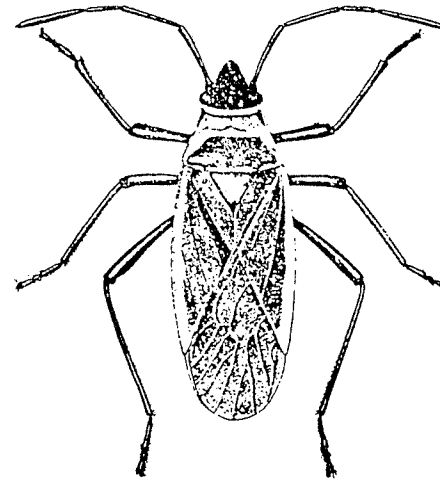
Dorsal



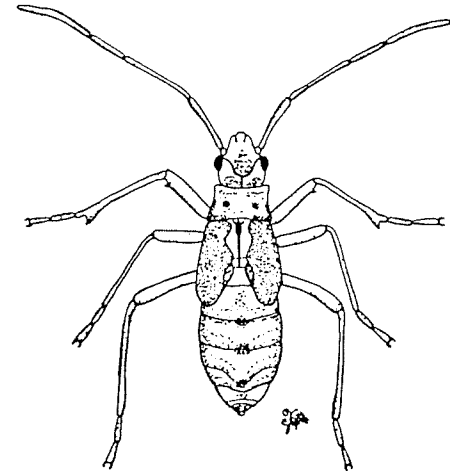
*Dysdercus suturellus* (H.-S.)



