

GEOGRAPHICAL DISTRIBUTION AND ALTI-LATITUDINAL DISPERSION

DISTRIBUIÇÃO GEOGRÁFICA E DISPERSÃO ALTILATITUDINAL

Authors/Autores: *Rodolfo U. Carcavallo, Susana I. Curto de Casas, Ítalo A. Sherlock, Itamar Galíndez Girón, José Jurberg, Cleber Galvão, Carlos A. Mena Segura & François Noireau*

Contributing Authors/Autores colaboradores: *Roberto Salvatella, María E. Franca Rodríguez, Miguel A.S. Otero Arocha, Thomas H. Farr, Jorge Lugo Mendoza, João Aristeu da Rosa, Mirta Rabadán, Hugo Suligoy, Ricardo Váez, Rufino Ortega, Leonardo Goyo, Otilio Vargas, Jacinto Peraza, Juana Ramos de Martínez, Lelia B. Vázquez de Carcavallo, Freddy González, Eduardo Cortón*

Triatominae species of the American Continent and the Caribbean are about 116. Some of them have very large geographical distribution; e.g. *Panstrongylus geniculatus* is prevalent from the South of Mexico to the North of Argentina. In the other side there are species of very restricted dispersion; e.g. *Triatoma obscura* limited to the small area of Mandeville in Jamaica.

In this chapter and according to current experience and information, authors have attempted to correlate the dispersion on a geographical area to the altitude on which each species was found. For this reason the updated map of distribution of each species is attached with a diagram on which we can see the specific latitudinal and altitudinal dispersion and the range that it attains.

Some species are found in lowlands, others in highlands; *Triatoma infestans* is found in ranges between the sea level and 4.100 m.a.s.l. in Bolivia (Llallagua). Most of the species are found in the wide range between 300 and 1.500 m.a.s.l.

In relation to the latitude, a great number of genera and species are found within or close to the intertropical areas. The northernmost species is *Triatoma sanguisuga* that attains the States of Maryland, Illinois and Indiana in U.S.A. The southernmost species are two, *T. infestans* and *T. patagonica*, attaining the border between provinces of Chubut and Santa Cruz in the Argentinean Patagonia.

We show the current information with maps and diagrams. Bibliography on this subject is extensive and therefore we have selected some compilations as Usinger (1944), Lent & Wygodzinsky (1979), several authors of chapters in the PAHO/ECO publication (1985) and original descriptions of new species between 1985 and 1998. Some Triatominae tribes and genera were studied with this approach, as Alberproseniini, Bolboderini and Cavernicolini (Carcavallo et al., 1995), Rhodniini (Galíndez et al., 1996), genus *Panstrongylus* Berg, 1879 (Curto de Casas et al., 1996) and species of genus *Triatoma* Laporte, 1832 from North and Central America and the Caribbean (Jurberg et al., 1996). Other genera of the tribe Triatomini as *Dipetalogaster* Usinger, 1940, *Eratyrus* Stal, 1859, *Mepraia* Mazza, Gajardo e Jörg, 1940 and *Hermanlenticia* Jurberg & Galvão, 1997, were treated by Galvão et al. (1998).

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Atualmente existem 116 espécies de Triatomíneos no continente americano e no Caribe. Algumas delas têm ampla distribuição geográfica, como por exemplo *Panstrongylus geniculatus*, que ocorre desde o sul do México até o norte da Argentina; entretanto algumas espécies encontram-se restritas a pequenas áreas como *Triatoma obscura*, encontrada apenas numa pequena região de Mandeville, na Jamaica.

Neste capítulo os autores correlacionam a dispersão em determinada área geográfica com a altitude na qual cada espécie foi encontrada. Por esta razão os mapas atualizados da distribuição de cada espécie aparecem juntos aos diagramas onde é possível visualizar a dispersão altitudinal.

Algumas espécies são encontradas em grandes altitudes, enquanto outras, em baixas altitudes; *Triatoma infestans* é encontrada desde o nível do mar até 4.100 m.s.n.m., na Bolívia. A maioria das espécies é encontrada entre 300 e 1.500 m.s.n.m.

Com relação à latitude, um grande número de gêneros e espécies são encontrados no interior ou próximas de regiões intertropicais. A espécie encontrada mais ao norte é *Triatoma sanguisuga*, nos estados de Maryland, Illinois e Indiana, nos E.U.A. No extremo sul do continente são encontradas tanto *Triatoma patagonica* quanto *T. infestans*, atingindo as províncias de Chubut e Santa Cruz, na Patagônia, Argentina.

A bibliografia sobre o tema é extensa e portanto algumas compilações foram selecionadas, como os trabalhos de Usinger (1944), Lent & Wygodzinsky (1979), diversos autores de capítulos de publicações da OPAS/ECO (1985) e descrições originais de novas espécies publicadas entre os anos de 1985 e 1998. Algumas tribos e gêneros já foram estudadas com esta abordagem como: Alberproseniini, Bolboderini e Cavernicolini (Carcavallo et al., 1995); Rhodniini (Galíndez-Girón et al., 1996); gênero *Panstrongylus* Berg, 1879 (Curto de Casas et al., 1996); e espécies norte e centro-americanas e caribenhas do gênero *Triatoma* Laporte, 1832 (Jurberg et al., 1996). Outros gêneros da tribo Triatomini como *Dipetalogaster* Usinger, 1940; *Eratyrus* Stal, 1859; *Mepraia* Mazza, Gajardo & Jörg, 1940 e *Hermanlenticia* Jurberg & Galvão, 1997 foram publicadas por Galvão et al. (1998).

GEOGRAPHICAL DISTRIBUTION

The general policy for References in this Atlas is listing them without ordinal numbers. However, in this Chapter authors consider that numeration of references is needed to complete the bibliographical information, together with maps and diagrams.

Due to the extensive information, the geographical distribution is given by countries and, when national territories are very extensive, by States or political division equivalents, as Provinces or Departments. Names of countries are written in English, except Brazil.

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DISTRIBUIÇÃO GEOGRÁFICA

Neste Atlas a forma de listar as referências não apresenta numeração, entretanto, neste capítulo os autores consideraram-na necessária para associar as informações bibliográficas com os mapas e diagramas.

Para evitar informação excessiva, a distribuição geográfica é dada por países. No caso de territórios muito extensos é dada também por estados ou divisões políticas equivalentes como províncias ou departamentos. Os nomes dos países estão escritos em inglês, exceto o Brasil.

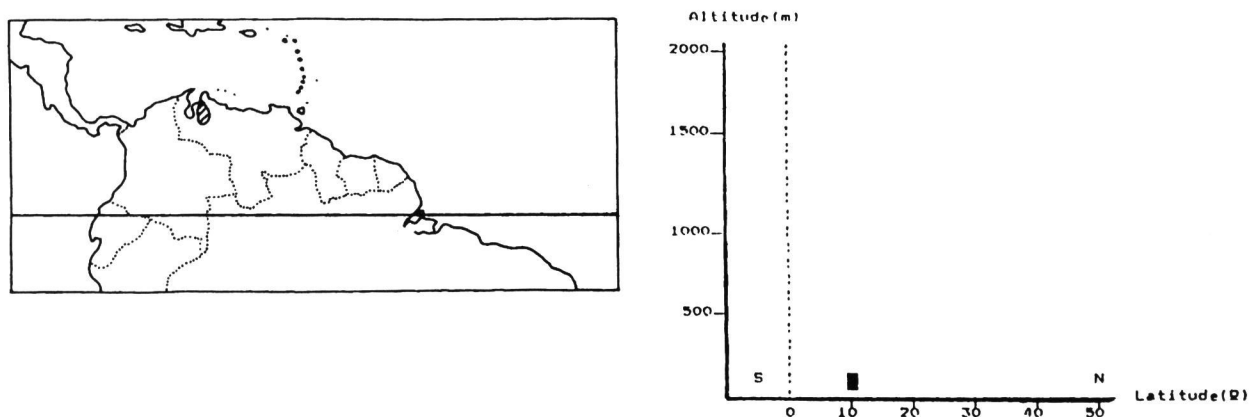


Fig. 17.1 - *Alberprosenia goyovargasi* Martínez & Carcavallo, 1977. **Venezuela** (Zulia) (6, 24, 41).

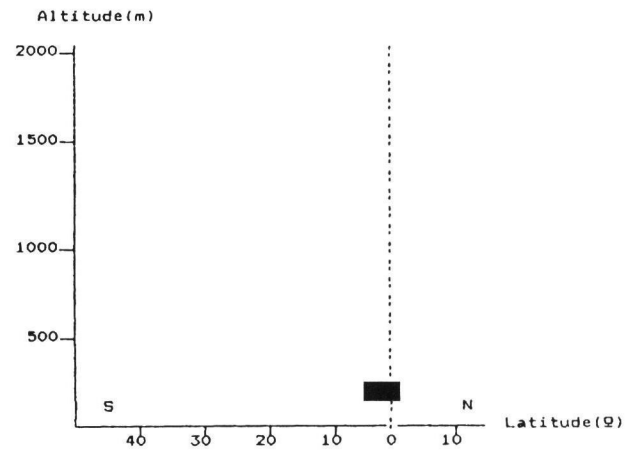
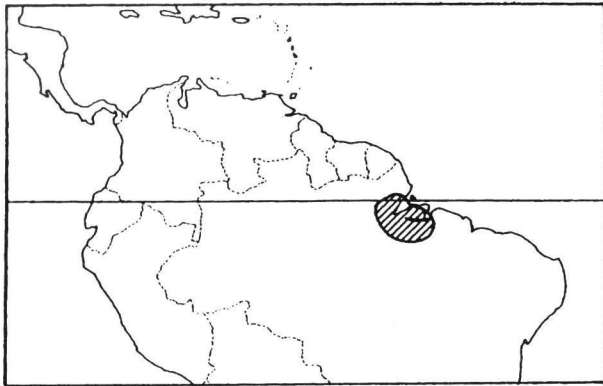


Fig. 17.2 - *Alberprosenia malheiroi* Serra, Atzingen & Serra, 1987. **Brasil** (Pará) (6, 31).

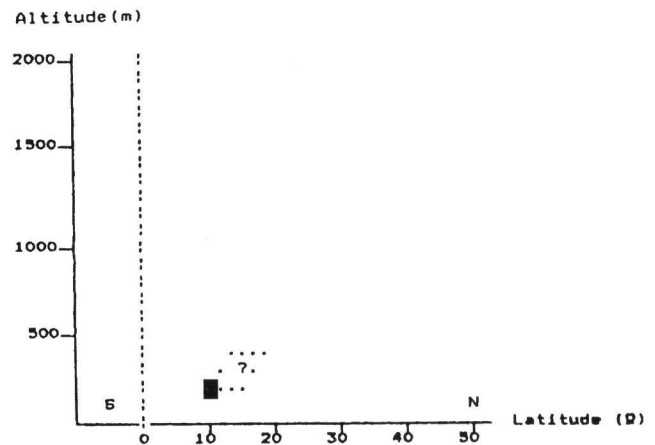
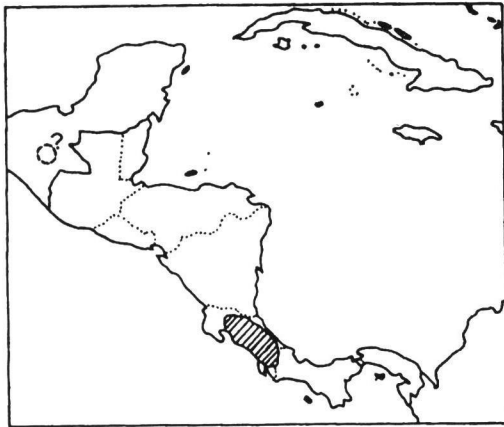


Fig. 17.3 - *Belminus costaricensis* Herrero, Lent & Wygodzinsky, 1954. **Costa Rica**. Lent & Wygodzinsky (1979) mentioned **Mexico**, State of Veracruz, with question mark (6, 8, 24, 41).

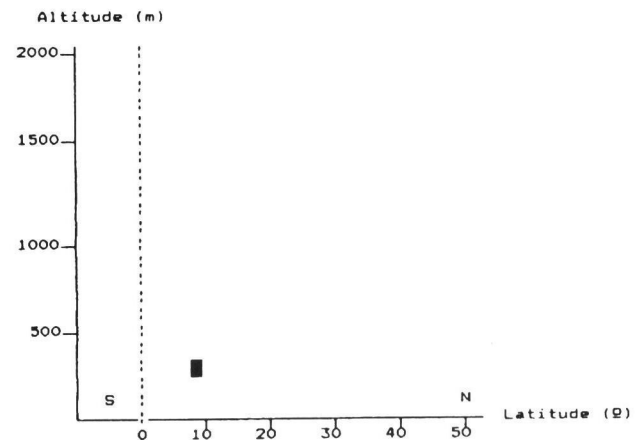


Fig. 17.4 - *Belminus herreri* Lent & Wygodzinsky, 1979. **Panama** (6, 8, 24, 41).

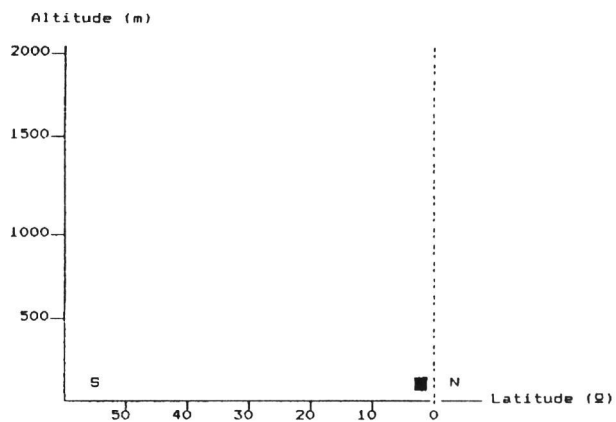
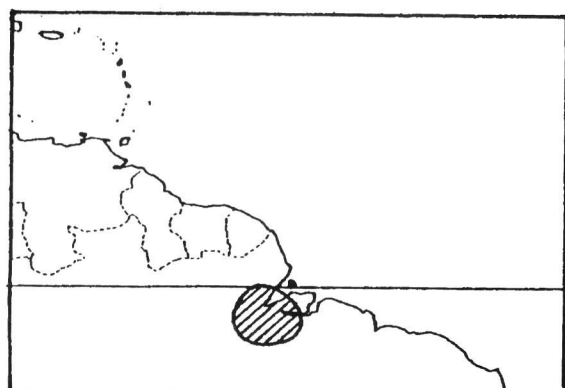


Fig. 17.5 - *Belminus laportei* Lent, Jurberg & Carcavallo, 1995. **Brasil** (Pará) (22, 41).

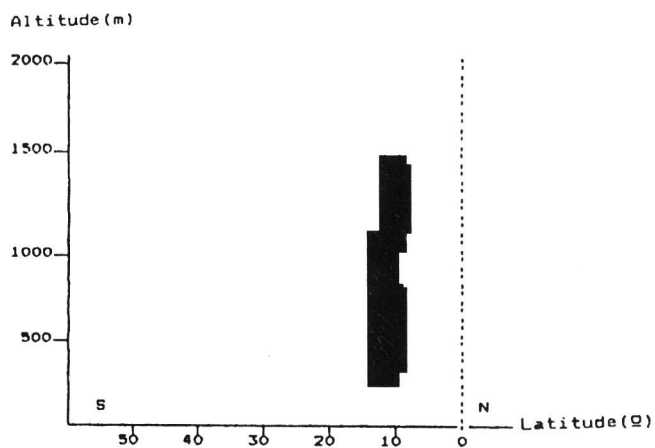
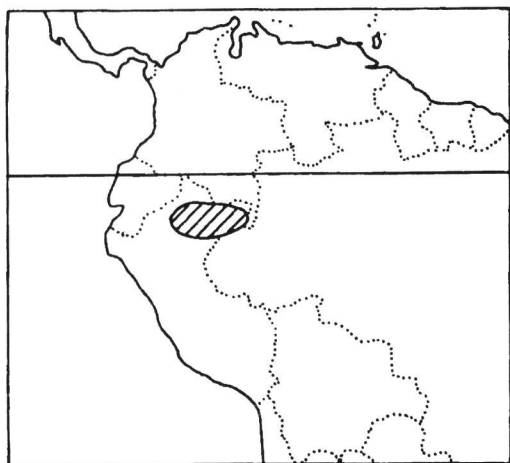


Fig. 17.6 - *Belminus peruvianus* Herrero, Lent & Wygodzinsky, 1954. **Peru** (Amazonas and Cajamarca) (4, 6, 24, 41).

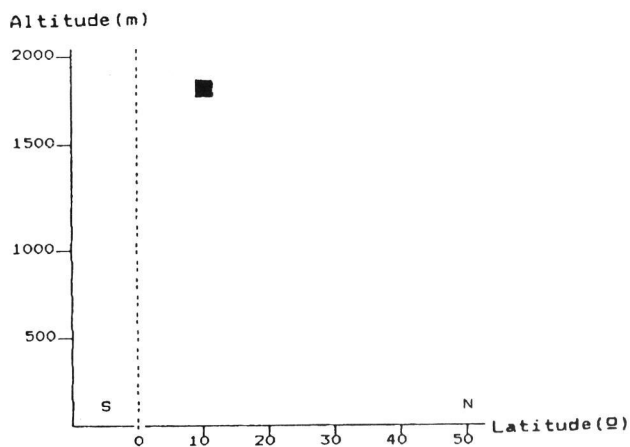


Fig. 17.7 - *Belminus pittieri* Osuna & Ayala, 1993. **Venezuela** (Aragua) (28, 41).

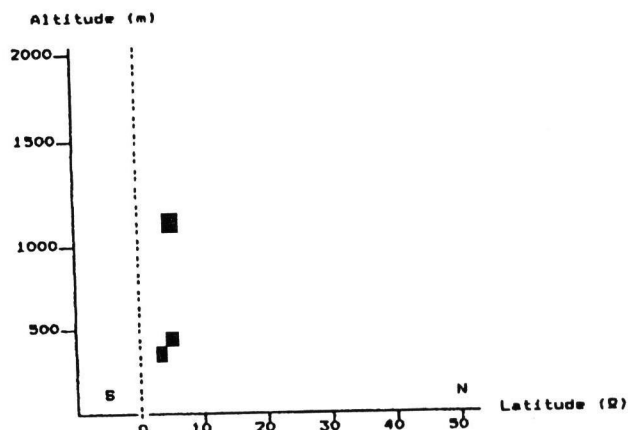
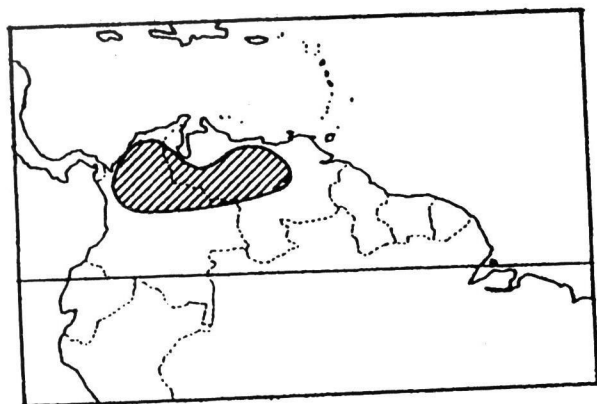


Fig. 17.8 - *Belminus rugulosus* Stal, 1859. **Colombia**, unknown locality (type material)/localidade de tipo desconhecido. **Venezuela** (Federal District, Aragua) (6, 10, 37, 41).

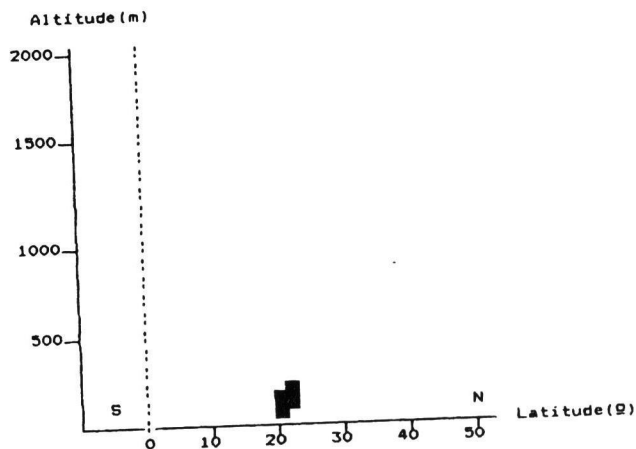


Fig. 17.9 - *Bolboder scabrosa* Valdés, 1919. **Cuba** (6, 24, 41).

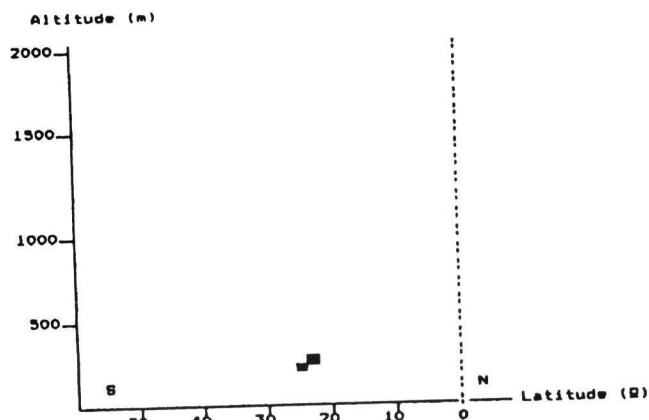
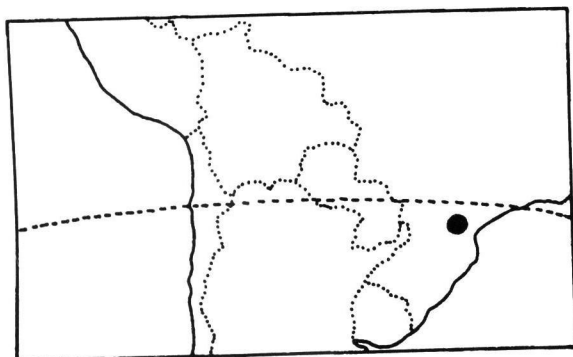


Fig. 17.10 - *Microtriatoma borbaei* Lent & Wygodzinsky, 1979. **Brasil** (Paraná and Goiás) (10, 11, 24, 41).