— *Pyrrhocoris apterus*

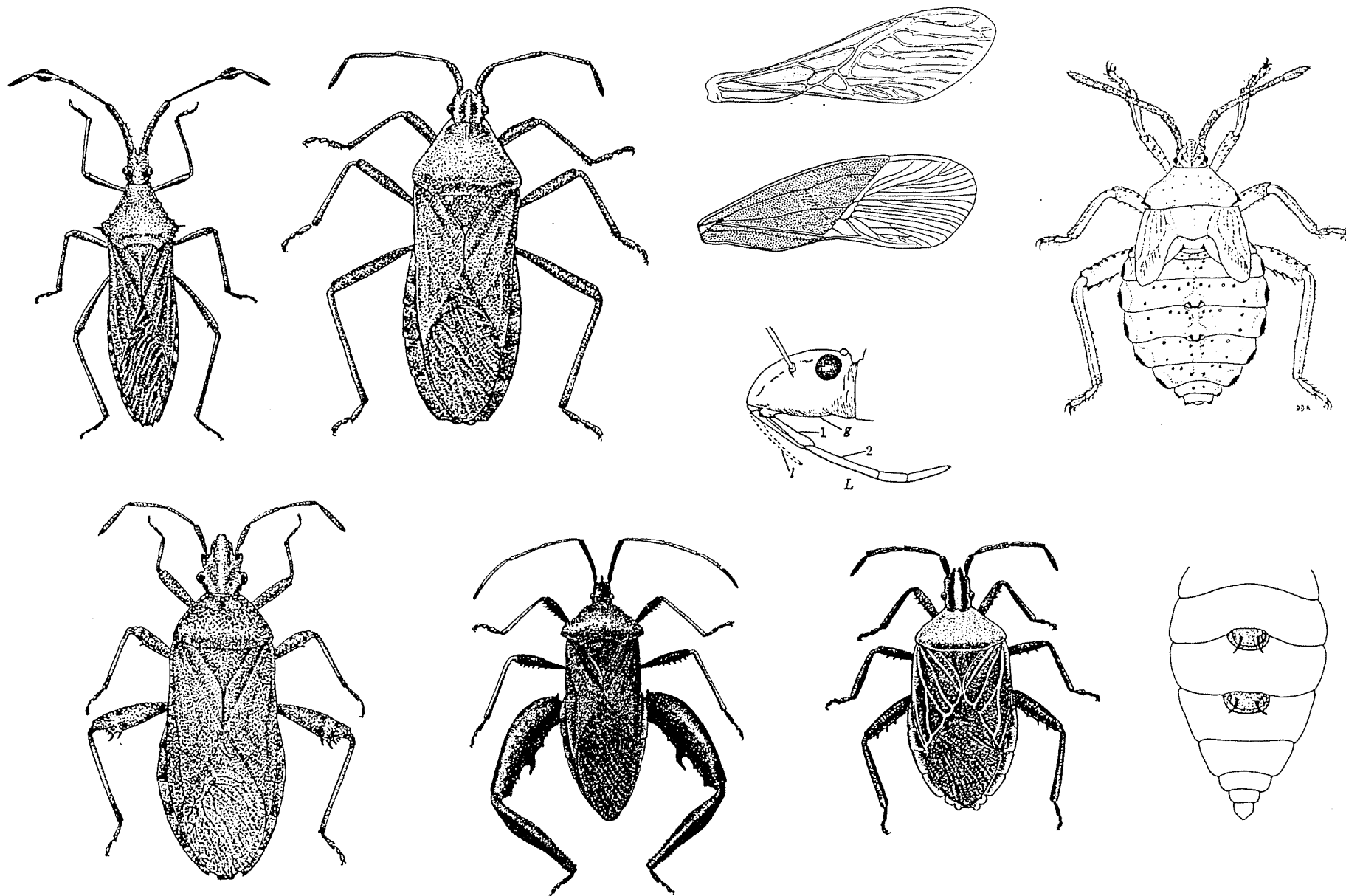


*Dysdercus mimulus*

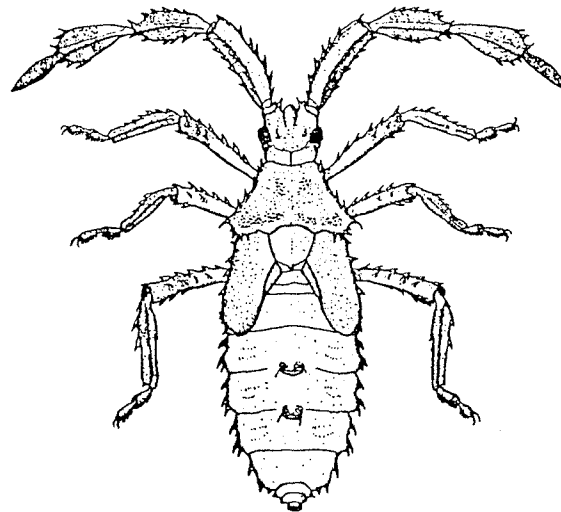
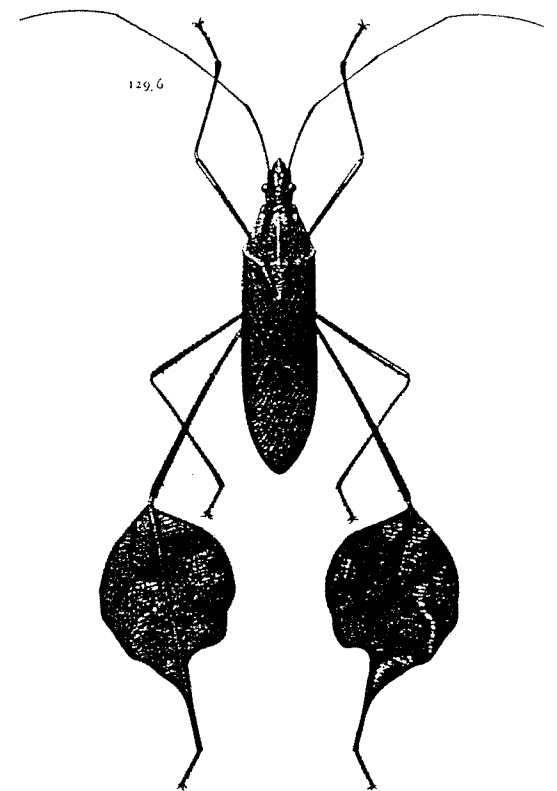
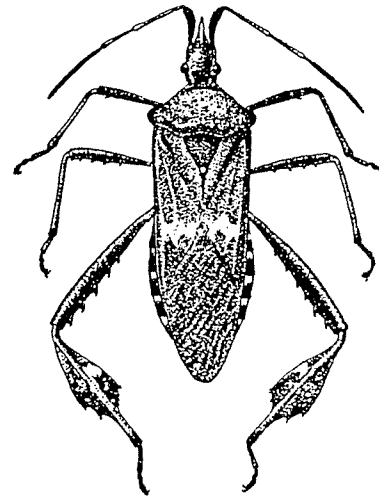
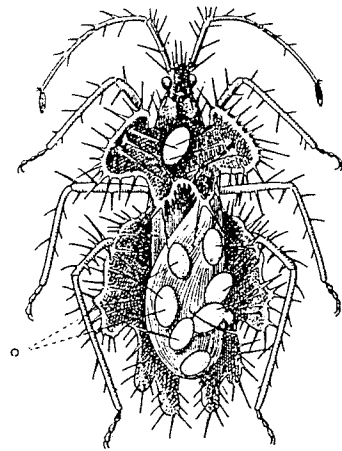
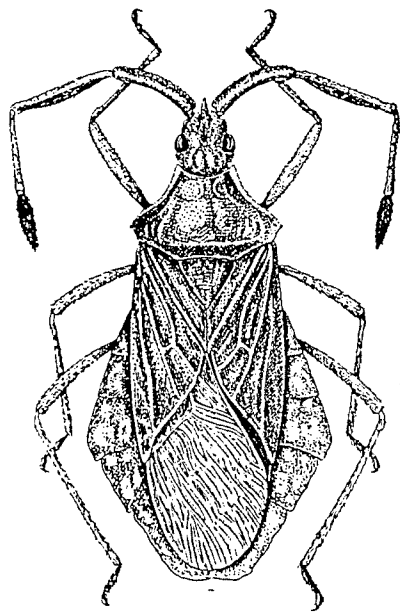


Pyrrhocoridae. Red bug, *Dysdercus mimulus*

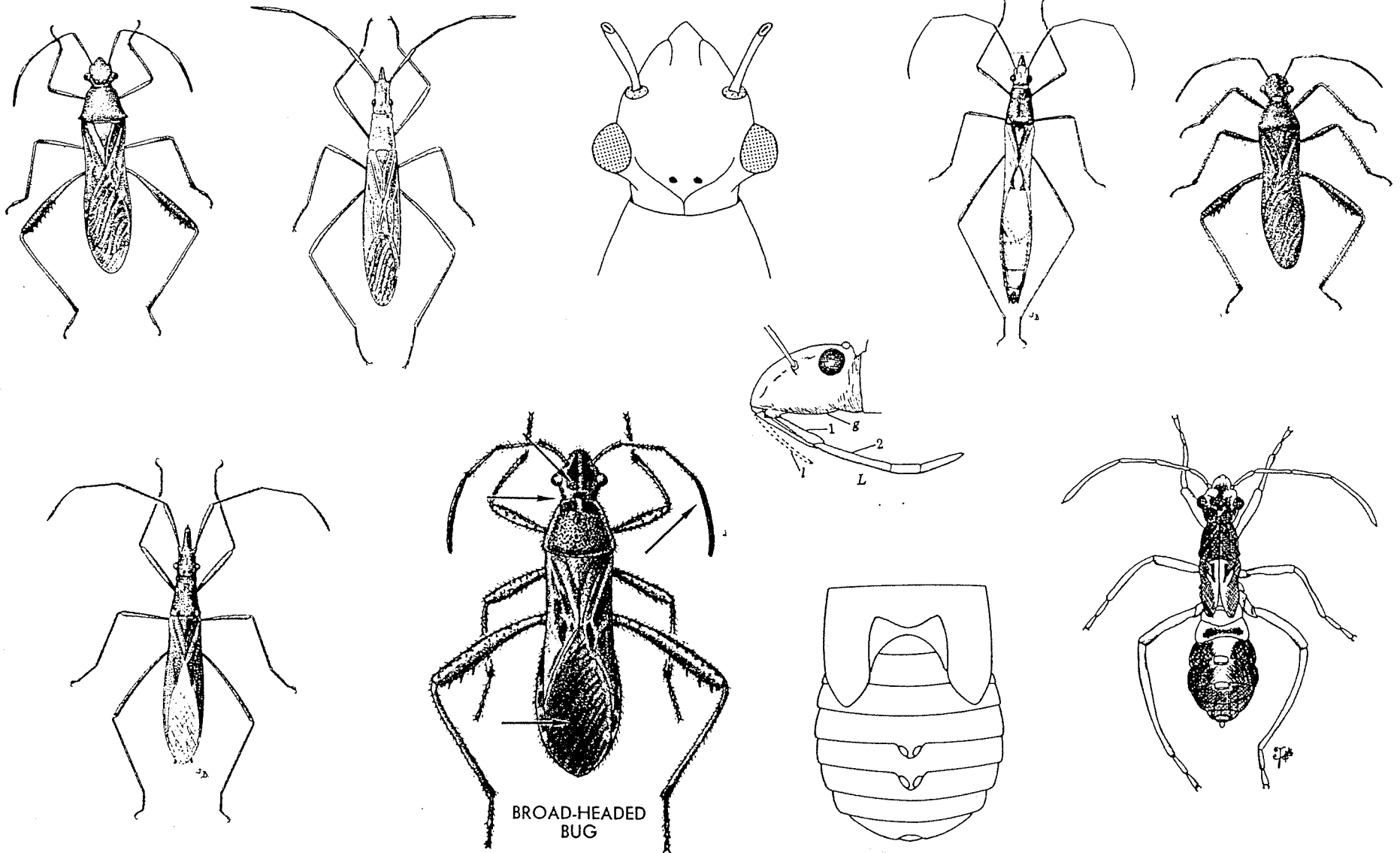
**HEMIPTERA: Pentatomomorpha**  
**Family Coreidae**  
**Squash bugs/ Leaf-footed bugs**