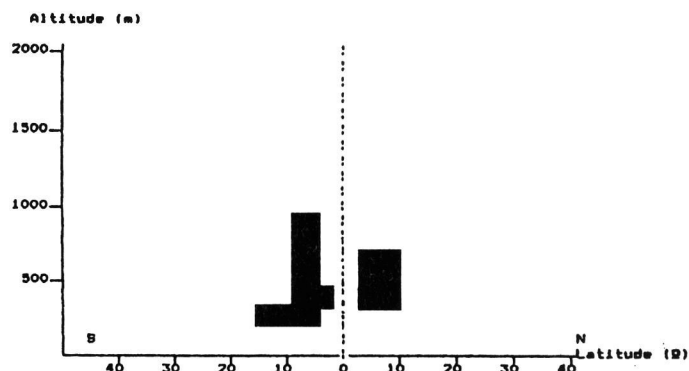
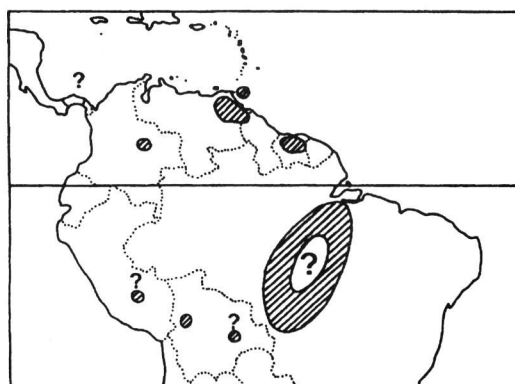


Fig. 17.11 - *Microtriatoma trinidadensis* (Lent, 1951). **Trinidad. Venezuela** (Sucre, Territory Delta Amacuro). **Colombia** (Meta, as *T. mansosotoi* Prosen & Martínez, 1952). **Peru** (Cuzco and Valle del Rio Monson). **Bolivia** (Beni, Cochabamba and Santa Cruz). **Brasil** (Pará) (6, 8, 10, 11, 24, 29, 33, 35, 37, 41, unpublished data).

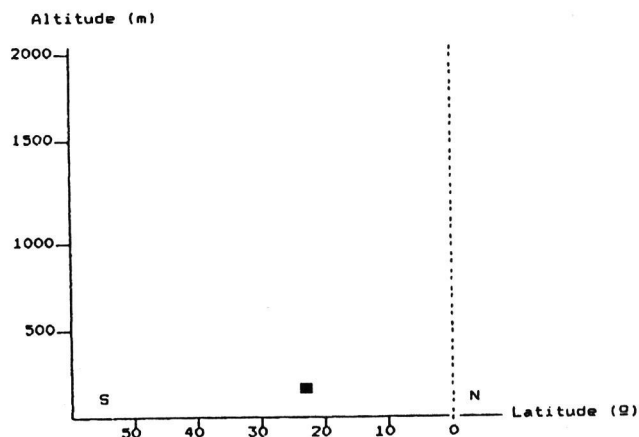
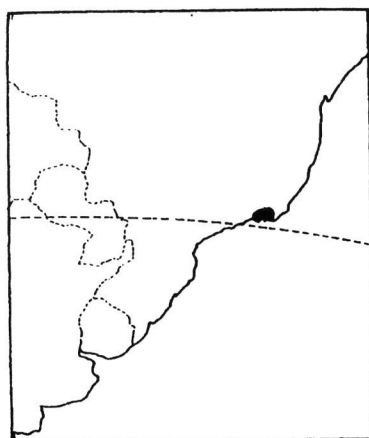


Fig. 17.12 - *Parabelminus carioca* Lent, 1943. **Brasil** (Rio de Janeiro) (6, 11, 24, 41).

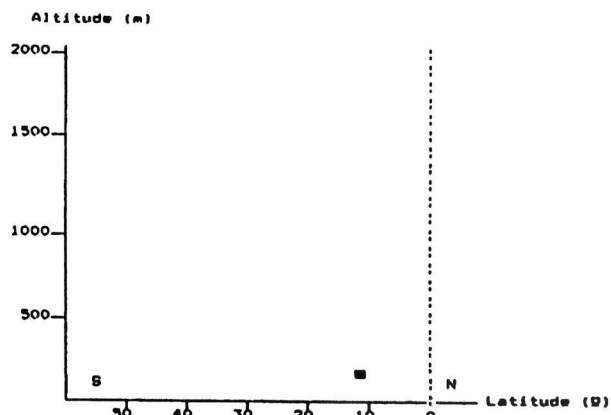
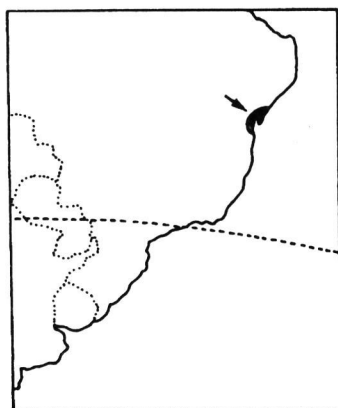


Fig. 17.13 - *Parabelminus yurupucu* Lent & Wygodzinsky, 1979. **Brasil** (Bahia) (6, 11, 24, 41).

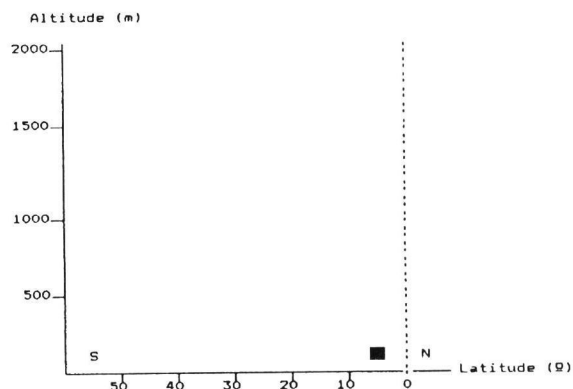
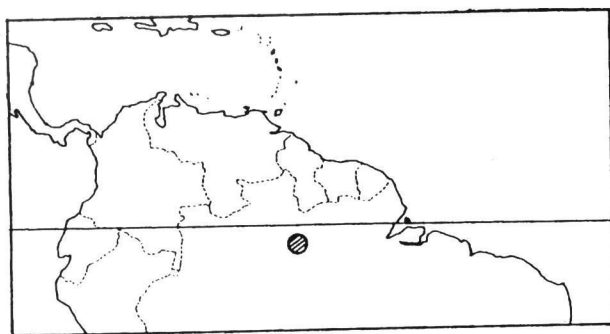


Fig. 17.14 - *Cavernicola lenti* Barrett & Arias, 1985. **Brasil** (Amazonas) (1, 41).

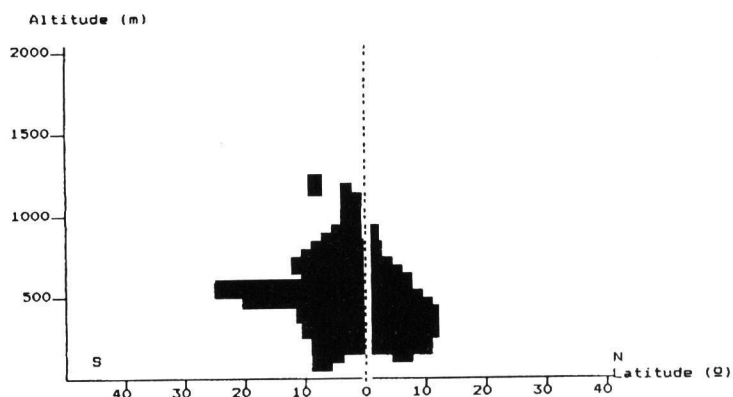
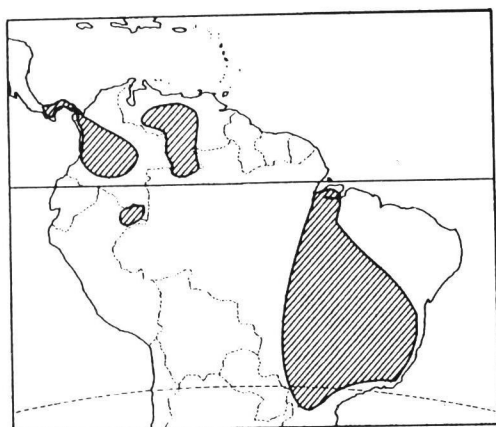


Fig. 17.15 - *Cavernicola pilosa* Barber, 1937. **Panama**. **Colombia** (Cundinamarca, Meta, Tolima and Valle). **Peru** (Loreto). **Brasil** (Pará, Mato Grosso, Espírito Santo, Bahia, Paraná). **Venezuela** (Cojedes, Portuguesa, Táchira, Lara, Territory Amazonas) (4, 6, 8, 10, 11, 24, 29, 37, 41).

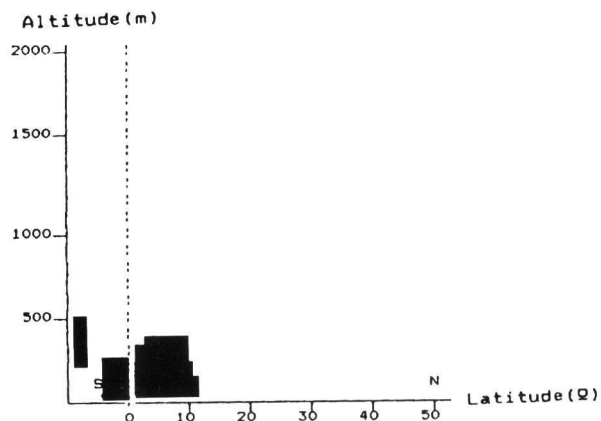
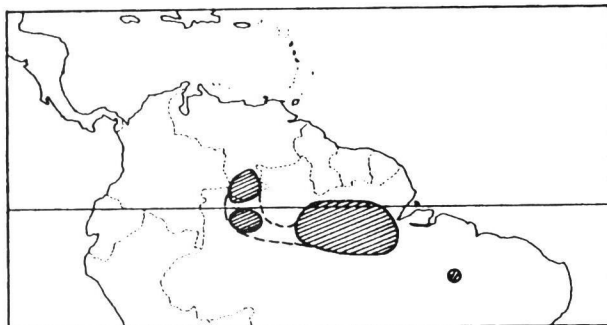


Fig. 17.16 - *Rhodnius brethesi* Matta, 1919. **Brasil** (Amazonas and Pará). **Venezuela** (Territory Amazonas) (6, 11, 24, 29, 33, 37).

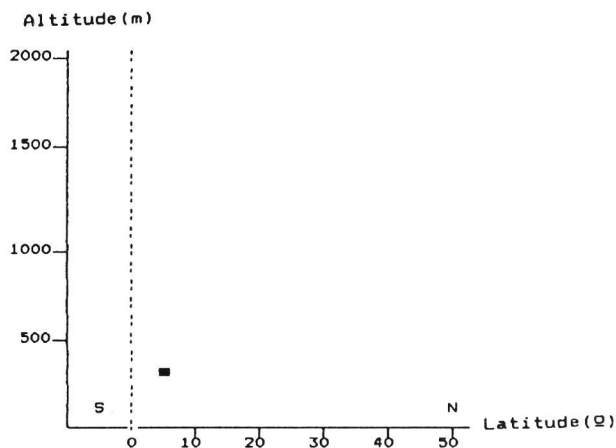
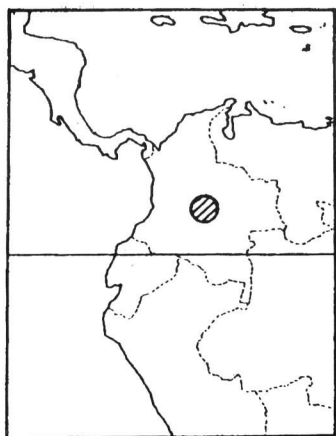


Fig. 17.17 - *Rhodnius dalessandroi* Carcavallo & Barreto, 1976. **Colombia** (Meta) (6, 10).

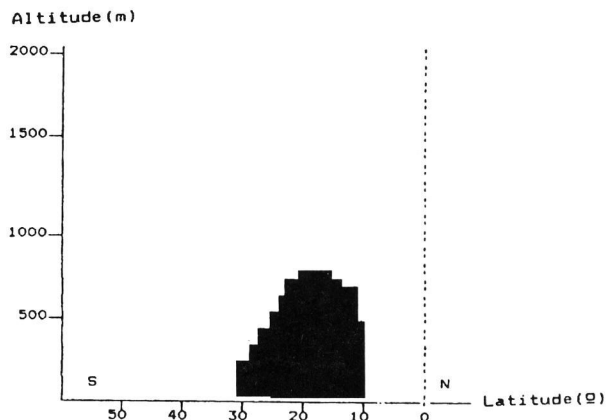
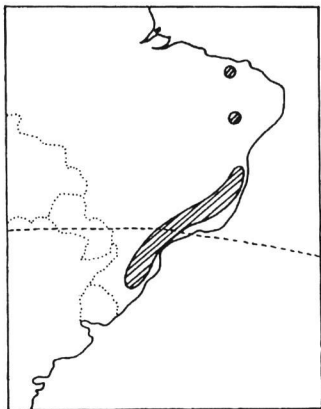


Fig. 17.18 - *Rhodnius domesticus* Neiva & Pinto, 1923. **Brasil** (Espírito Santo, Bahia, Rio de Janeiro, Santa Catarina, Paraná, São Paulo, Maranhão, Piauí, Minas Gerais) (6, 11, 24, 33).

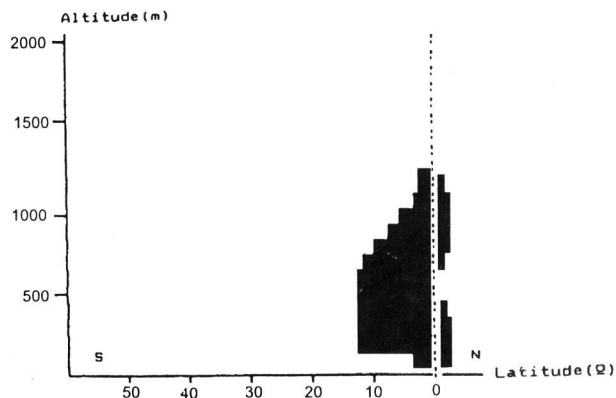
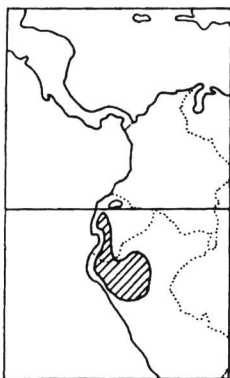


Fig. 17.19 - *Rhodnius ecuadoriensis* Lent & Leon, 1958. **Ecuador** (Manabi, Guayas, Loja). **Peru** (Tumbes, Piura, Cajamarca, La Libertad, probably San Martín) (6, 8, 20, 24).

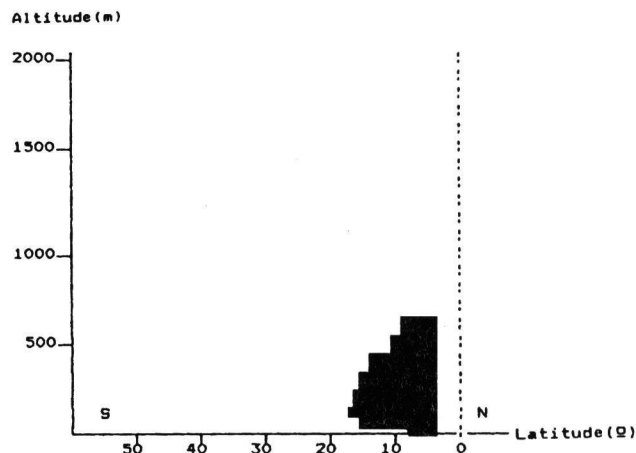
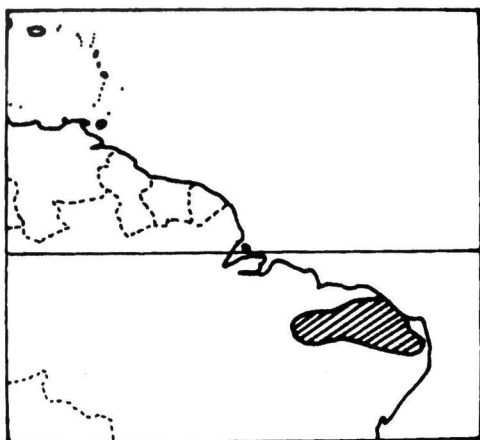


Fig. 17.20 - *Rhodnius nasutus* Stal, 1859. **Brasil** (Ceará, Piauí, Rio Grande do Norte, Paraíba and Maranhão) (6, 11, 24, 33).

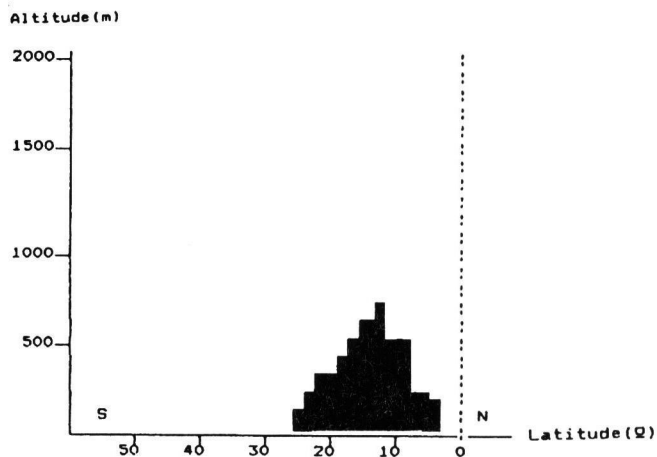
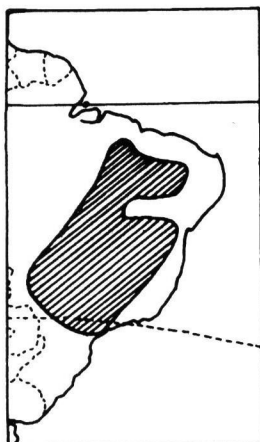


Fig. 17.21 - *Rhodnius neglectus* Lent, 1954. **Brasil** (Bahia, Mato Grosso, Minas Gerais, Goiás, São Paulo, Paraná, Maranhão, Pernambuco). (6, 11, 24, 33).

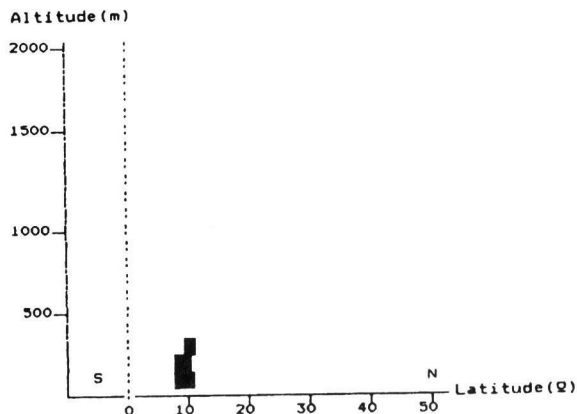
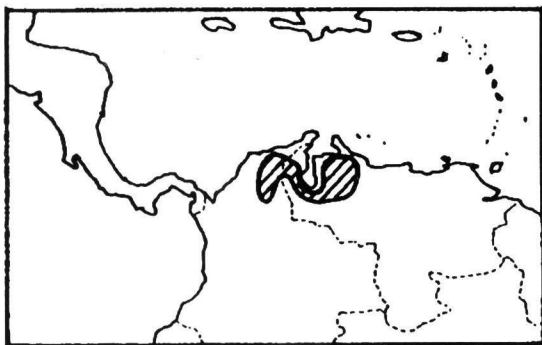


Fig. 17.22 - *Rhodnius neivai* Lent, 1953. **Venezuela** (Lara, Falcón and Zulia). **Colombia** (César) (6, 10, 24, 29, 37).

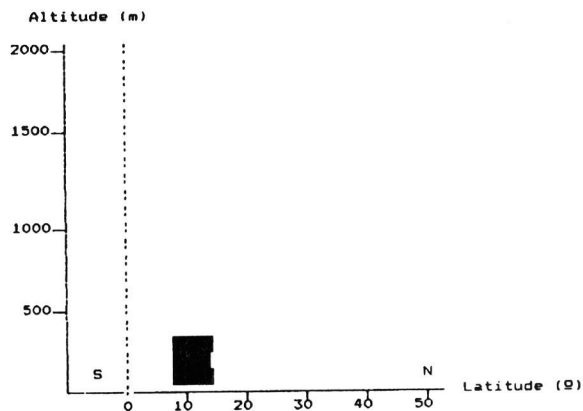
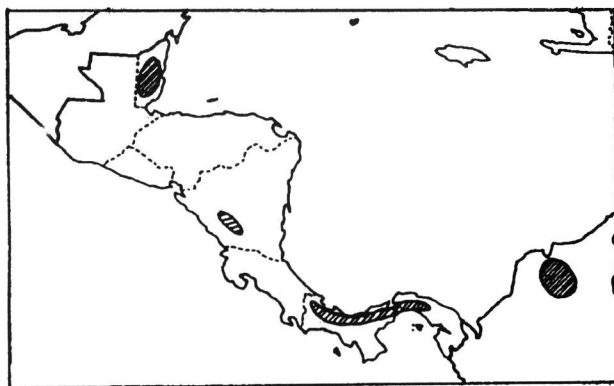


Fig. 17.23 - *Rhodnius pallescens* Barber, 1932. **Panama. Belize. Costa Rica. Colombia** (Bolívar and Sucre) (6, 8, 10, 24, Zeledón inédito).

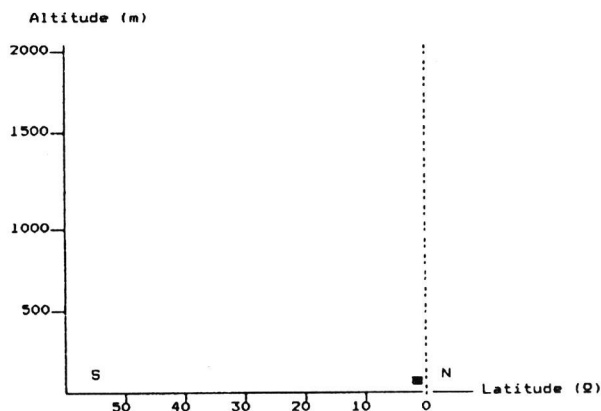
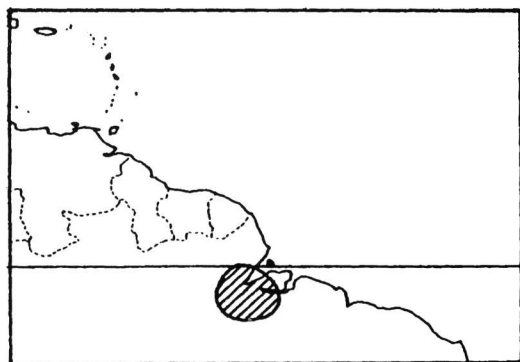


Fig. 17.24 - *Rhodnius paraensis* Sherlock, Guitton & Miles, 1977. **Brasil** (Pará) (6, 11, 24).

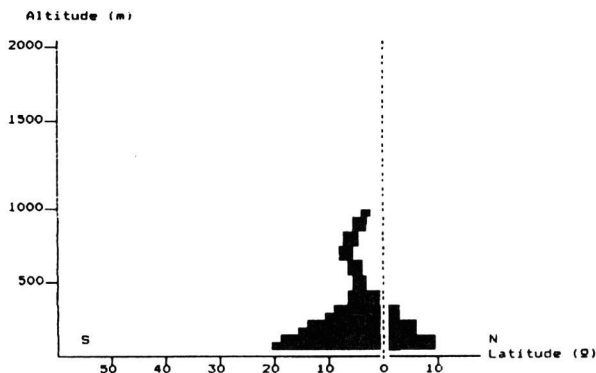
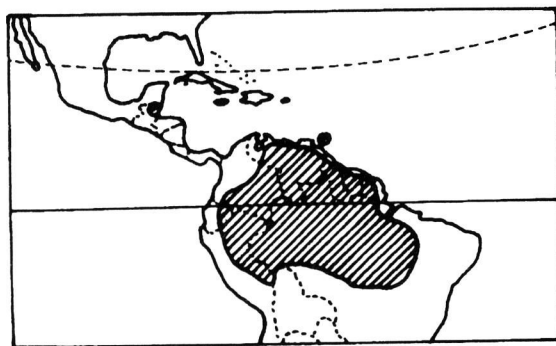


Fig. 17.25 - *Rhodnius pictipes* Stal, 1872. **Brasil** (Goiás, Amazonas, Pará, Maranhão). **Colombia** (Meta and Putumayo). **Equator** (Prov. Azuay). **Peru** (Loreto, Cuzco and San Martín), **Surinam. French Guiana. Guyana. Trinidad. Venezuela** (Anzoátegui, Apure, Aragua, Bolívar, Carabobo, Cojedes, Falcón, Mérida, Miranda, Monagas, Portuguesa, Táchira, Trujillo, Yaracuy, Zulia, Sucre and Territory Delta Amacuro). **Belize.** (3, 4, 6, 8, 10, 11, 20, 24, 29, 32, 33, 35, 37).

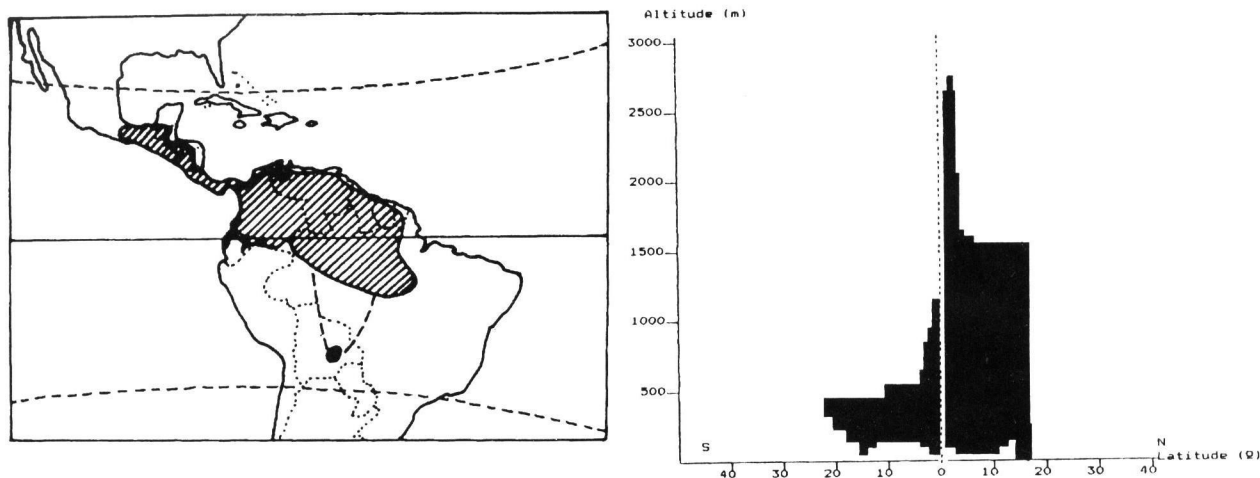


Fig. 17.26 - *Rhodnius prolixus* Stal, 1859. **Mexico** (Oaxaca and Chiapas), **Colombia** (Antioquia, Arauca, Boyacá, Caquetá, Casanare, César, Cundinamarca, Guajira, Huila, Magdalena, Meta, Norte Santander, Putumayo, Santander, Tolima, Vichada). **Surinam**. **Guyana**. **French Guiana**. **Venezuela** (all the States). **Trinidad**. **Brasil** (Amazonas, Goiás, Pará). **Panama**. **Costa Rica**. **Nicaragua**. **Honduras**. **Guatemala**. **El Salvador**. **Bolivia** (Santa Cruz). **Equator** (Esmeraldas, Manabí, Napo, Zamora-Chinchipe). (2, 3, 4, 6, 10, 11, 20, 24, 29, 33, 34, 35, 37, 39, 42).

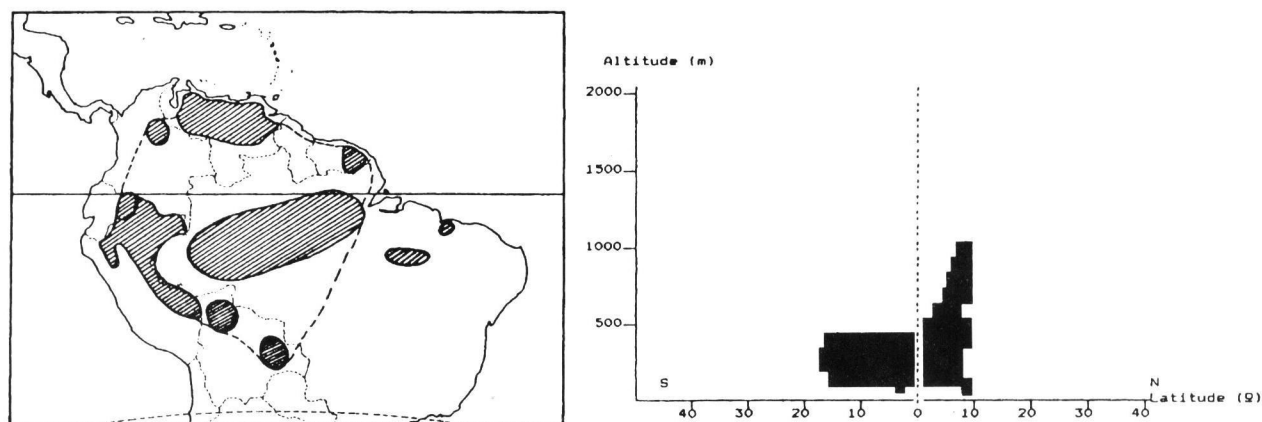


Fig. 17.27 - *Rhodnius robustus* Larrousse, 1927. **Bolivia** (Pandos, Santa Cruz). **Brasil** (Amazonas, Pará, Maranhão, Goiás). **Colombia** (Santander and Norte Santander). **Equator** (Napo). **Venezuela** (Mérida, Falcón, Táchira, Cojedes, Apure, Barinas, Bolívar, Monagas, Sucre and Yaracuy). **Peru** (Cajamarca, Loreto, Madre de Dios). **French Guiana**. (3, 4, 6, 10, 11, 20, 24, 29, 33, 35, 37).

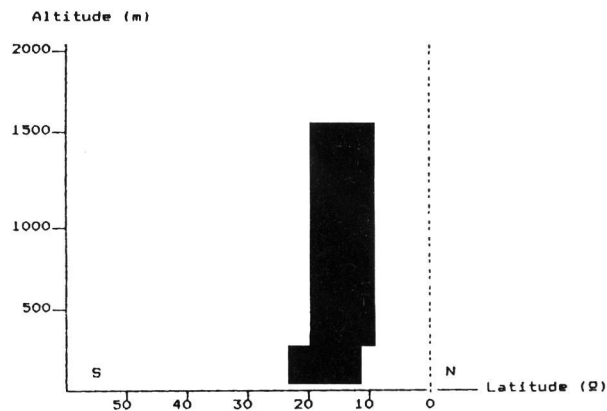
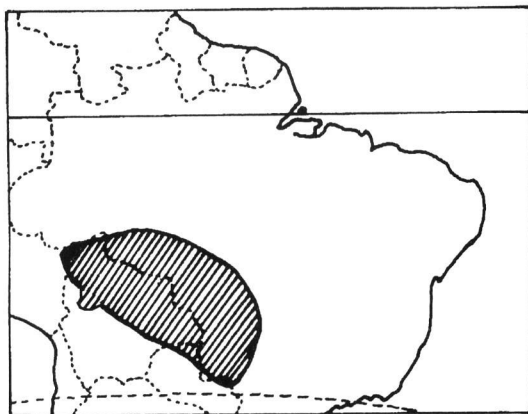


Fig. 17.28 - *Rhodnius stali* Lent, Jurberg & Galvão, 1993. **Brasil** (Mato Grosso). **Bolivia** (Beni, Chapare, La Paz, Santa Cruz, probably Pando) (23, 53 and unpublished data).

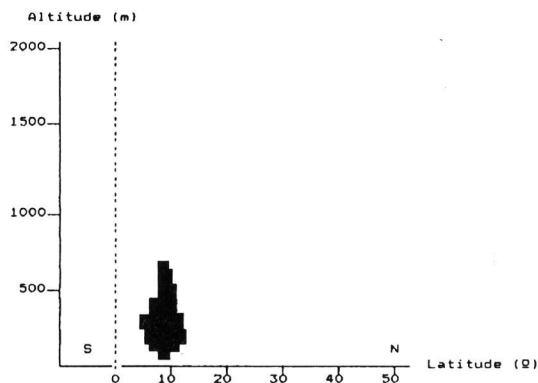
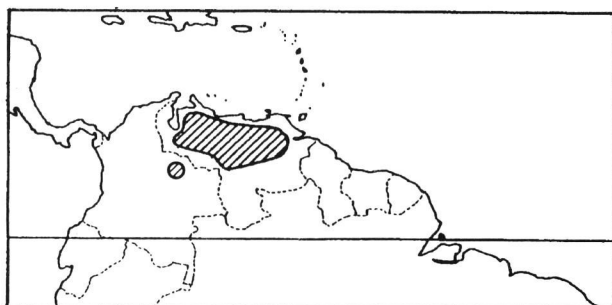


Fig. 17.29 - *Psammolestes arthuri* Pinto, 1926. **Venezuela** (Aragua, Cojedes, Miranda, Portuguesa, Guárico, Yaracuy, Anzoátegui, Apure, Lara, Táchira, Barinas and Monagas). **Colombia** (Meta) (6, 10, 24, 29, 37).

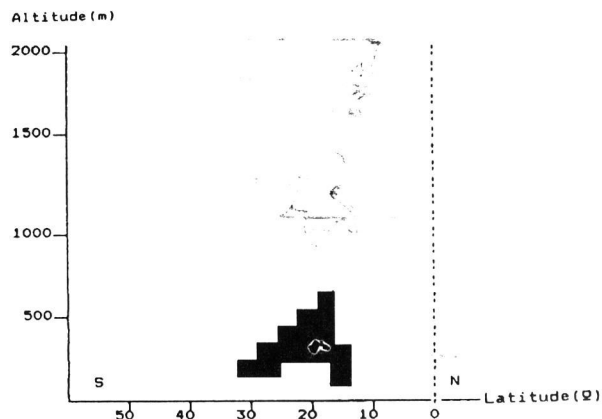
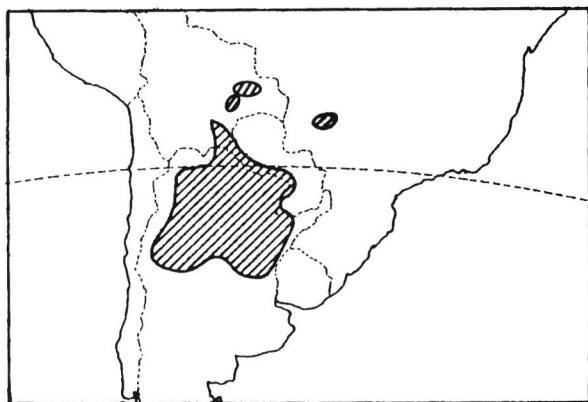


Fig. 17.30 - *Psammolestes coreodes* Bergroth, 1911. **Argentina** (Córdoba, Catamarca, Corrientes, Chacho, Entre Ríos, Santa Fe, Santiago del Estero, Formosa, La Rioja, Salta, Jujuy. **Paraguay** (Central). **Bolivia** (Santa Cruz). **Brasil** (Mato Grosso). (3, 6, 18, 24, 25, 33, 53).

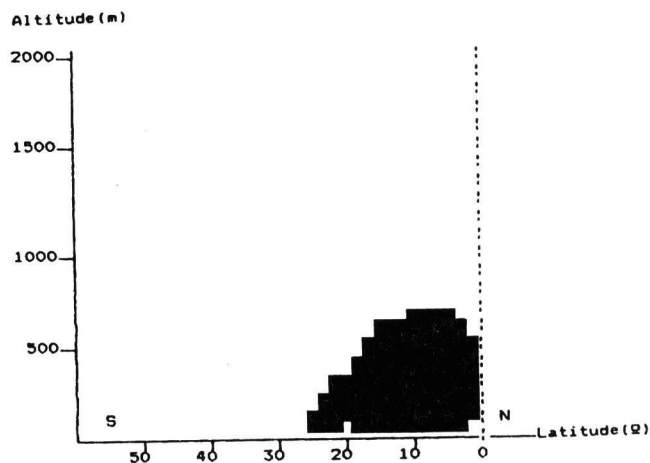
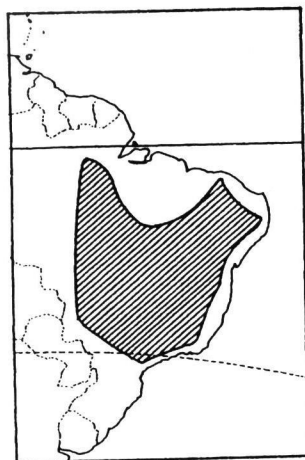


Fig. 17.31 - *Psammolestes tertius* Lent & Jurberg, 1965. **Brasil** (Bahia, Ceará, Goiás, Mato Grosso, Minas Gerais, Pará, Paraíba, Pernambuco, São Paulo) (6, 11, 24).

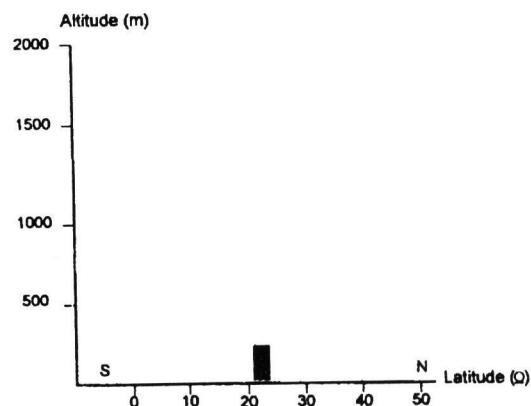
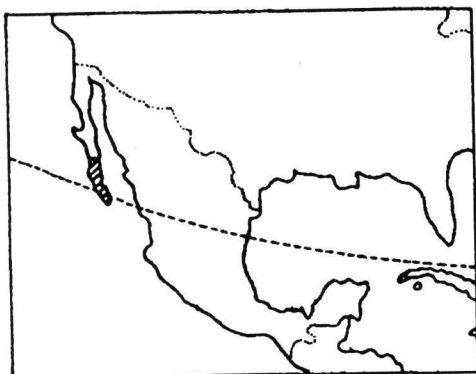


Fig. 17.32 - *Dipetalogaster maxima* (Uhler, 1894) **Mexico** (Baja California Sur) (2, 6, 24, 34, 38, 39).

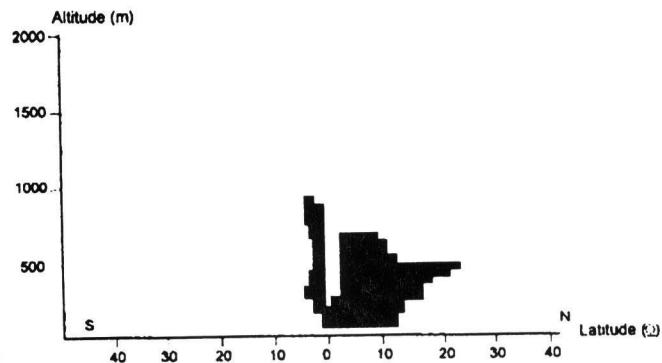
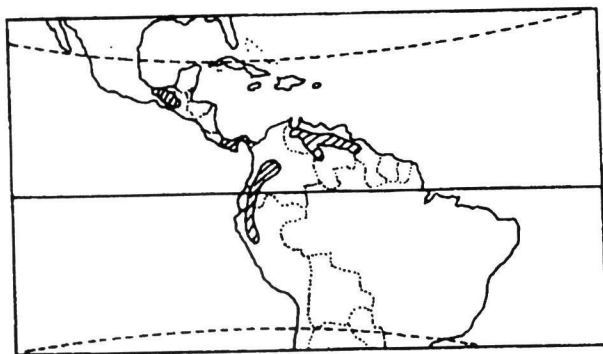


Fig. 17.33 - *Eratyrus cuspidatus* Stal, 1859. **Colombia** (Boyacá, Norte Santander, Sucre). **Equator** (Esmeraldas, Loja). **Venezuela** (Anzoátegui, Aragua, Falcón, Trujillo, Yaracuy, Táchira, Sucre, Zulia). **Peru** (Piura and Tumbes). **Panama**. **Guatemala**. **Mexico** (Chiapas) In South America, it occurs west of the Andes in the whole area of distribution. (2, 4, 6, 8, 10, 20, 24, 29, 34, 35, 39).

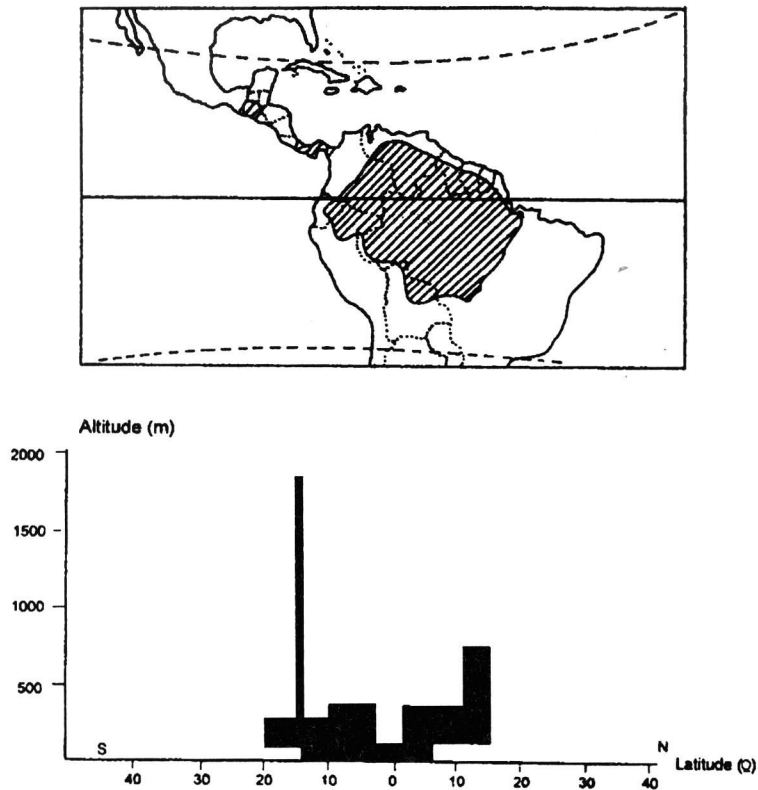


Fig. 17.34 - *Eratyrus mucronatus* Stal, 1859. **Panama.** **Guatemala.** **Bolivia** (Beni, La Paz). **Brasil** (Amazonas, Mato Grosso, Pará, Goiás, Maranhão). **Colombia** (Meta, Norte Santander). **Ecuador** (Esmeraldas). **Peru** (Loreto, Madre de Dios). **French Guiana.** **Guyana.** **Surinam.** **Venezuela** (Yaracuy, Aragua, Barinas, Carabobo, Guárico, Mérida, Monagas, Portuguesa, Zulia, Cojedes, Falcón, Lara, Sucre, Trujillo, Táchira). **Trinidad.** (3, 6, 8, 10, 11, 20, 24, 29, 33, 35, 37, 51).