**HEMIPTERA: Pentatomomorpha**  
**Family Coreidae**  
**Squash bugs/ Leaf-footed bugs**

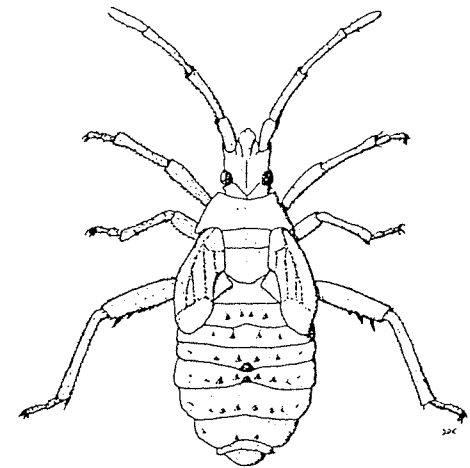
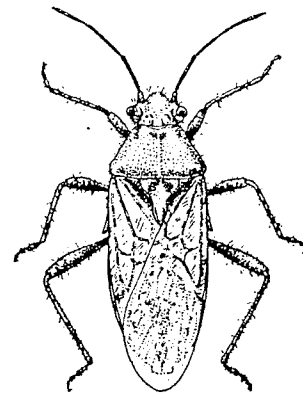
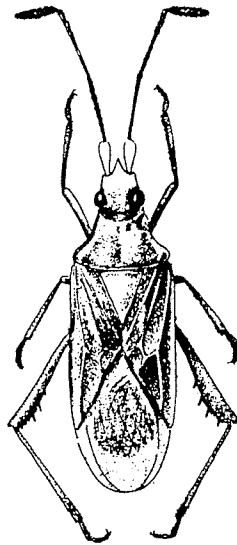
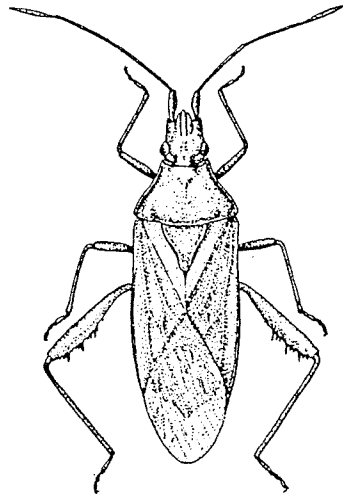
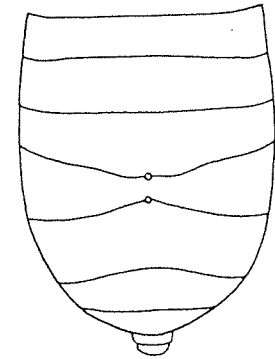
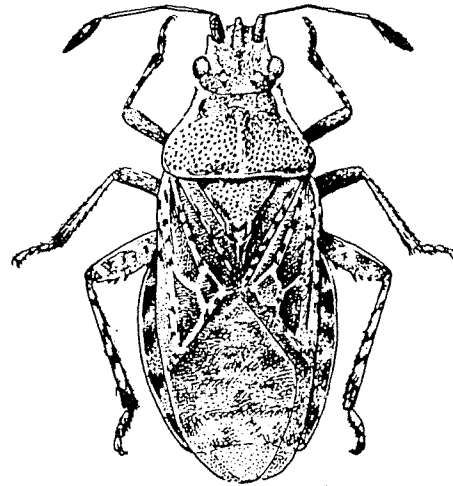
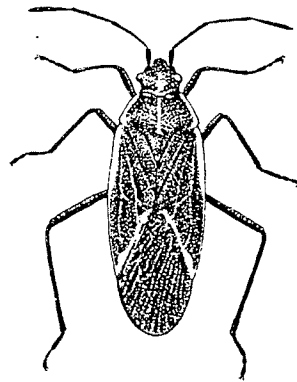
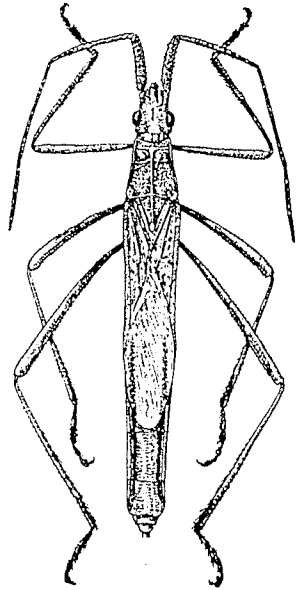
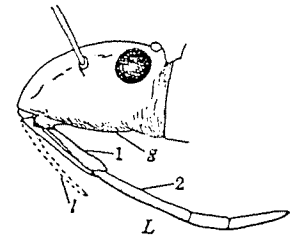