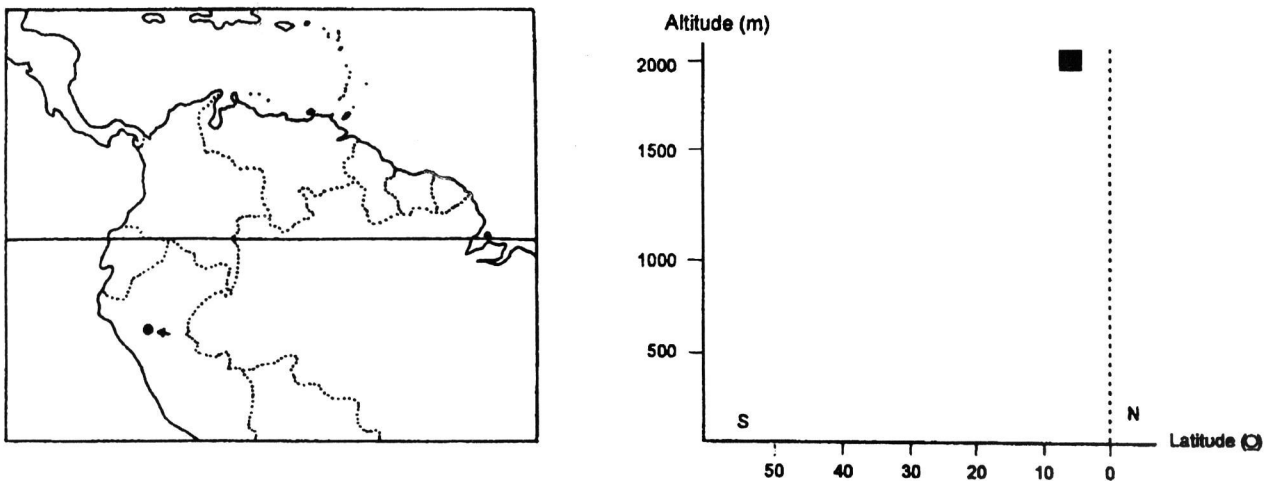


Fig. 17.35 - *Hermanlenticia matsunoi* (Fernández Loayza, 1989). **Peru** (La Libertad) (12).

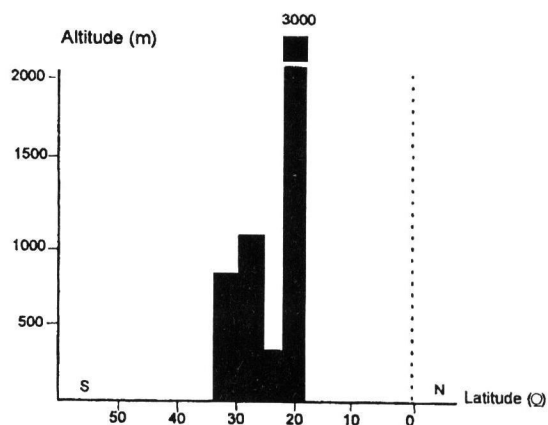
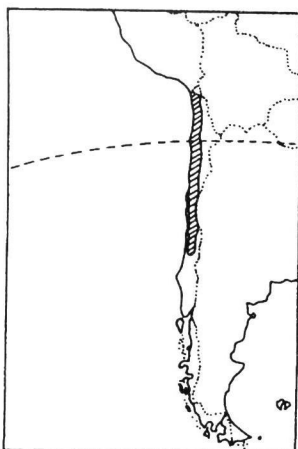


Fig. 17.36 - *Mepraia spinolai* (Porter, 1934). **Chile** (found in the seven Provinces between parallels 18° S and 34° S.(6, 24, 30).

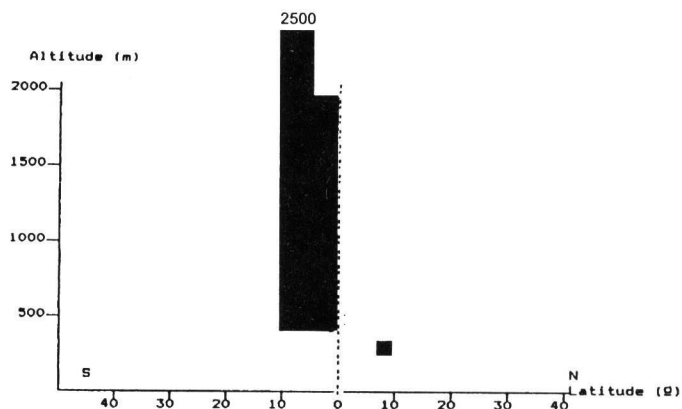
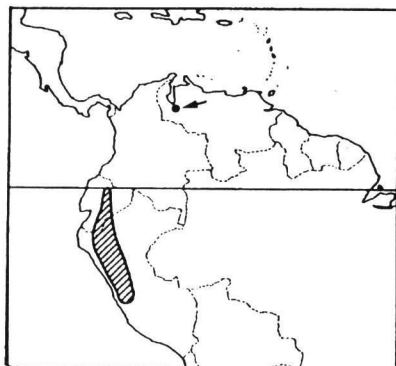


Fig. 17.37 - *Panstrongylus chinai* (Del Ponte, 1929). **Equator** (Loja). **Peru** (Tumbes, Piura, La Libertad, Amazonas, Ancash, Cajamarca). (6, 8, 9, 20, 24).

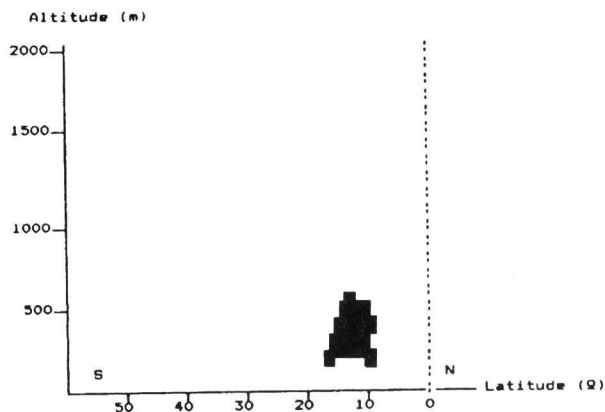
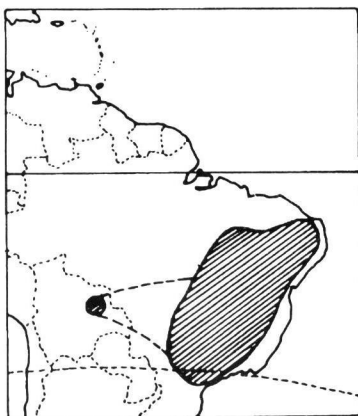


Fig. 17.38 - *Panstrongylus diasii* Pinto & Lent, 1946. **Bolivia** (Santa Cruz). **Brasil** (Bahia, Goiás, Minas Gerais, São Paulo) (3, 6, 9, 11, 24, 33).

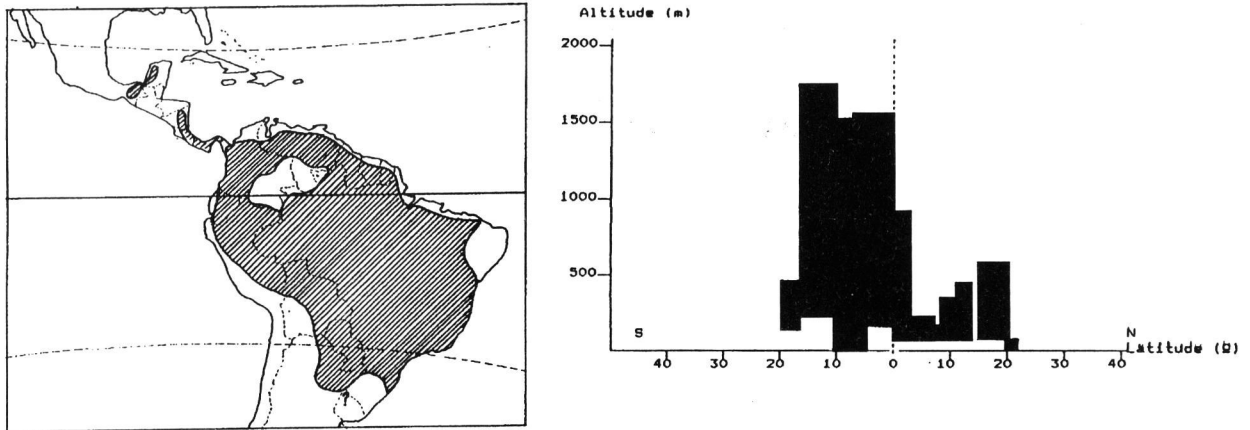


Fig. 17.39 - *Panstrongylus geniculatus* (Latreille, 1811). **Argentina** (Corrientes, Chaco, Entre Ríos, Formosa, Misiones, Santa Fe, Santiago del Estero). **Bolivia** (Beni, Tarija, Santa Cruz). **Brasil** (Acre, Amapá, Amazonas, Bahia, Brasília, Ceará, Espírito Santo, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraná, Rio de Janeiro, Rondônia, São Paulo). **Colombia** (Antioquia, Cauca, Cundinamarca, Huila, Norte Santander, Putumayo, Santander, Sucre, Tolima, Valle). **Ecuador** (Manabí, Imbabura, Pastaza). **Peru** (Cajamarca, Junín, Loreto). **Paraguay** (Concepción, Caaguazú, Paraguari, Alto Paraná, Nueva Asunción). **Uruguay**. **Venezuela** (Anzoátegui, Aragua, Bolívar, Carabobo, Falcón, Guárico, Lara, Mérida, Miranda, Monagas, Táchira, Yaracuy, Zulia, Federal District, Territory Delta Amacuro, Portuguesa, Cojedes, Trujillo, Territory Amazonas). **Guyana**. **French Guiana**. **Surinam**. **Trinidad**. **Panama**. **Costa Rica**. **Nicaragua**. **Guatemala (?)**. **Mexico** (Yucatán, Chiapas, Veracruz) (3, 4, 6, 8, 9, 10, 11, 15, 18, 24, 25, 29, 33, 34, 35).

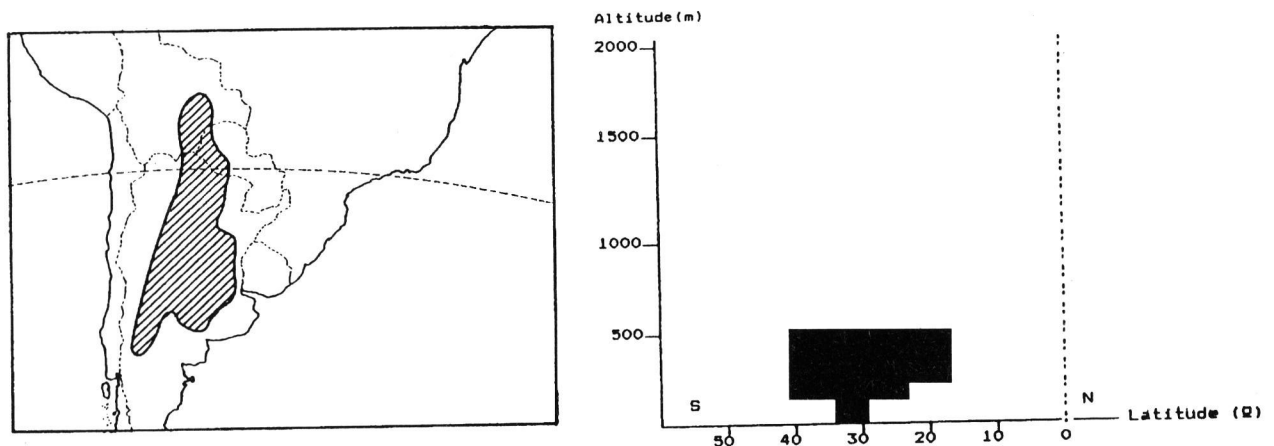


Fig. 17.40 - *Panstrongylus guentheri* Berg, 1879. **Argentina** (Buenos Aires, Catamarca, Córdoba, Corrientes, Chaco, Entre Ríos, Formosa, Jujuy, La Pampa, La Rioja, Mendoza, Neuquén, Río Negro, Salta, San Juan, San Luis, Santa Fe, Santiago del Estero, Tucumán) **Bolivia** (Santa Cruz, Tarija). **Paraguay** (Boquerón). **Uruguay** (3, 6, 9, 18, 24, 25).

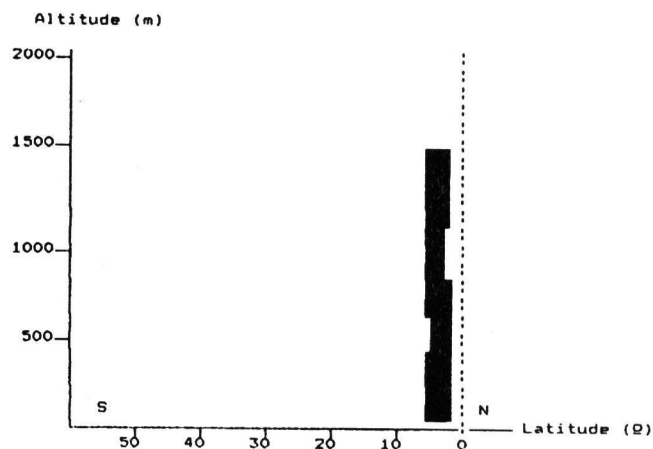
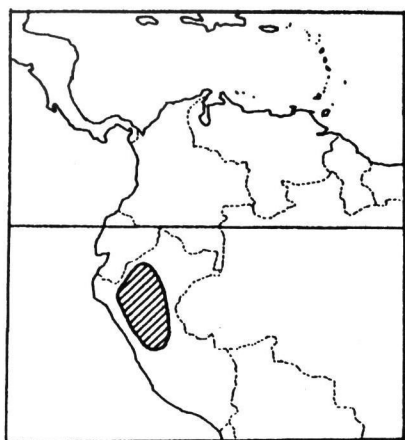


Fig. 17.41 - *Panstrongylus herreri* Wygodzinsky, 1948. **Peru** (Amazonas, San Martín, Piura, Cajamarca) (6, 8, 9, 24).

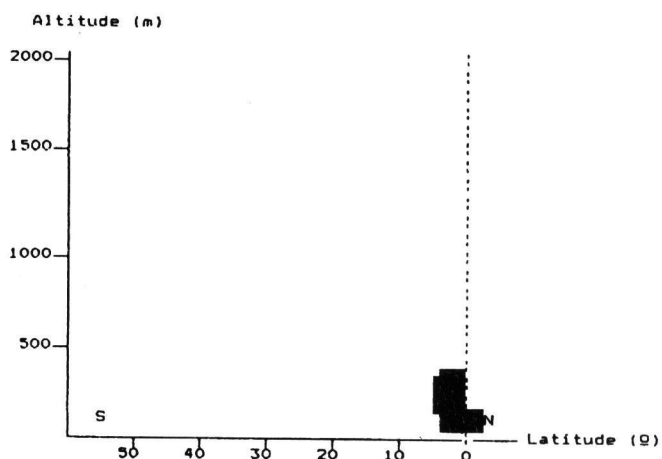
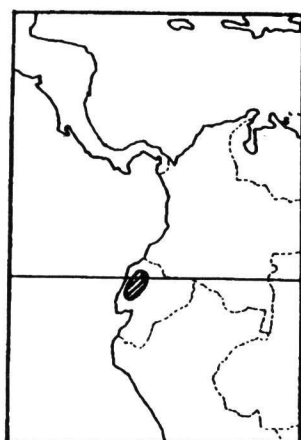


Fig. 17.42 - *Panstrongylus howardi* (Neiva, 1911). **Ecuador** (Manabí) (6, 9, 20, 24).

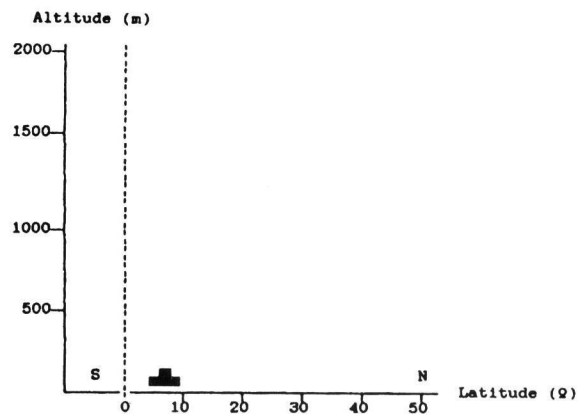
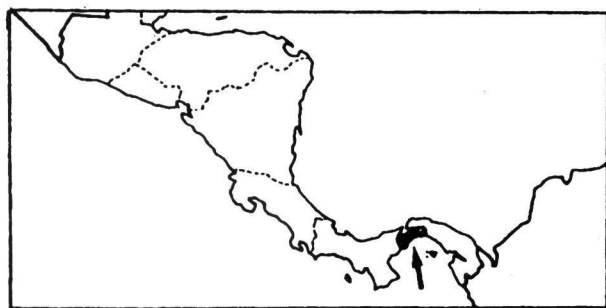


Fig. 17.43 - *Panstrongylus humeralis* (Usinger, 1939). **Panama** (6, 8, 9, 24, 35).

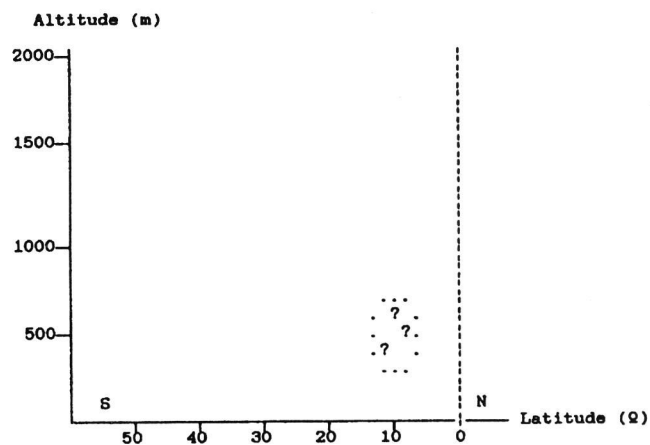
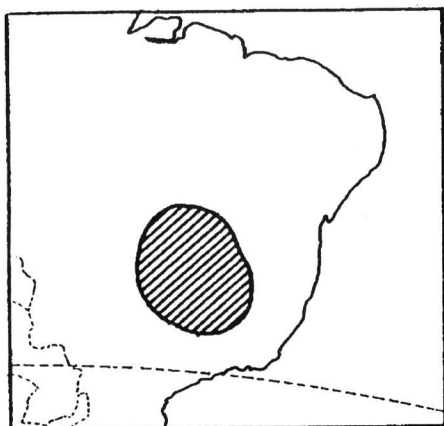


Fig. 17.44 - *Panstrongylus lenti* Galvão & Palma, 1968. **Brasil** (Goiás) (24, 43).

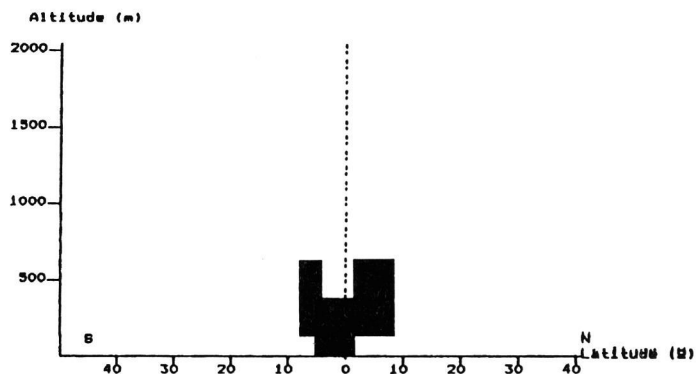
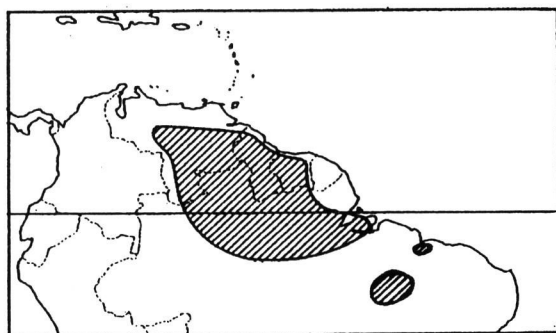


Fig. 17.45 - *Panstrongylus lignarius* (Walker, 1873). **Brasil** (Amazonas, Pará, Goiás, Maranhão). **Venezuela** (Portuguesa). **Guyana**. **Surinam**. (6, 9, 11, 24, 29, 33, 35, 37).

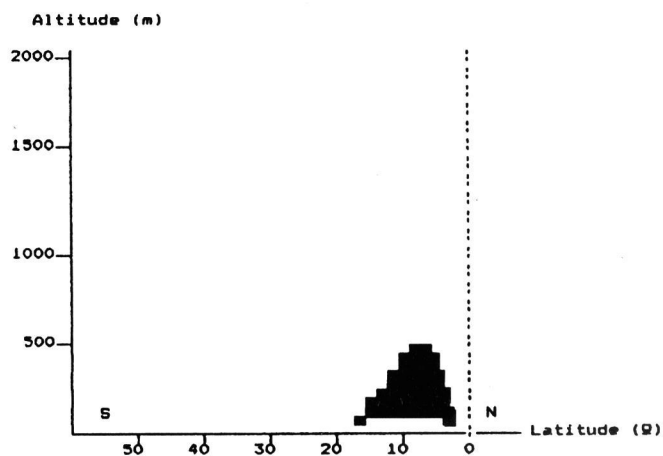
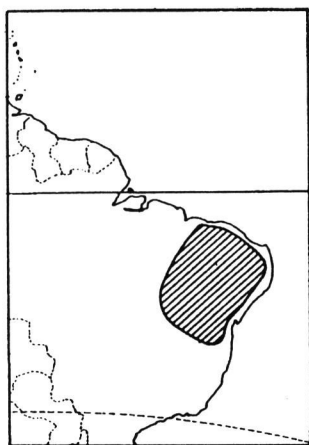


Fig. 17.46 - *Panstrongylus lutzi* (Neiva & Pinto, 1923). **Brasil** (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe) (6, 9, 11, 24, 33).