**HEMIPTERA: Pentatomomorpha**  
**Family Alydidae**  
**Broad-headed bugs**

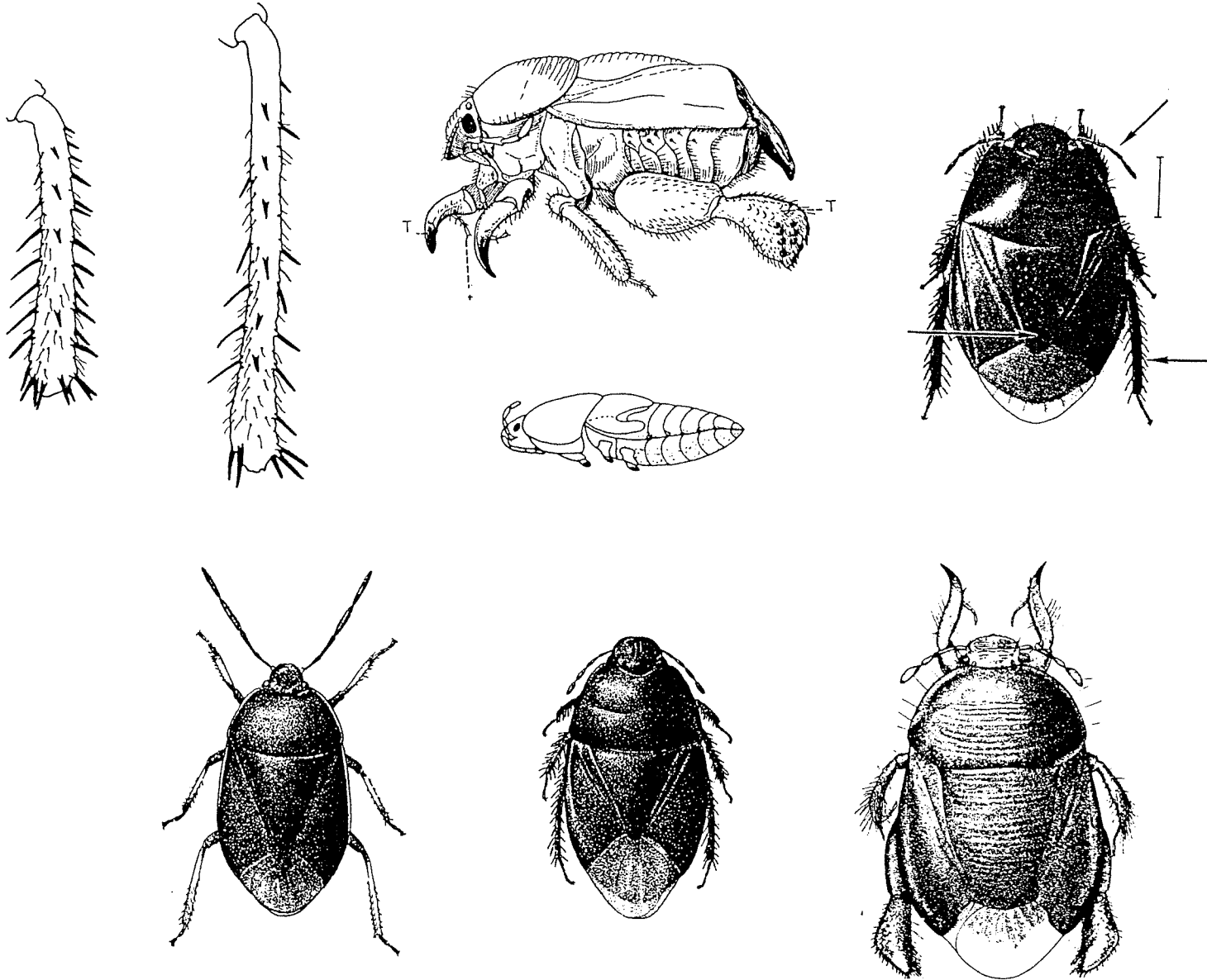


**BROAD-HEADED  
BUG**

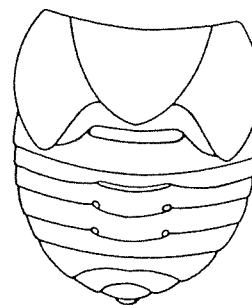
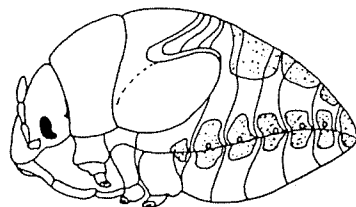
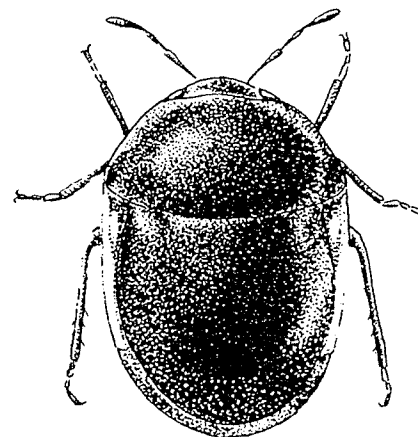
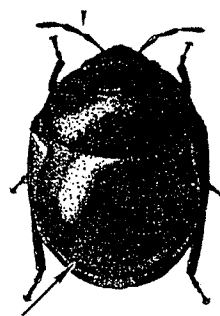
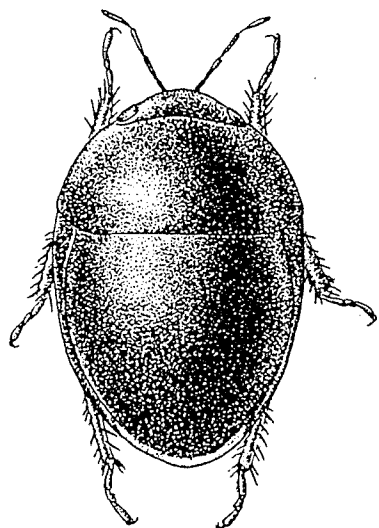
**HEMIPTERA: Pentatomomorpha**  
**Family Rhopalidae**  
**Scentless plant bugs**