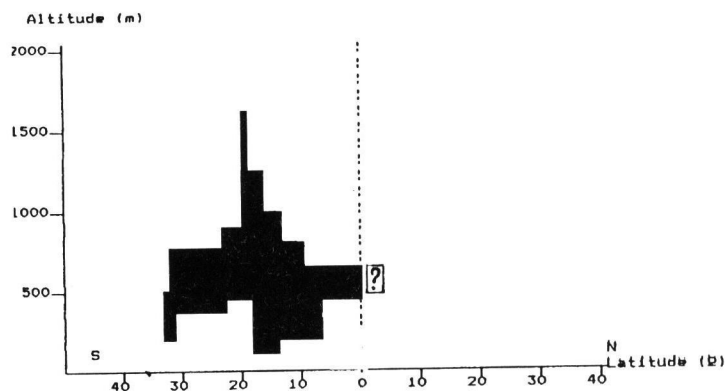


Fig. 17.47 - *Panstrongylus megistus* (Burmeister, 1835). **Argentina** (Misiones, Corrientes, Salta, Jujuy). **Brasil** (Alagoas, Bahia, Ceará, Espírito Santo, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraíba, Paraná, Pernambuco, Piauí, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina, São Paulo, Sergipe). **Bolivia** (Santa Cruz). **Paraguay** (Cordillera). **Uruguay**. (3, 6, 9, 11, 13, 14, 15, 18, 24, 25, 33, 53).

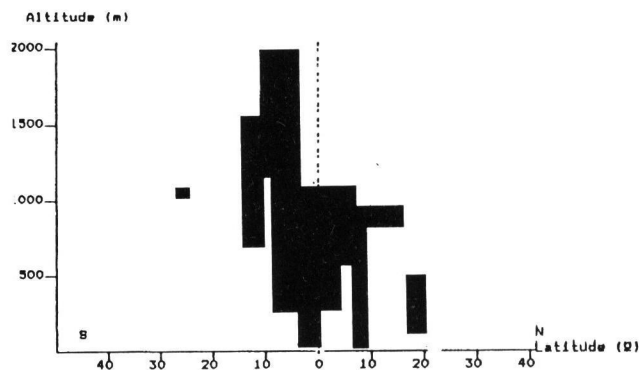
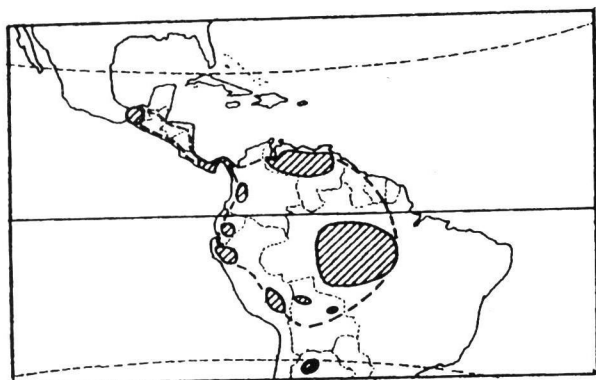


Fig. 17.48 - *Panstrongylus rufotuberculatus* (Champion, 1899) **Mexico** (Chiapas). **Costa Rica**. **Panama**. **Colombia** (Cauca, Meta, Valle). **Venezuela** (Aragua, Carabobo, Cojedes, Falcón, Guárico, Lara, Monagas, Portuguesa, Yaracuy, Trujillo, Zulia, Sucre, Táchira, Federal District, Territory Delta Amacuro) **Ecuador** (Manabí, Guayas, El Oro, Imbabura, Pichincha, Loja). **Peru** (Tumbes, Cuzco, Piura). **Bolivia** (La Paz, Beni, Santa Cruz). **Brasil** (Amazonas, Pará, Mato Grosso). **Argentina** (Jujuy) (2, 3, 4, 6, 8, 9, 10, 11, 20, 24, 29, 34, 37, 52).

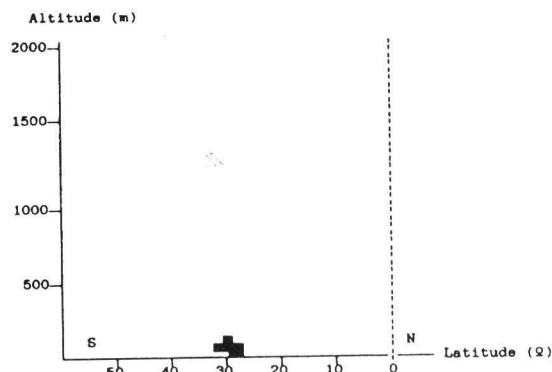


Fig. 17.49 - *Panstrongylus tupynambai* Lent, 1942. **Brasil** (Rio Grande do Sul). **Uruguay**. (6, 9, 11, 15, 24, 33).

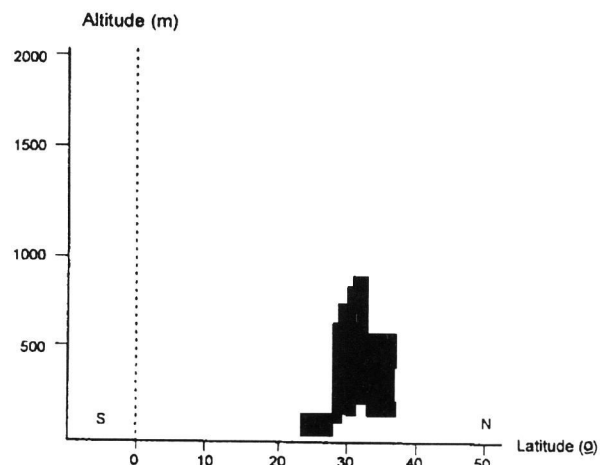
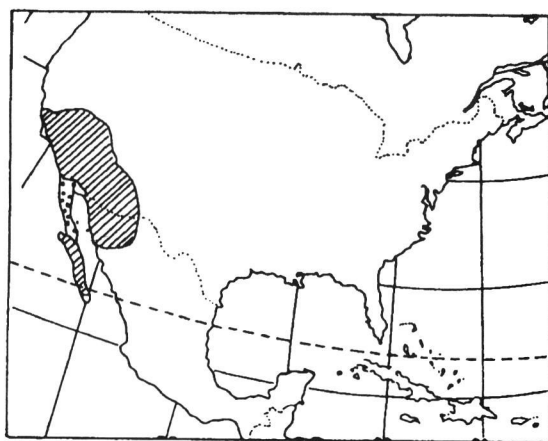


Fig. 17.50 - *Paratriatoma hirsuta* Barber, 1938. **United States** (California, Nevada, Arizona). **Mexico** (Sonora, Baja California Sur, Baja California Norte). (2, 6, 17, 24, 34, 36, 39).

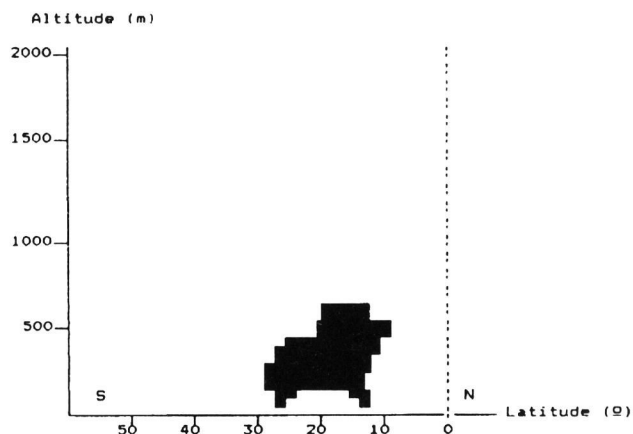
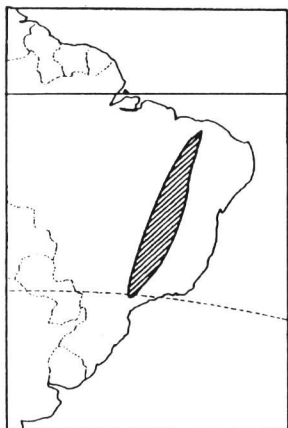


Fig. 17.51 - *Triatoma arthurneivai* Lent & Martins, 1940. **Brasil** (Minas Gerais, São Paulo, Bahia, Piauí) (6, 11, 24).

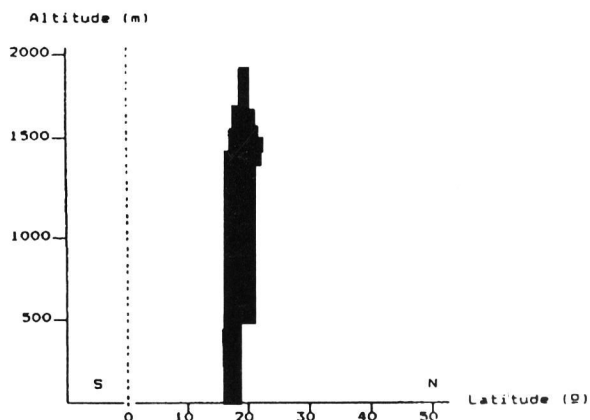


Fig. 17.52 - *Triatoma barberi* Usinger, 1939. **Mexico** (Colima, Hidalgo, Jalisco, Michoacán, Morelos, Oaxaca, Puebla, Guerrero, Tlaxcala, Guanajuato, Querétaro, Federal District) (2, 6, 19, 24, 34, 39).

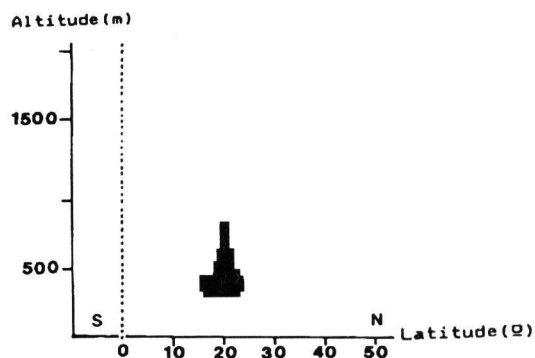
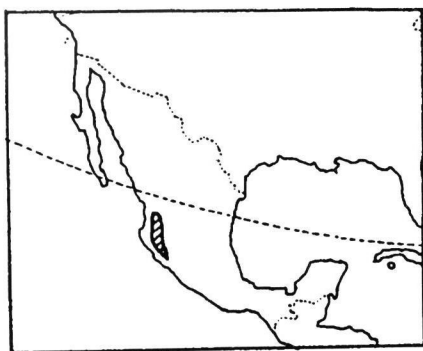


Fig. 17.53 - *Triatoma bolivari* Carcavallo, Martínez & Peláez, 1987. **Mexico** (Colima, Nayarit, Jalisco) (7, 19).

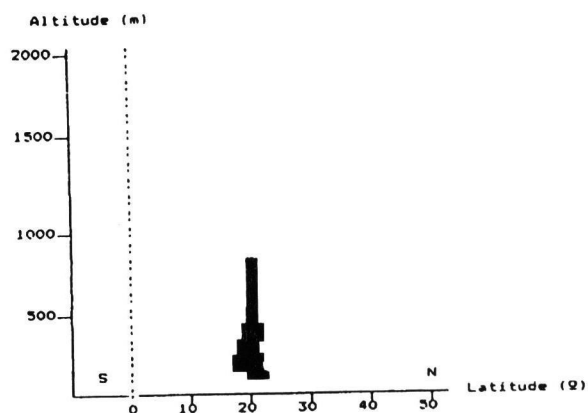


Fig. 17.54 - *Triatoma brailovskyi* Martínez, Carcavallo & Peláez, 1984. **Mexico** (Nayarit, Colima, Jalisco). (6, 19, 39).

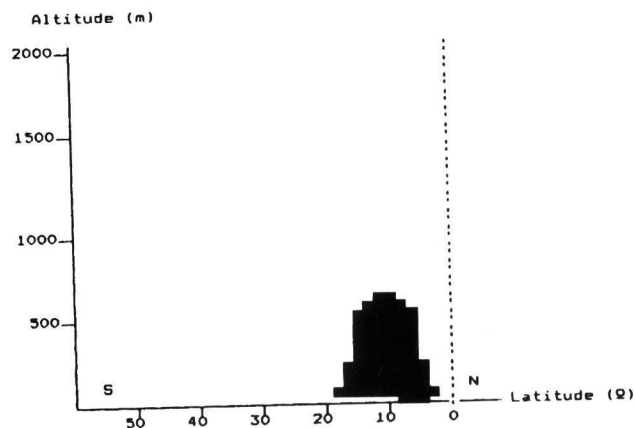
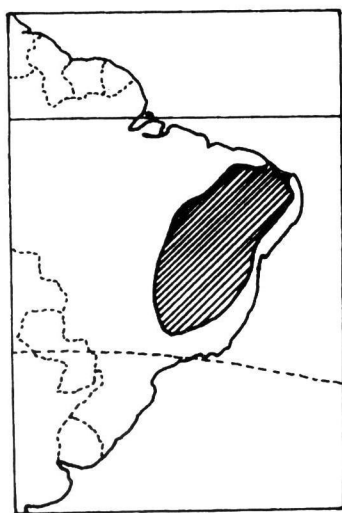


Fig. 17.55 - *Triatoma brasiliensis* Neiva, 1911. **Brasil** (Alagoas, Minas Gerais, Bahia, Ceará, Goiás, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe) (6, 11, 13, 24, 33).

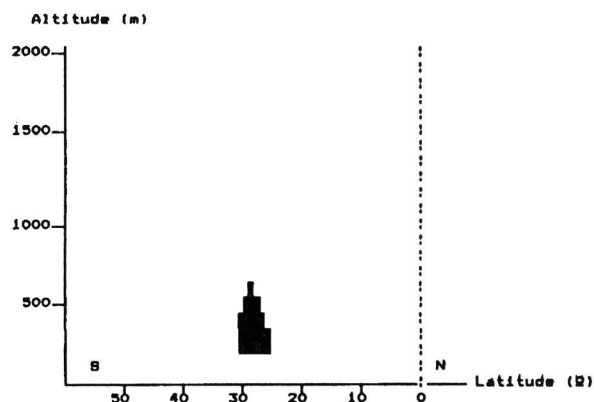


Fig. 17.56 - *Triatoma breyeri* Del Ponte, 1929. **Argentina** (Córdoba, La Rioja, Catamarca) (6, 24, 25).

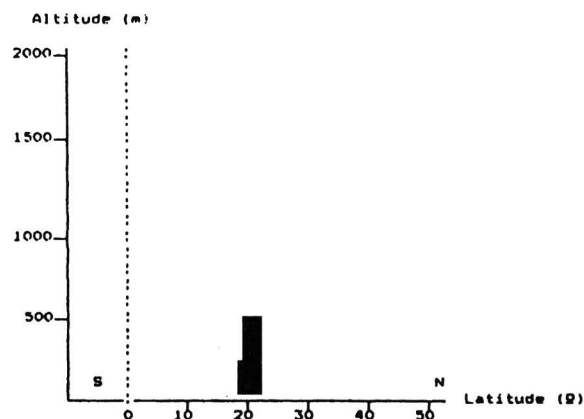


Fig. 17.57 - *Triatoma bruneri* Usinger, 1944. **Cuba**. (19, 38).

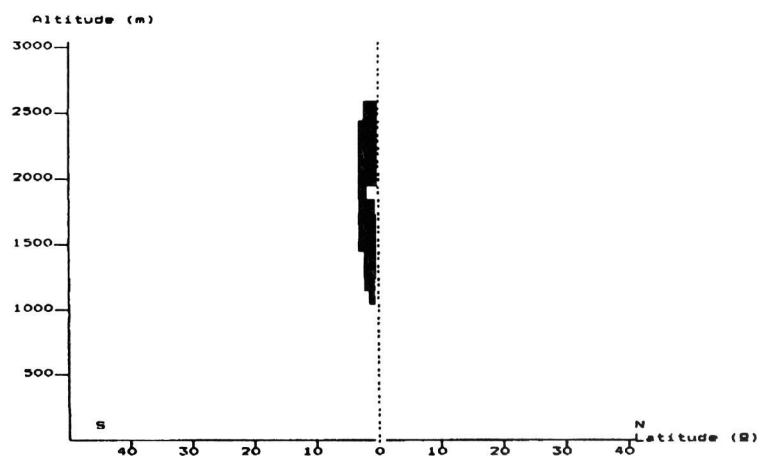


Fig. 17.58 - *Triatoma carrioni* Larrousse, 1926. **Equator** (El Oro, Cañar, Azuar, Zamora-Chinchiipe). **Peru** (Piura, Cajamarca, probably intermediates Departments) (6, 8, 20, 24).

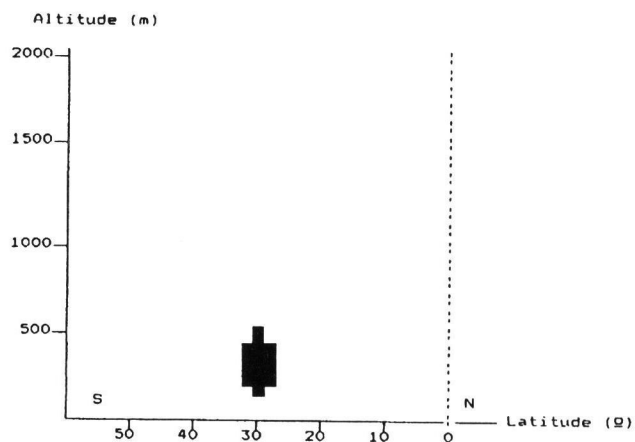
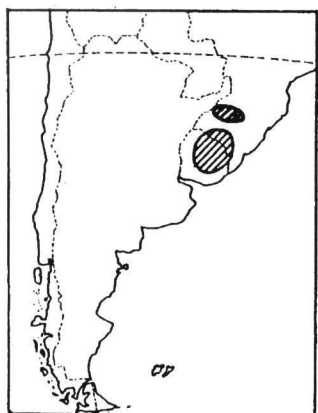


Fig. 17.59 - *Triatoma circummaculata* Stal, 1859. **Brasil** (Rio Grande do Sul). **Uruguay** (6, 11, 15, 24, 33).

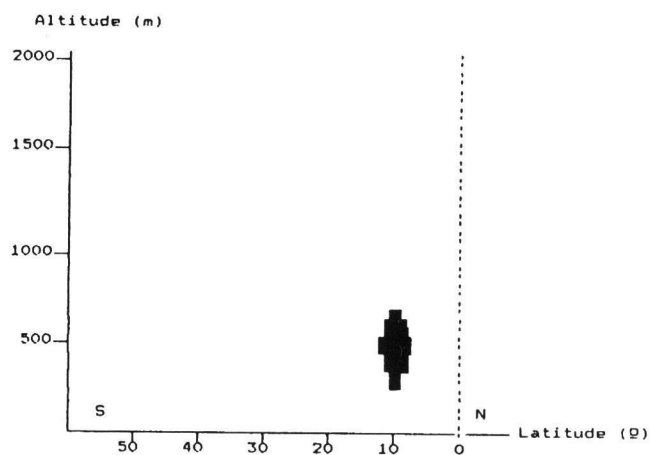
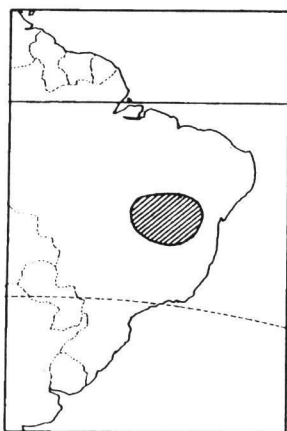


Fig. 17.60 - *Triatoma costalimai* Verano & Galvão, 1959. **Brasil** (Goiás) (6, 11, 24).

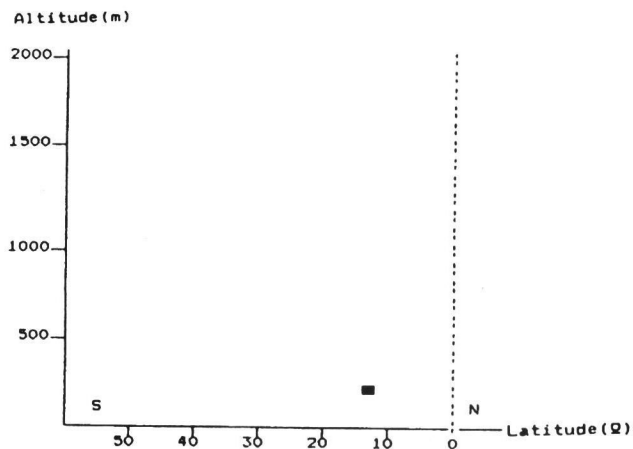
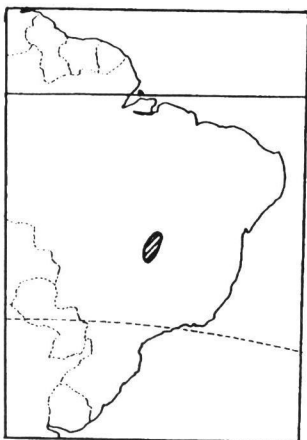


Fig. 17.61 - *Triatoma deanei* Galvão, Souza & Lima, 1967. **Brasil** (Goiás) (6, 11, 24).

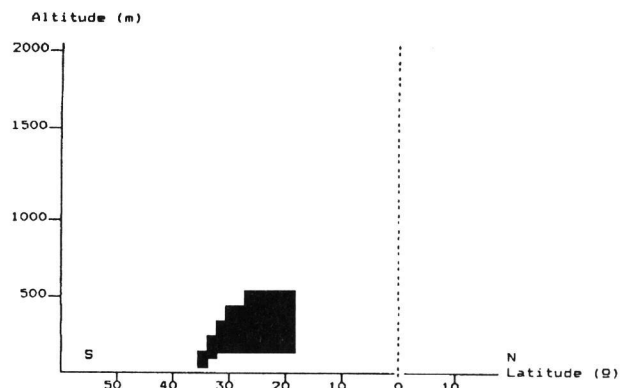


Fig. 17.62 - *Triatoma delpontei* Romaña & Abalos, 1947. **Argentina** (Buenos Aires, Catamarca, Córdoba, Corrientes, La Rioja, Salta, Santa Fe, Santiago del Estero, Tucumán, Chaco, Jujuy, Formosa, La Pampa). **Bolivia** (Santa Cruz). **Uruguay**. **Paraguay** (Presidente Hayes) (6, 24, 25, 53).

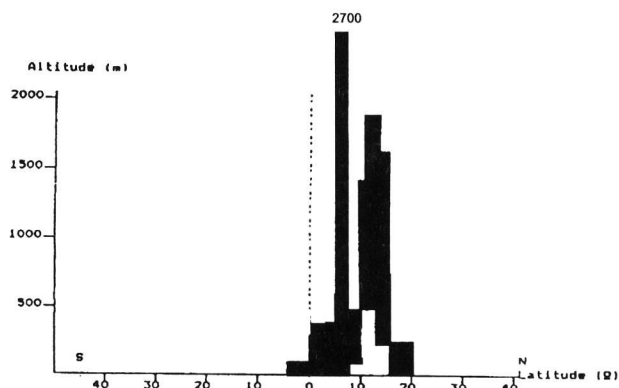
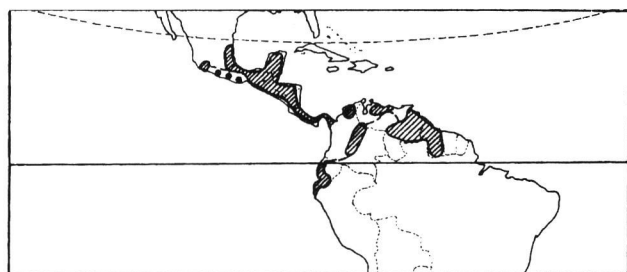


Fig. 17.63 - *Triatoma dimidiata*. (Latreille, 1811) **Mexico** (Campeche, Chiapas, Guerrero, Jalisco, Nayarit, Oaxaca, Puebla, Quintana Roo, San Luis Potosí, Tabasco, Veracruz, Yucatán) **Belize**. **Honduras**. **Guatemala**. **El Salvador**. **Nicaragua**. **Costa Rica**. **Panama**. **Venezuela** (Cojedes, Carabobo, Yaracuy, Bolívar, Falcón, Territory delta Amacuro, Federal District). **Guyana**. **Colombia** (Cundinamarca, Boyacá, Huila, Norte Santander, Magdalena, Casanare, Santander). **Ecuador** (Guayas, Manabí, Esmeraldas, El Oro, Los Rios, Bolívar, Morona Santiago). **Peru** (Tumbes) (2, 6, 10, 20, 24, 29, 34, 35, 37, 38, 39, 40).

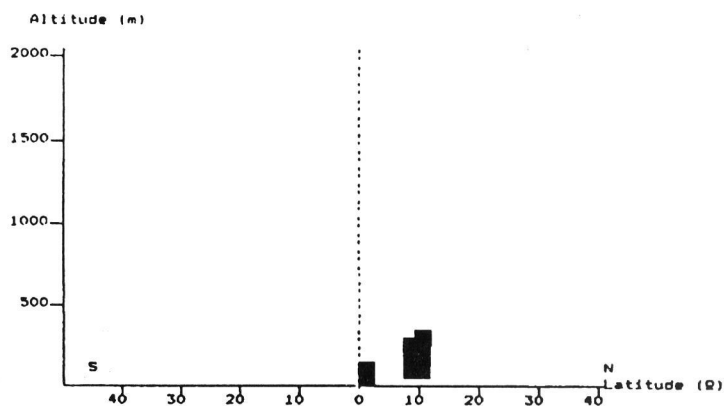
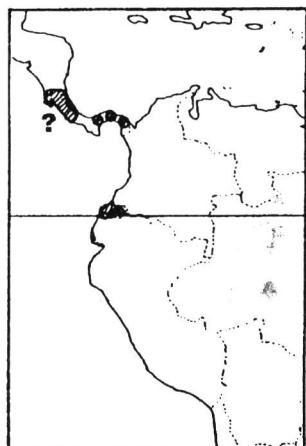


Fig. 17.64 - *Triatoma dispar* Lent, 1950. **Panama**. **Costa Rica**. **Equator** (Guayas, Imbabura). (6, 20, 24, 35).

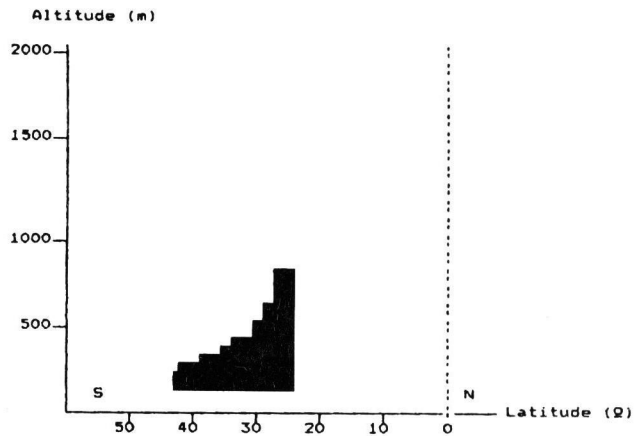
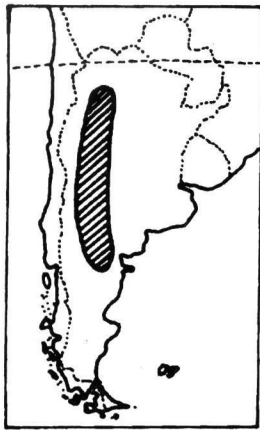


Fig. 17.65 - *Triatoma eratyrusiformis* Del Ponte, 1929. **Argentina** (Catamarca, Córdoba, La Pampa, La Rioja, Mendoza, Neuquén, Río Negro, Salta, San Juan, San Luis, Tucumán) (6, 24, 25).

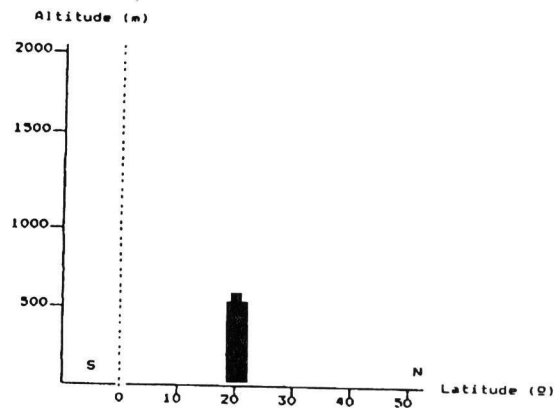
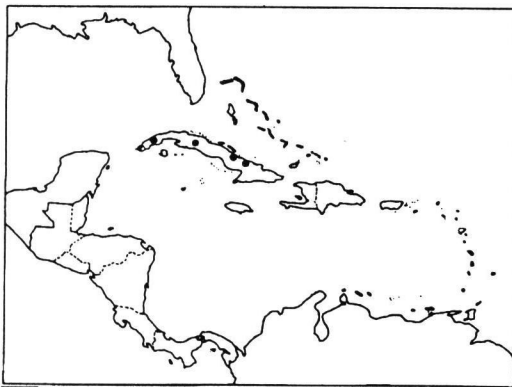


Fig. 17.66 - *Triatoma flavida* Neiva, 1911. **Cuba**. (6, 19, 24, 35, 38).

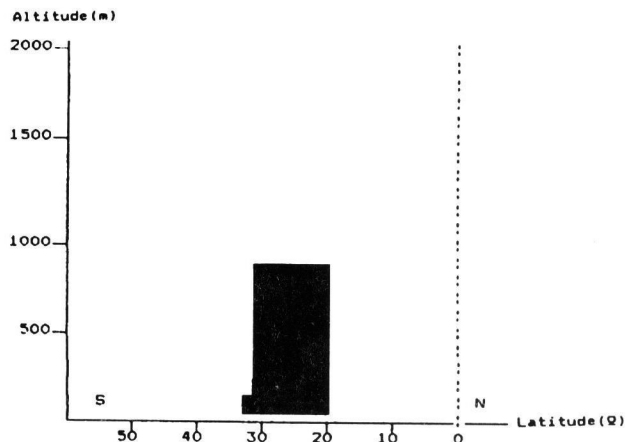
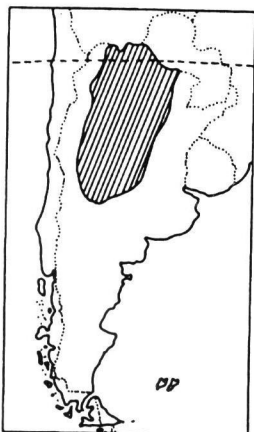


Fig. 17.67 - *Triatoma garciabesi* Carcavallo, Cichero, Martínez, Prosen & Ronderos, 1967. **Argentina** (Salta, Jujuy, Tucumán, Santiago del Estero, Córdoba, Catamarca, La Rioja, San Juan, Mendoza, Santa Fe, NW Formosa, NW Chaco) (6, 25, 46).

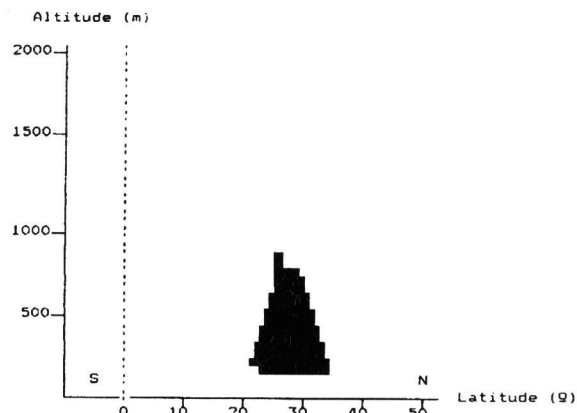


Fig. 17.68 - *Triatoma gerstaeckeri* (Stal, 1859) **United States** (New Mexico, Texas). **Mexico** (Chihuahua, Coahuila, Nuevevo León, San Luis Potosí, Tamaulipas) (2, 6, 19, 24, 34, 36, 38, 39).

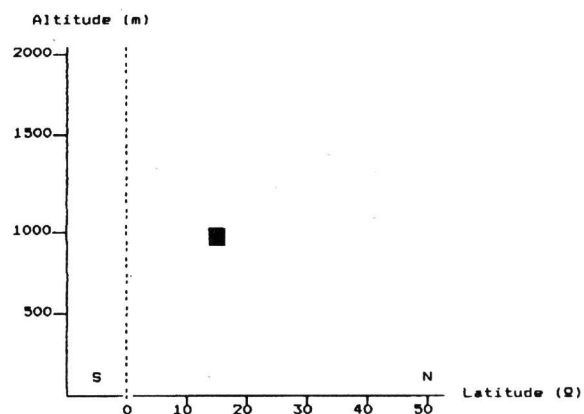


Fig. 17.69 - *Triatoma gomeznunezi* Martínez, Carcavallo & Jurberg, 1994. **Mexico** (Oaxaca) (19, 26).

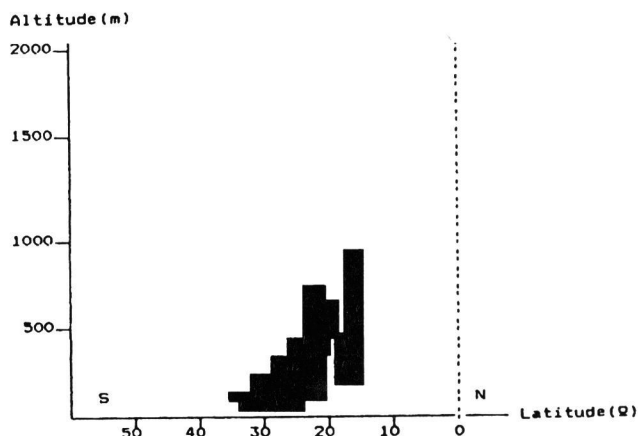


Fig. 17.70 - *Triatoma guasayana* Wygodzinsky & Abalos, 1949. **Argentina** (Buenos Aires, Catamarca, Córdoba, Chaco, Jujuy, La Pampa, La Rioja, Mendoza, Salta, San Juan, San Luis, Santa Fe, Santiago del Estero, Tucumán). **Paraguay** (Alto Paraguay, Boquerón, Nueva Asunción, Paraguari, Presidente Hayes). **Bolivia** (Santa Cruz, Tarija, La Paz) (3, 6, 18, 24, 25, 44).

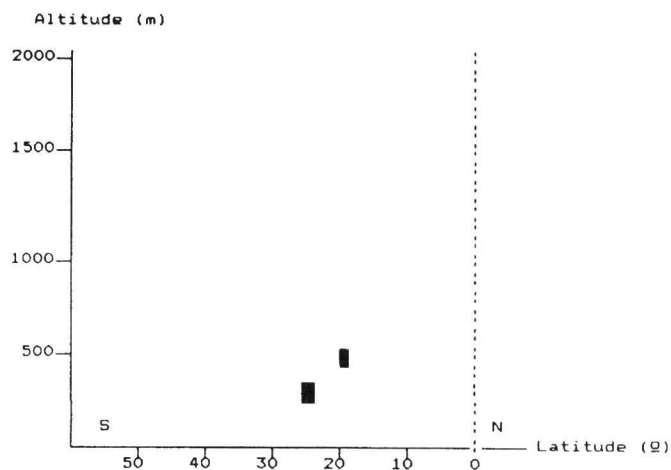


Fig. 17.71 - *Triatoma guazu* Lent & Wygodzinsky, 1979. **Paraguay** (type locality: Villarica). **Brasil** (Mato Grosso) (6, 18, 22, 24).

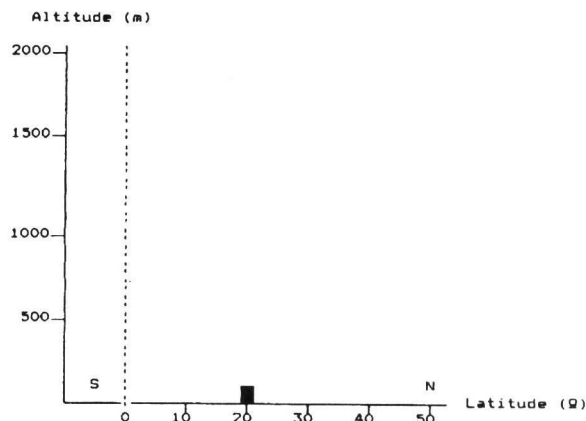


Fig. 17.72 - *Triatoma hegneri* Mazzotti, 1940. **Mexico** (Quintana Roo) (2, 6, 19, 24 34, 38, 39).

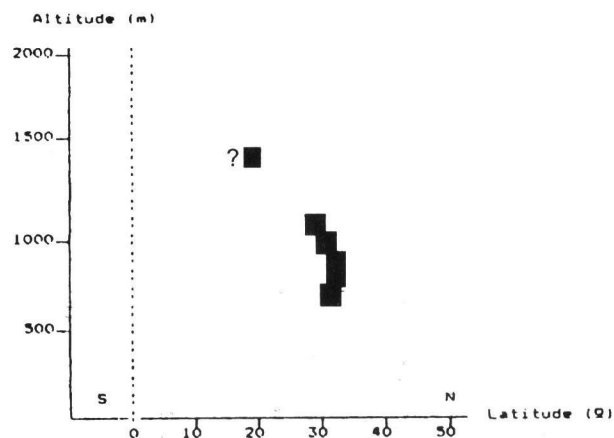
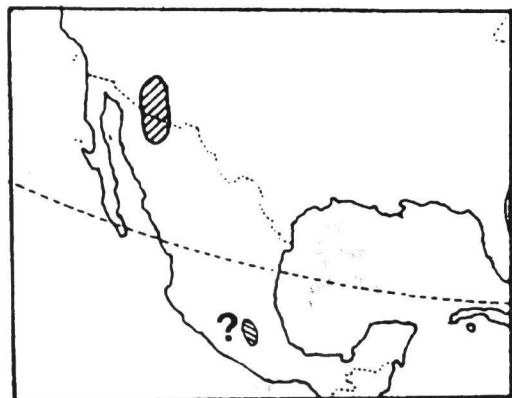


Fig. 17.73 - *Triatoma incassata* Usinger, 1939. **Mexico** (Sonora, Valle de México (?)). **United States** (Arizona) (2, 6, 19, 24, 34, 36, 38, 39).

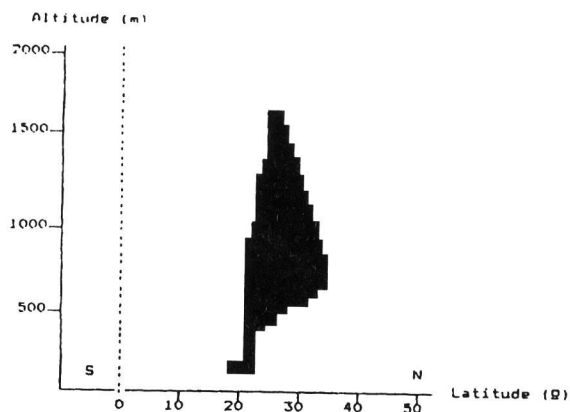


Fig. 17.74 - *Triatoma indictiva* Neiva, 1912. **United States** (Arizona, New Mexico, Texas). **Mexico** (Chihuahua, Sinaloa) (2, 6, 19, 24, 34, 36, 38, 39).

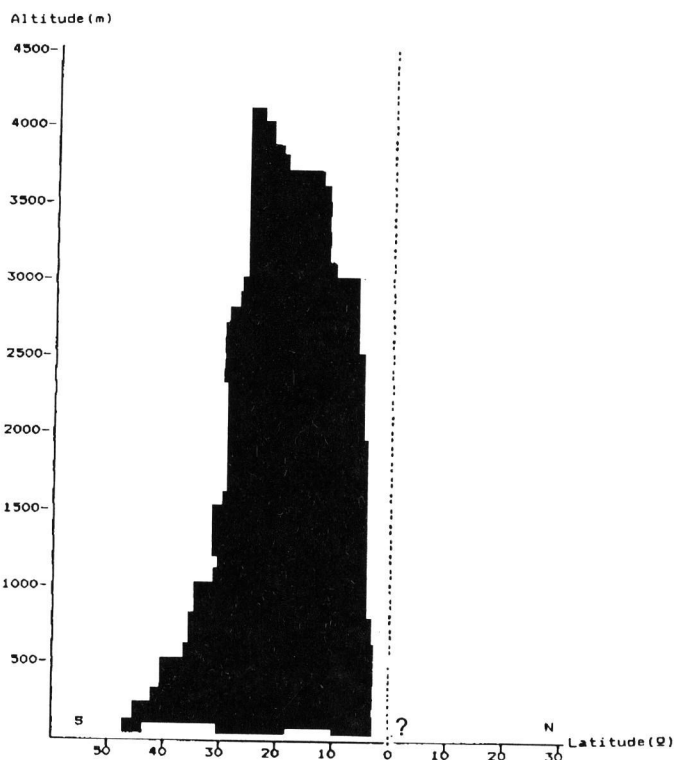
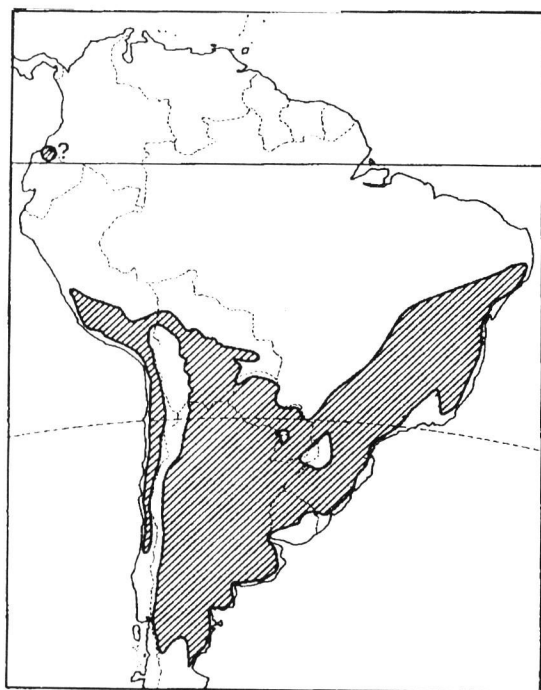


Fig. 17.75 - *Triatoma infestans* (Klug, 1834). **Argentina** (Salta, Jujuy, Tucumán, Formosa, Chaco, Santiago del Estero, Santa Fe, Misiones, Corrientes, Entre Ríos, Córdoba, Catamarca, La Rioja, San Juan, Mendoza, San Luis, Buenos Aires, La Pampa, Neuquén, Rio Negro, Chubut). **Uruguay**. **Bolivia** (Cochabamba, Potosí, Tarija, Beni, La Paz, Santa Cruz, Chuquisaca). **Brasil** (Alagoas, Bahia, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Paraíba, Paraná, Pernambuco, Piauí, Rio de Janeiro, Rio Grande do Sul, São Paulo, Santa Catarina, Sergipe). **Paraguay** (Concepción, San Pedro, Cordillera, Guairá, Caaguazú, Caazapá, Misiones, Paraguari, Central, Presidente Hayes, Alto Paraguay, Chaco, Nueva Asunción, Boquerón). **Ecuador** (Esmeraldas (?)), **Chile** (in the 9 Provinces, between 18° 30'S y 34° 36'S). **Peru** (Apurimac, Ayacucho, Moquegua, Arequipa, Tacna, Ica, Lima). (3, 4, 6, 11, 13, 15, 18, 20, 24, 25, 33).

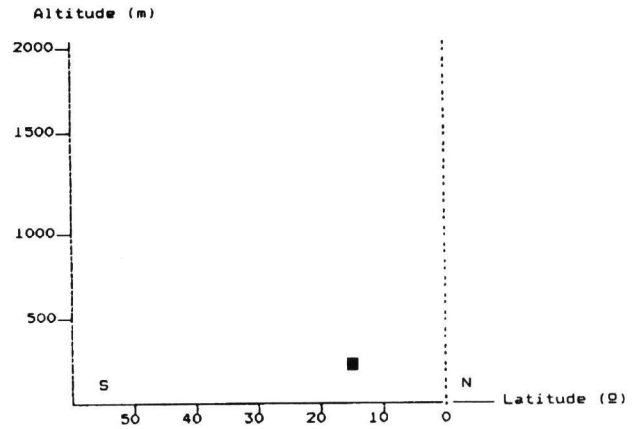


Fig. 17.76 - *Triatoma jurbergi* Carcavallo, Galvão & Lent, 1998. **Brasil** (Mato Grosso) (45).