**HEMIPTERA: Pentatomomorpha**  
**Family Cydnidae**  
**Burrower bugs**

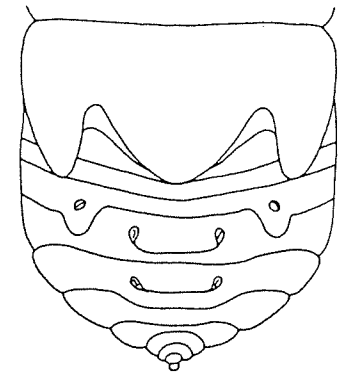
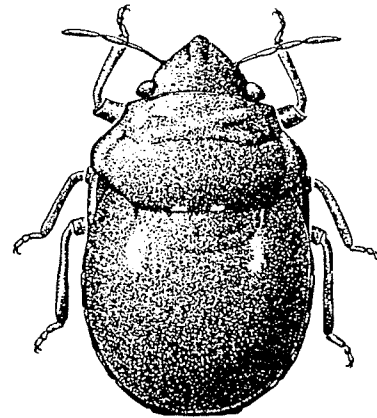
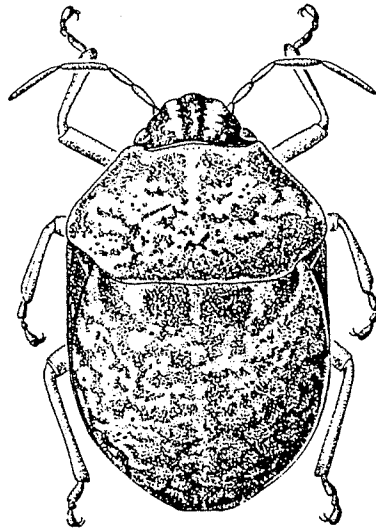
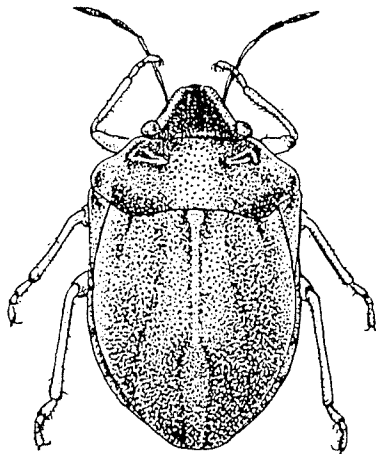
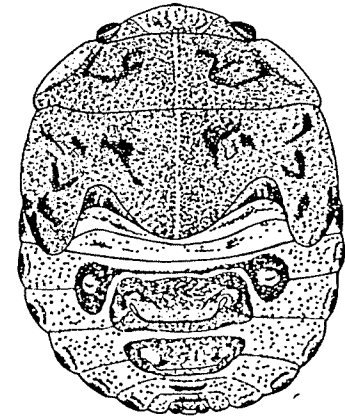
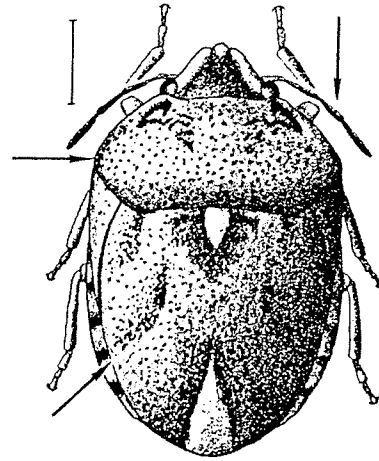
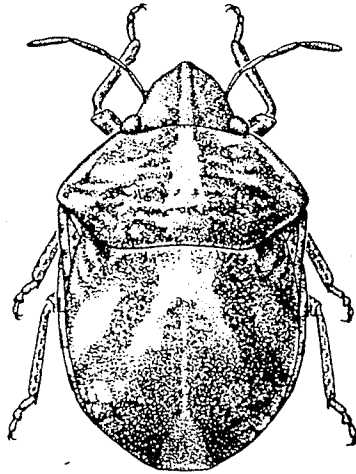


**HEMIPTERA: Pentatomomorpha**  
**Family Thyreocoridae**  
**Negro bugs**

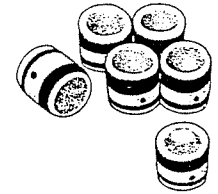
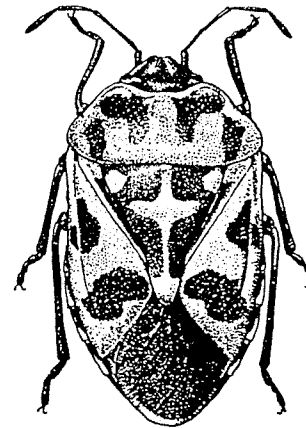
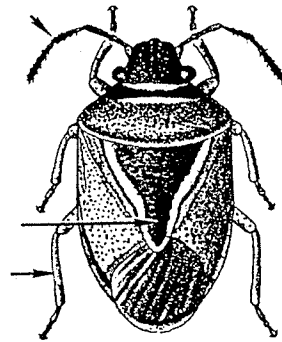
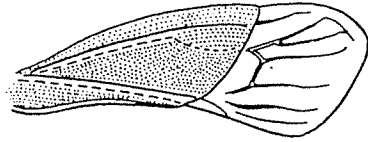
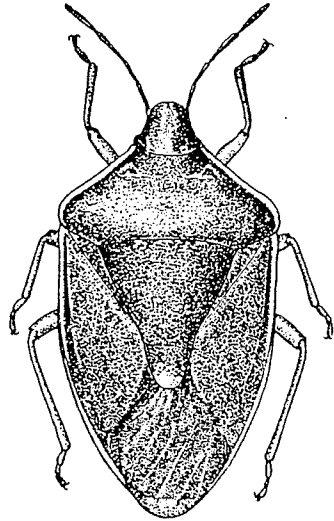
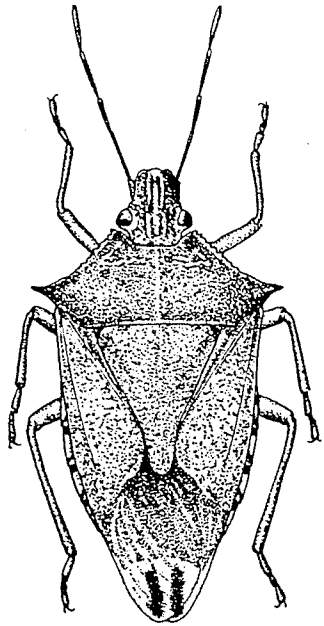