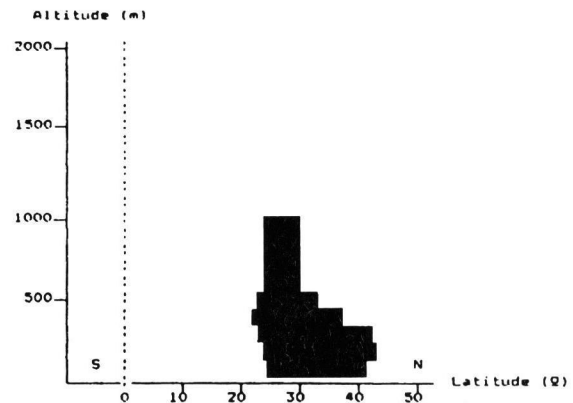
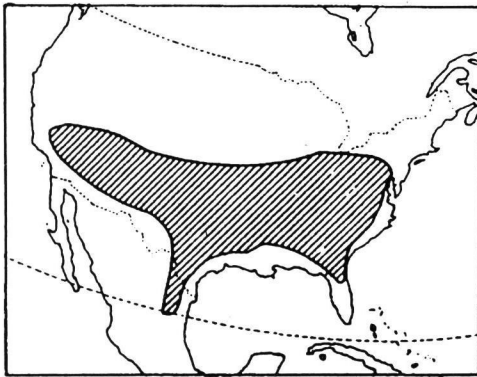


Fig. 17.77 - *Triatoma lecticularia* (Stal, 1859). **United States** (Texas, Missouri, New Mexico, Louisiana, Georgia, Florida, South Carolina, Arizona, North Carolina, California, Tennessee, Pennsylvania, Oklahoma, Maryland, Illinois, Kansas). **Mexico** (Nuevo León) (2, 6, 19, 24, 34, 36, 38, 39).

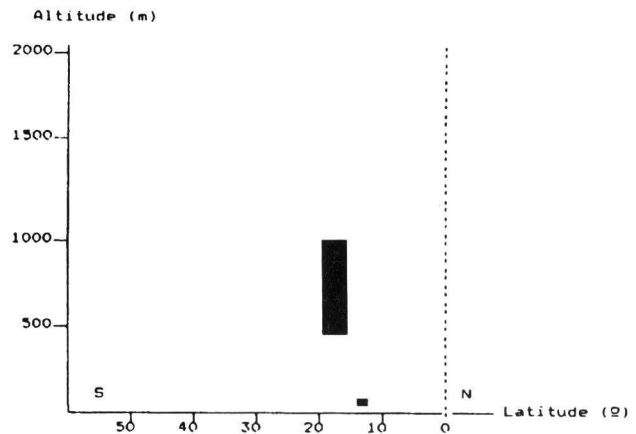
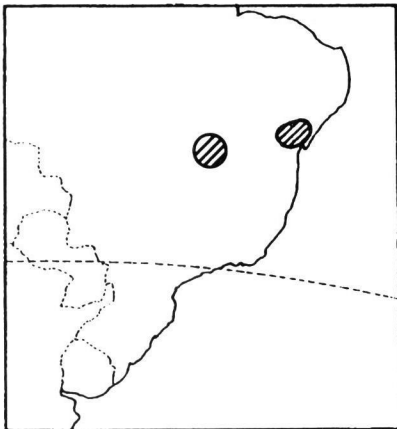


Fig. 17.78 - *Triatoma lenti* Sherlock & Serafim, 1967. **Brasil** (Bahia, Goiás) (6, 11, 24, 33).

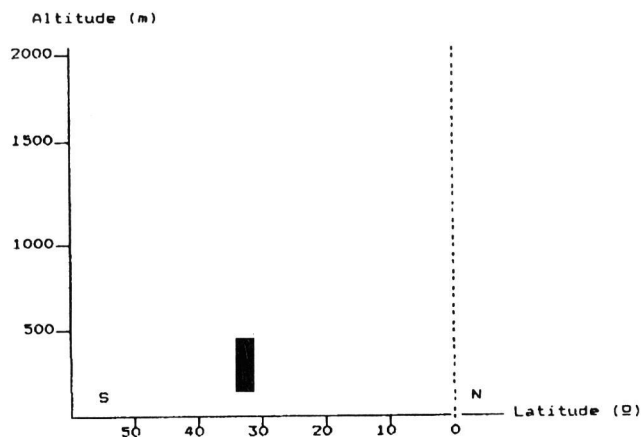


Fig. 17.79 - *Triatoma limai* Del Ponte, 1929. **Argentina** (Córdoba, San Luis) (6, 24, 25).

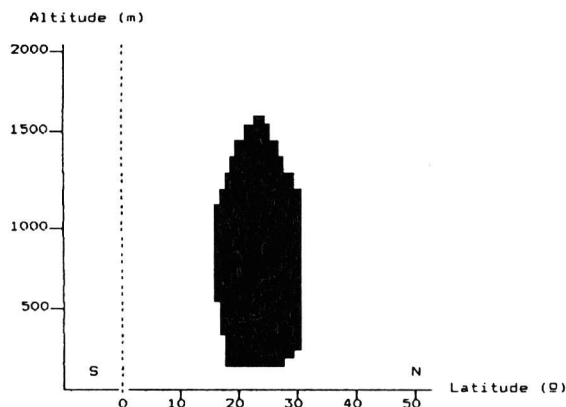


Fig. 17.80 - *Triatoma longipennis* Usinger, 1939. **Mexico** (Jalisco, Nayarit, Colima, Chihuahua, Sinaloa, Aguascalientes, Zacatecas. Yucatán (?)). (2, 6, 19, 24, 34, 38, 39).

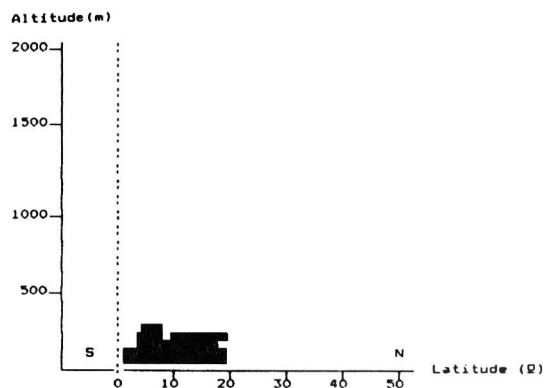


Fig. 17.81 - *Triatoma maculata* (Erichson, 1848). **Venezuela** (all the States except Táchira and Territory Delta Amacuro). **Colombia** (Atlántico, César, Guajira, Vichara). **Brasil** (Roraima). **Surinam**. **Guyana**. **French Guiana**. **Aruba**. **Bonaire**. **Curaçao**. (6, 10, 24, 29, 35, 37).

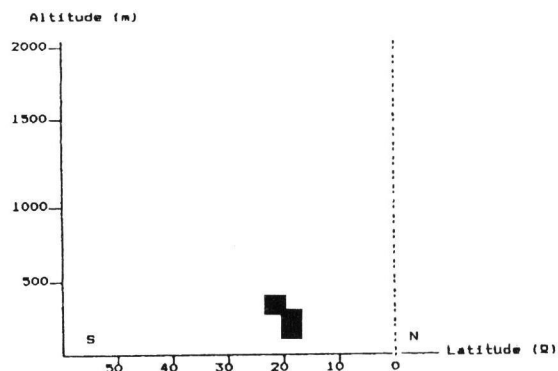
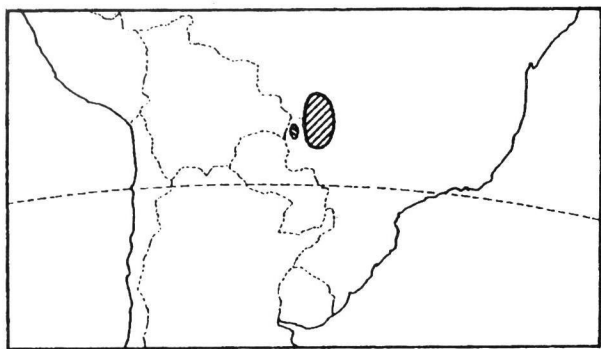


Fig. 17.82 - *Triatoma matogrossensis* Leite & Barbosa, 1953. **Brasil** (Mato Grosso, Mato Grosso do Sul) (6, 11, 24, 33).

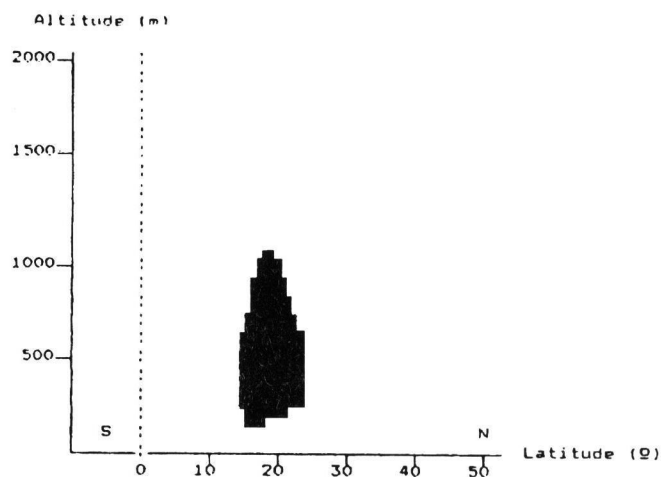
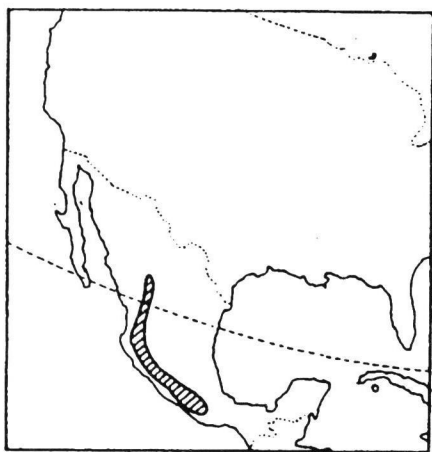


Fig. 17.83 - *Triatoma mazzotti* Usinger, 1941. **Mexico** (Oaxaca, Guerrero, Michoacán, Jalisco, Nayarit) (2, 6, 19, 24, 34, 38, 39).

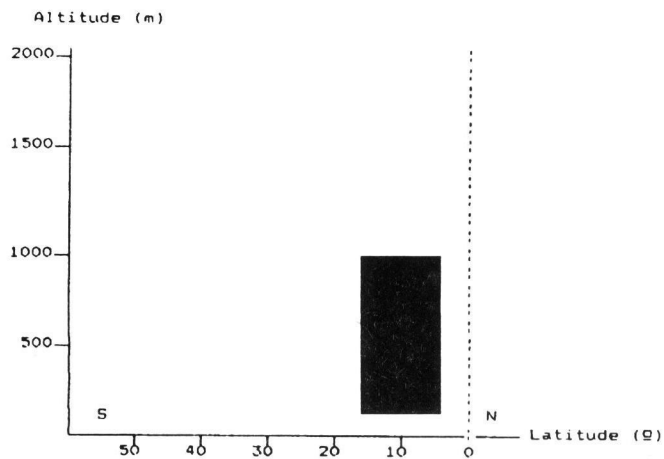


Fig. 17.84 - *Triatoma melanocephala* Neiva & Pinto, 1923. **Brasil** (Bahia, Paraíba, Pernambuco, Rio Grande do Norte, Sergipe) (6, 11, 24, 33).

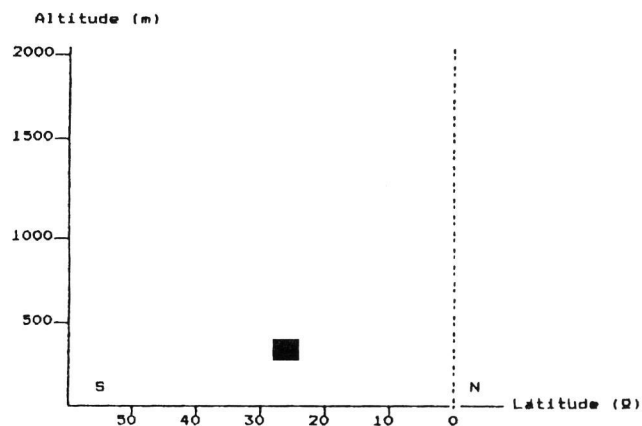
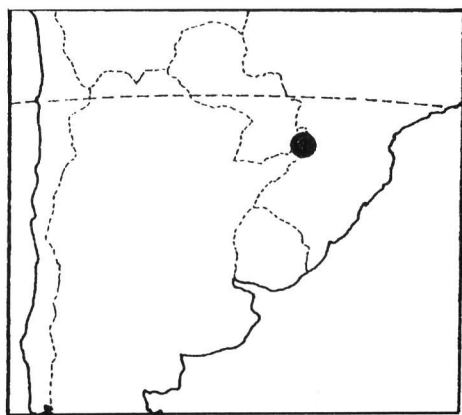


Fig. 17.85 - *Triatoma melanosoma* Martínez, Olmedo & Carcavallo, 1987. **Argentina** (Misiones) (27).

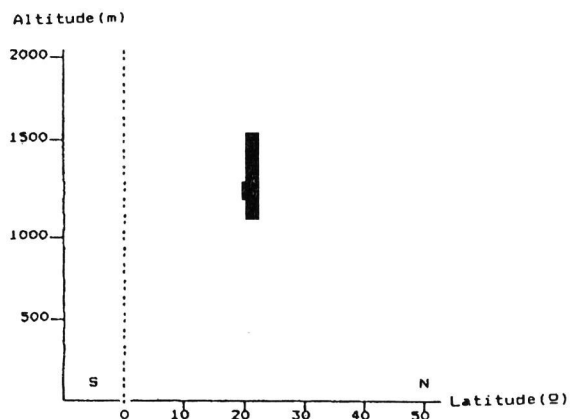


Fig. 17.86 - *Triatoma mexicana* (Herrich-Schaeffer, 1848). **Mexico** (Hidalgo, Querétaro) (2, 6, 19, 24, 34, 38, 39).

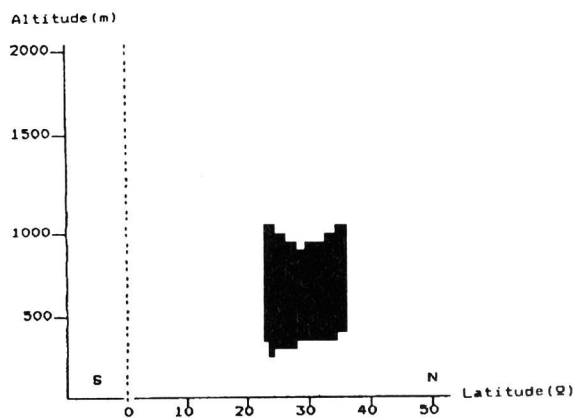
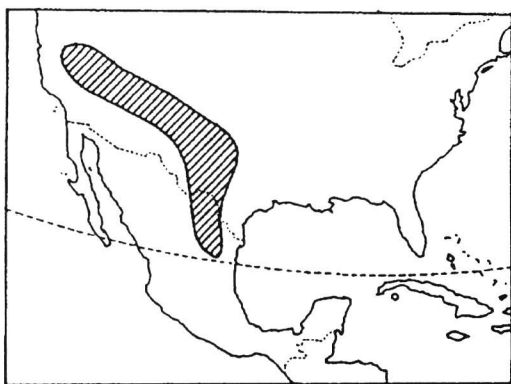


Fig. 17.87 - *Triatoma neotomae* Neiva, 1911. **United States** (New Mexico, Arizona, California). **Mexico** (Nuevo León, Tamaulipas) (2, 6, 19, 24, 34, 36, 38, 39).

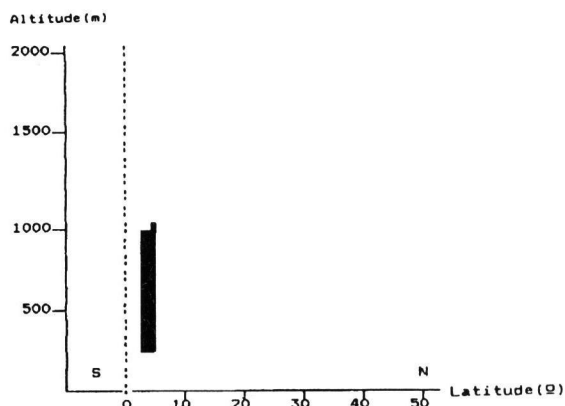
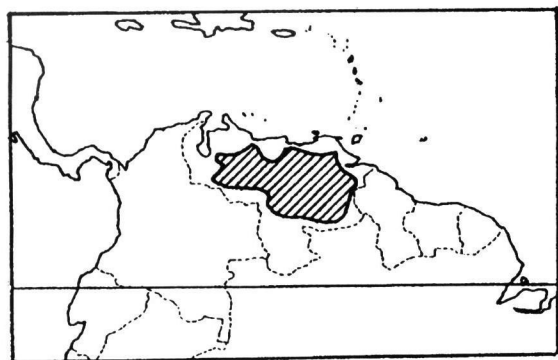


Fig. 17.88 - *Triatoma nigromaculata* (Stal, 1859). **Venezuela** (Aragua, Barinas, Bolívar, Cojedes, Lara, Mérida, Monagas, Portuguesa, Sucre, Yaracuy, Territory Delta Amacuro, Federal District) (6, 24, 29, 37).

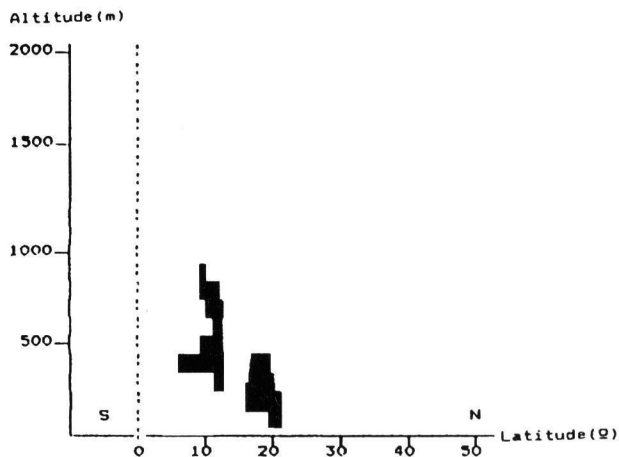
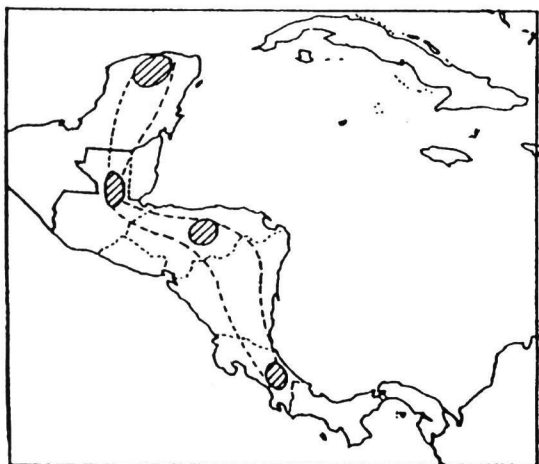


Fig. 17.89 - *Triatoma nitida* Usinger, 1939. **Mexico** (Yucatán). **Guatemala. Honduras. Costa Rica.** (6, 8, 19, 24, 35).

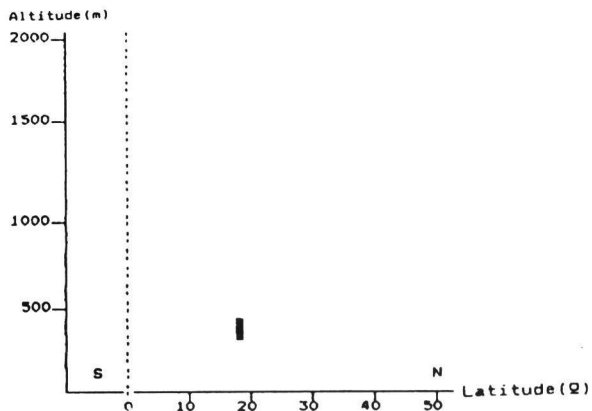


Fig. 17.90 - *Triatoma obscura* Maldonado Capriles & Farr, 1962. **Jamaica.** (6, 19, 24, 35).

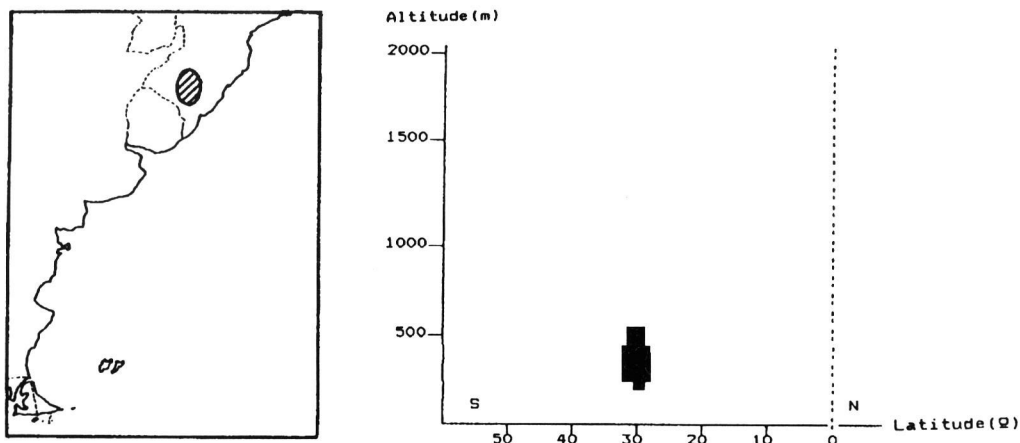


Fig. 17.91 - *Triatoma oliveirai* (Neiva, Pinto & Lent, 1939). **Brasil** (Rio Grande do Sul) (6, 11, 24).