**HEMIPTERA: Pentatomomorpha**  
**Family Scutelleridae**  
**Shield-backed bugs**



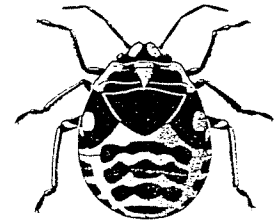
**HEMIPTERA: Pentatomomorpha**  
**Family Pentatomidae**  
**Stink bugs**



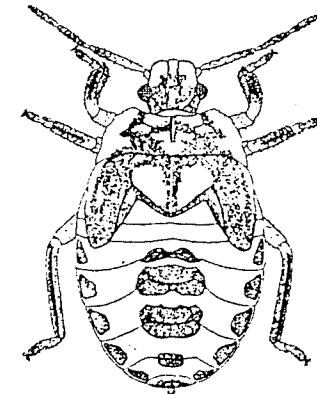
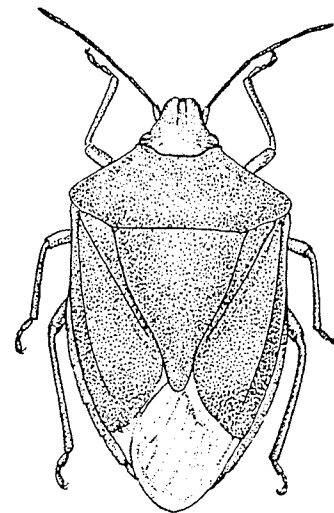
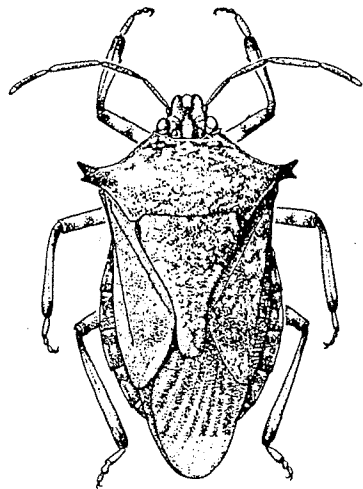
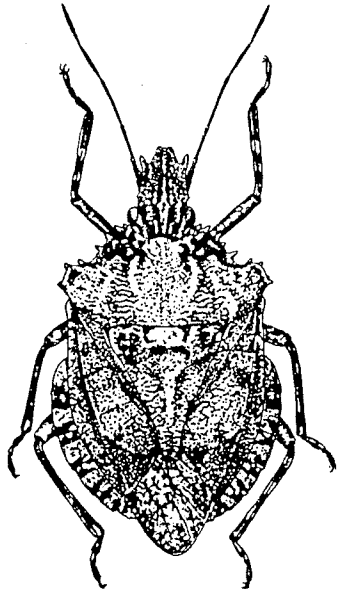
EGGS



YOUNG NYMPH



LATER NYMPH



Pentatomidae. Stink bug, *Podisus placidus* Uhler.

**HEMIPTERA: Pentatomomorpha**  
**Family Pentatomidae**  
**Stink bugs**

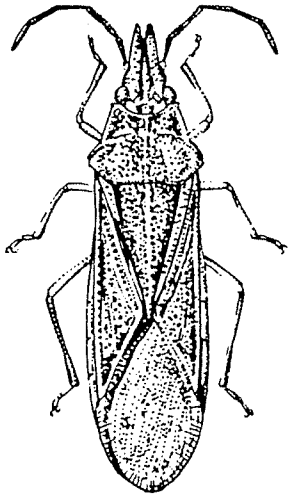
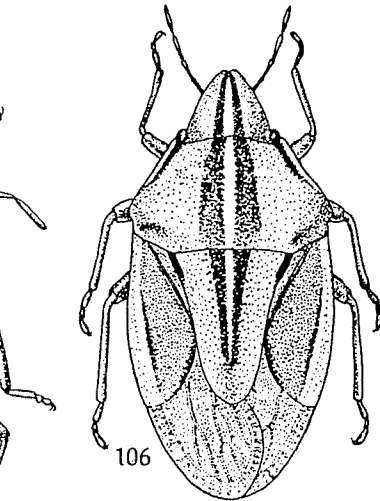
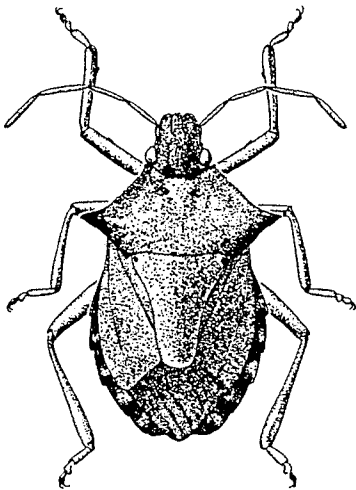


Figure 65

*Mecidea major* Sailer



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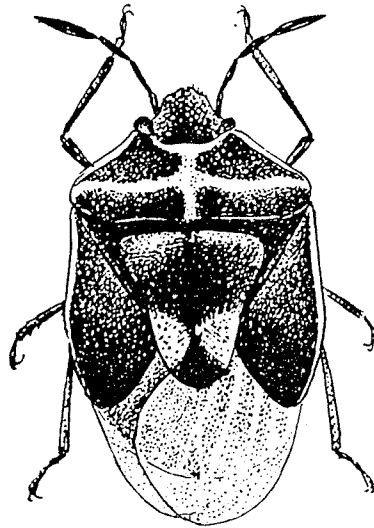
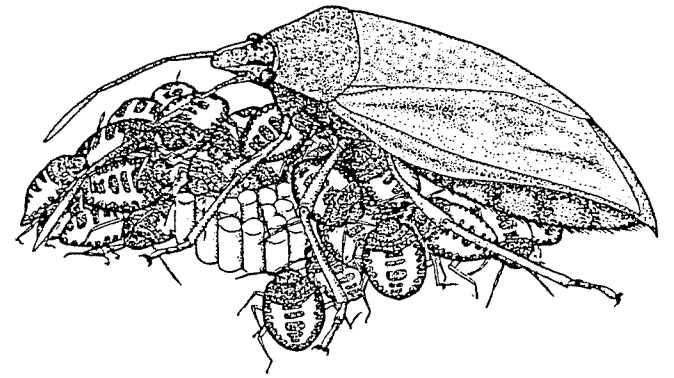
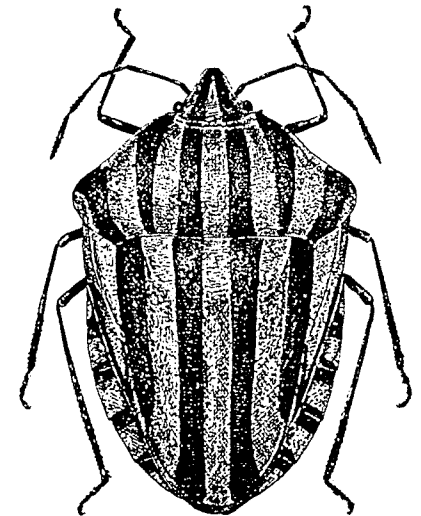
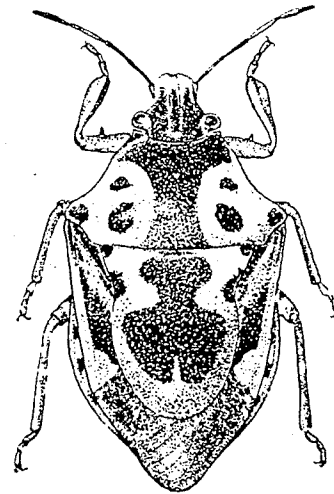
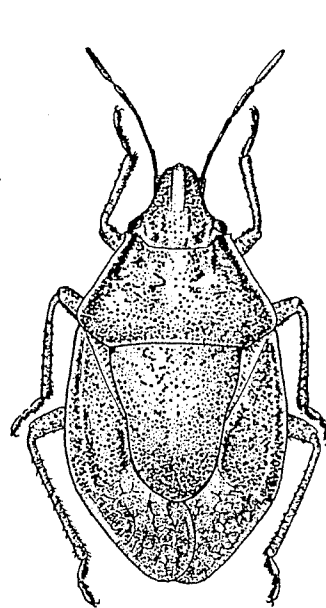


Figure 77

*Cosmopepla bimaculata* (Thomas)



A female of the cacao stink bug (*Mecistorhinus tripterus*) of Trinidad is shown guarding her first instar nymphs four days after they hatched (from Kirkpatrick, 1957).



**HEMIPTERA: Pentatomomorpha**  
**Family Acanthosomatidae**  
**Acanthosomatid stink bugs**

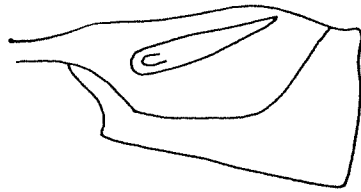


Figure 46

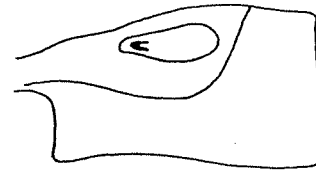


Figure 44

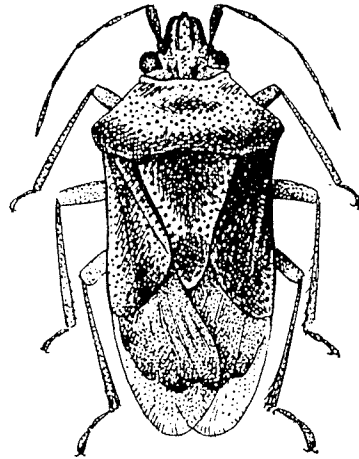


Figure 47

*Elasmotherus cruciatus* (Say)

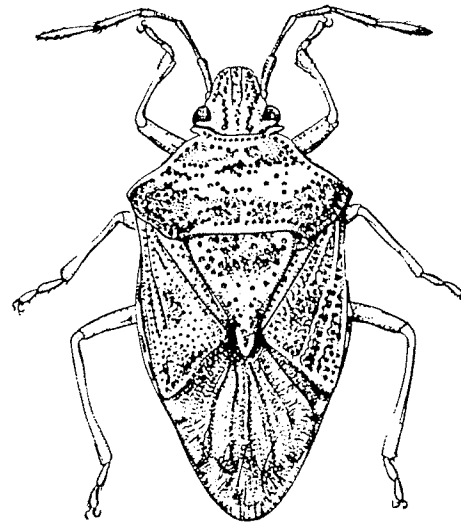


Figure 45

*Elasmucha lateralis* (Say)