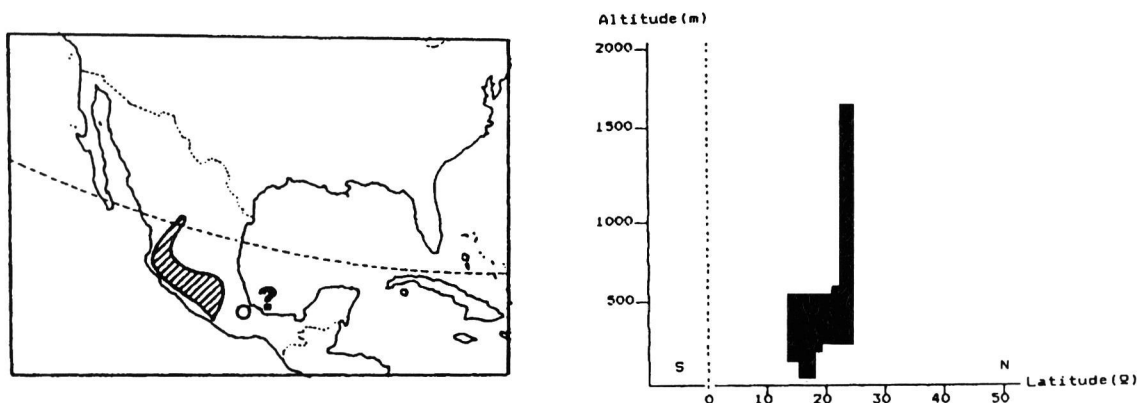


Fig. 17.92 - *Triatoma pallidipennis* (Stal, 1872). **Mexico** (Nayarit, Jalisco, Colima, Guerrero, Michoacán, Mexico, Puebla, Morelos, Zacatecas, Querétaro, Veracruz) (2, 6, 19, 24, 34, 38, 39).

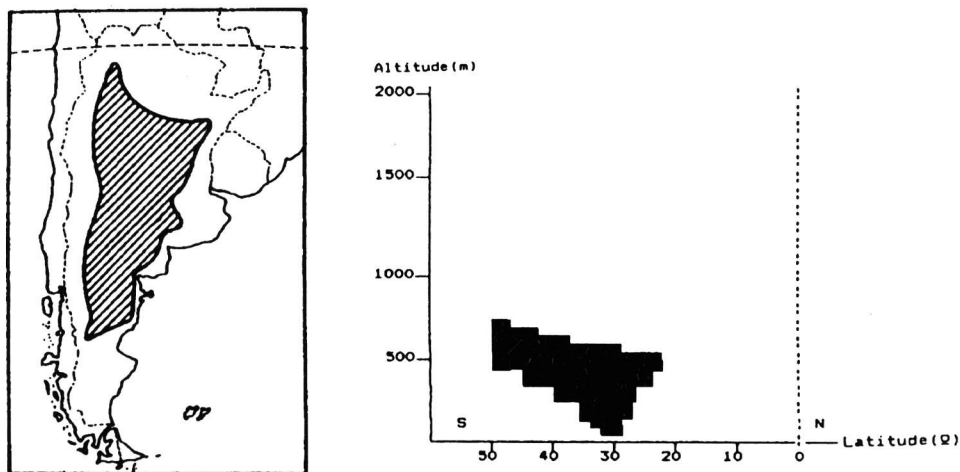


Fig. 17.93 - *Triatoma patagonica* Del Ponte, 1929. **Argentina** (Chubut, Rio Negro, neuquén, mendoza, La Pampa, Buenos Aires, San Luis, Córdoba, San Juan, La Rioja, Santiago del Estero, Catamarca, Salta, Santa Fe, Entre Ríos, Corrientes). **Uruguay** (?). (6, 24, 44).

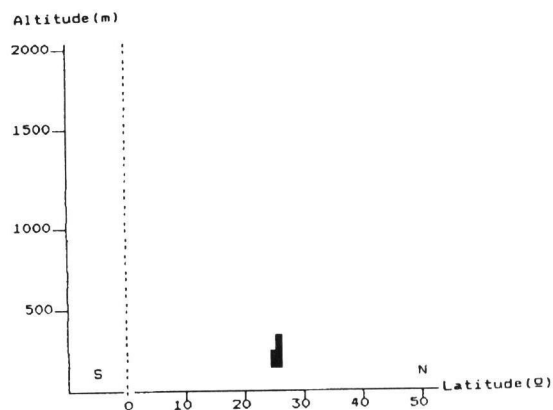
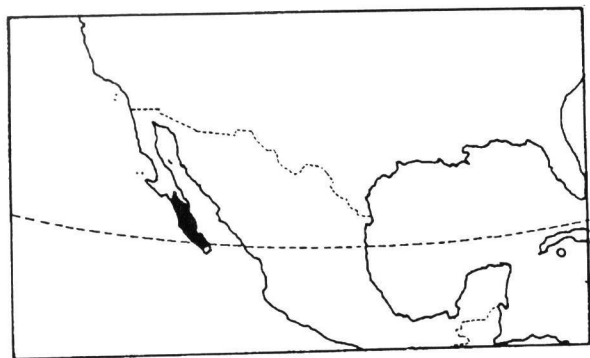


Fig. 17.94 - *Triatoma peninsularis* Usinger, 1940. **Mexico** (Baja California Sur) (2, 6, 19, 24, 34, 38, 39).

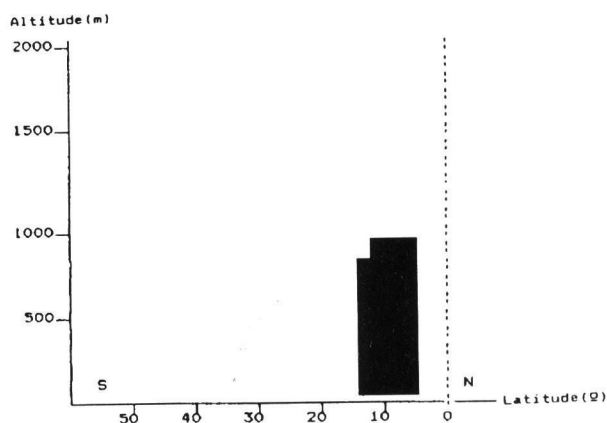
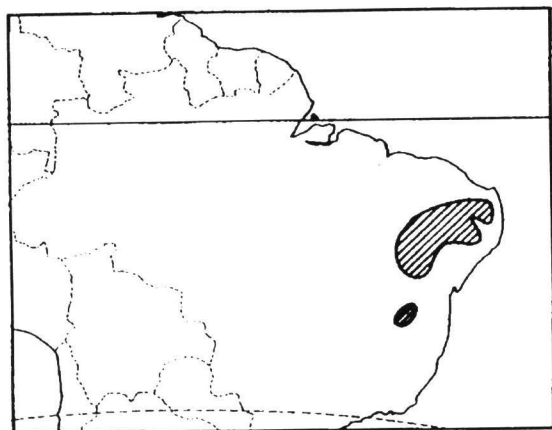


Fig. 17.95 - *Triatoma petrocchiai* Pinto & Barreto, 1925. **Brasil** (Rio Grande do Norte, Bahia, Pernambuco, Paraíba) (6, 11, 24, 33).

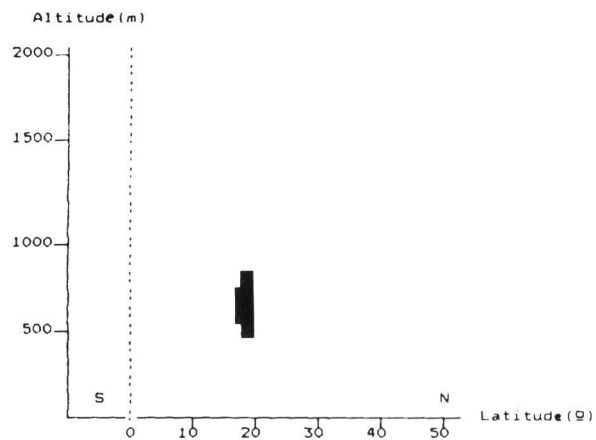


Fig. 17.96 - *Triatoma phyllosoma* (Burmeister, 1835). **Mexico** (Oaxaca) (2, 6, 19, 24, 34, 38, 39).

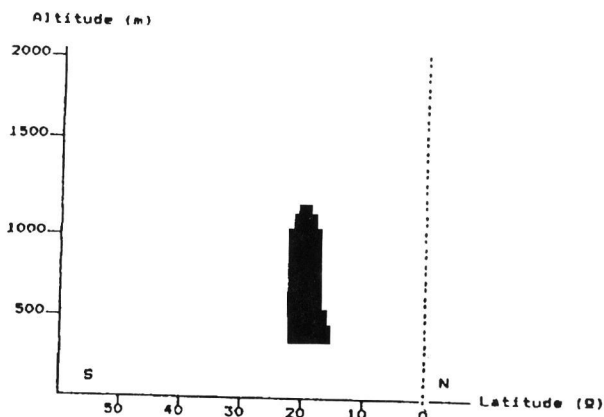
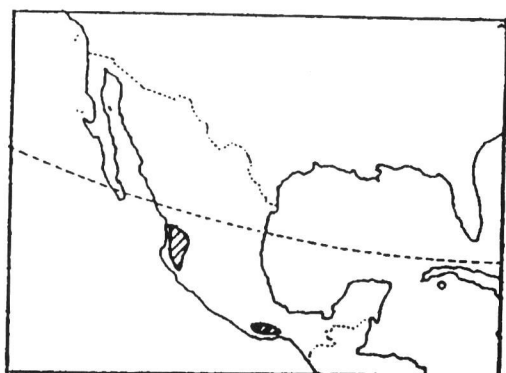


Fig. 17.97 - *Triatoma picturata* Usinger, 1939. **Mexico** (Nayarit, Jalisco, Colima, Oaxaca) (2, 6, 19, 24, 34, 38, 39).

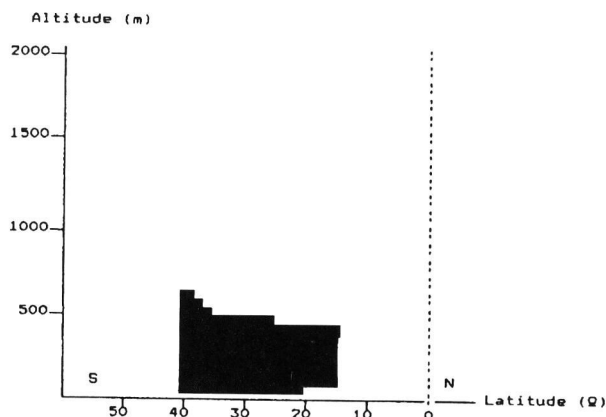
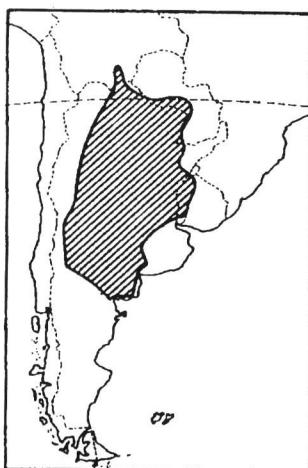


Fig. 17.98 - *Triatoma platensis* Neiva, 1913. **Argentina** (Salta, Jujuy, Formosa, Chaco, Tucumán, Catamarca, La Rioja, Santiago del Estero, Corrientes, Entre Ríos, Córdoba, Santa Fe, Buenos Aires, La Pampa, San Luis, San Juan, Mendoza, Río Negro). **Paraguay** (Presidente Hayes). **Uruguay**. (6, 15, 18, 24, 25).

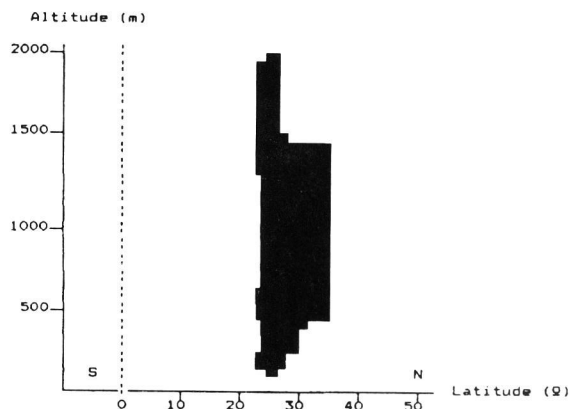


Fig. 17.99 - *Triatoma protracta* (Uhler, 1894). **United States** (Texas, New Mexico, Colorado, Arizona, California, Nevada, Utah). **Mexico** (Sinaloa, Sonora, Baja California Norte, Tamaulipas, San Luis Potosí, Zacatecas, Nuevo León, Durango, Chihuahua, Coahuila) (2, 6, 19, 24, 34, 36, 38, 39).

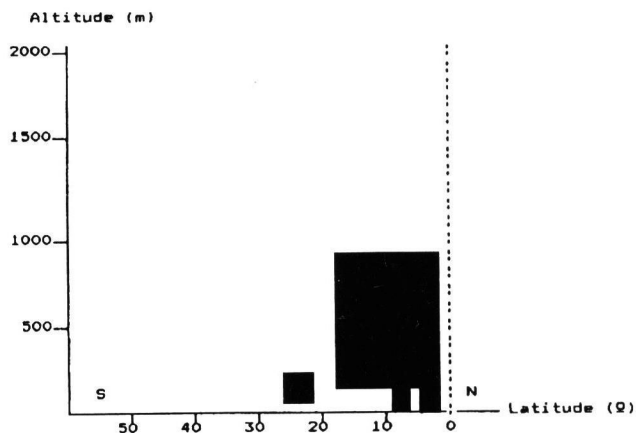
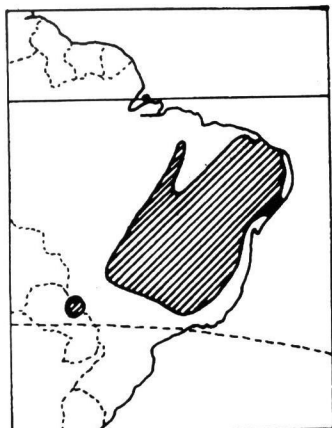


Fig. 17.100 - *Triatoma pseudomaculata* Corrêa & Espínola, 1964. **Brasil** (Alagoas, Bahia, Brasília, Ceará, Goiás, Minas Gerais, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Maranhão, Sergipe, Minas Gerais, Mato Grosso do Sul) (6, 11, 24, 33).

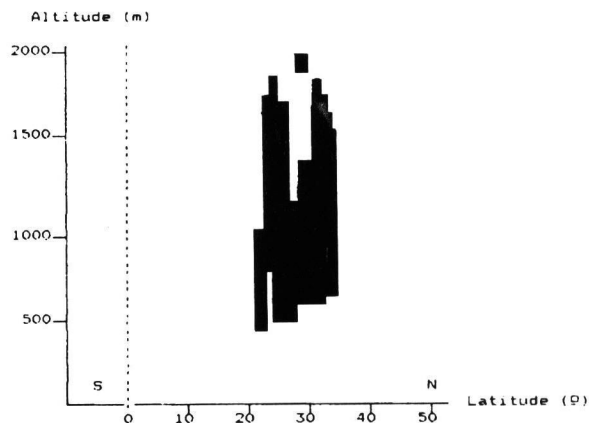
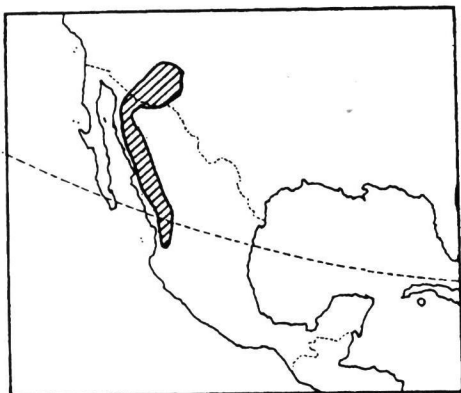


Fig. 17.101 - *Triatoma recurva* (Stal, 1869). **United States** (Arizona). **Mexico** (Nayarit, Sinaloa, Sonora, Chihuahua) (2, 6, 19, 24, 34, 36, 38, 39).

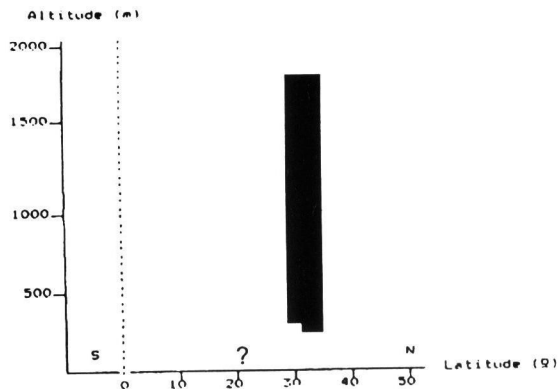


Fig. 17.102 - *Triatoma rubida* (Uhler, 1894). **United States** (New Mexico, Arizona, California). **Mexico** (Baja California Norte, Baja California Sur, Sonora, Sinaloa, Nayarit, Veracruz (?)) (2, 6, 19, 24, 34, 36, 38, 39).

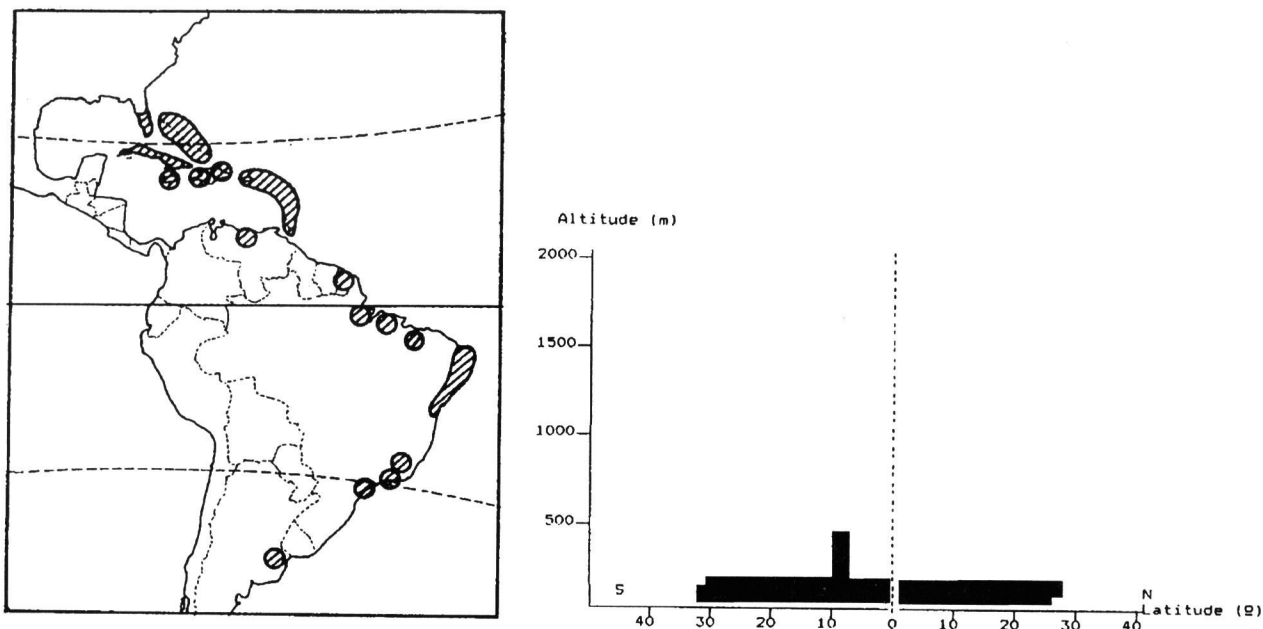


Fig. 17.103 - *Triatoma rubrofasciata* (De Geer, 1773). **United States** (Florida). **Brasil** (Alagoas, Bahia, Maranhão, Minas Gerais, Pará, Paraíba, Pernambuco, Rio de Janeiro, Rio Grande do Norte, São Paulo, Sergipe). **Venezuela** (Anzoátegui, Aragua). **Bahamas**. **Cuba**. **Dominican Republic**. **French Guiana**. **Grenada**. **Guadeloupe**. **Haiti**. **Jamaica**. **Martinica**. **St. Croix**. **St. Vincent**. The species was reported from **Argentina** (Buenos Aires) many years ago, but it could not be found any more (6, 11, 24, 25, 29, 35, 36, 38).

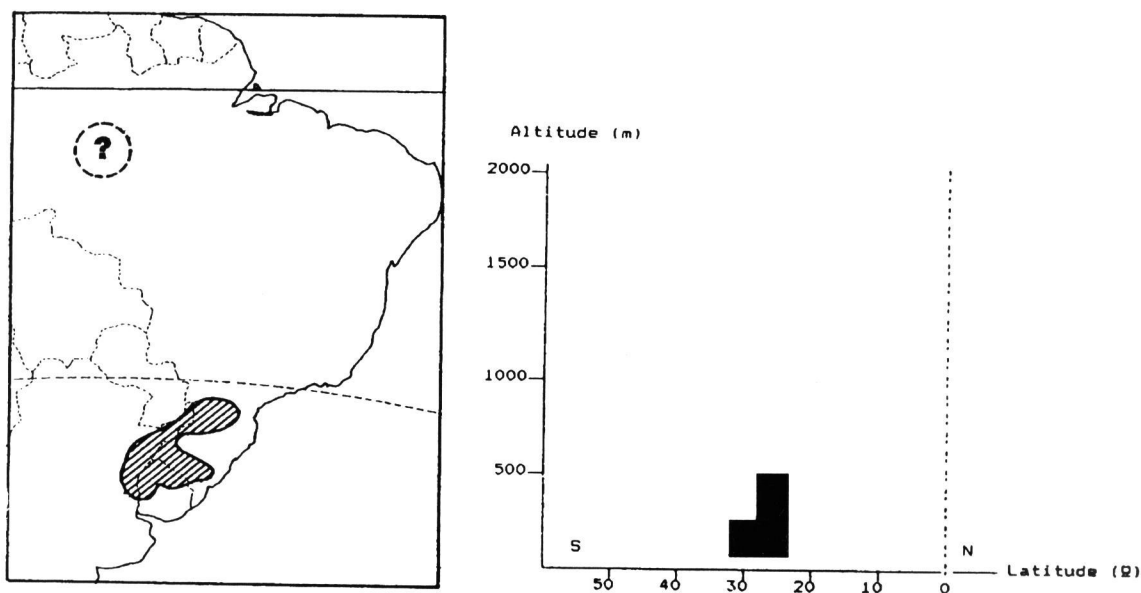


Fig. 17.104 - *Triatoma rubrovaria* (Blanchard, 1843). **Argentina** (Misiones, Corrientes, Entre Ríos). **Uruguay**. **Brasil** (Rio Grande do Sul) (6, 11, 15, 24, 25, 33).

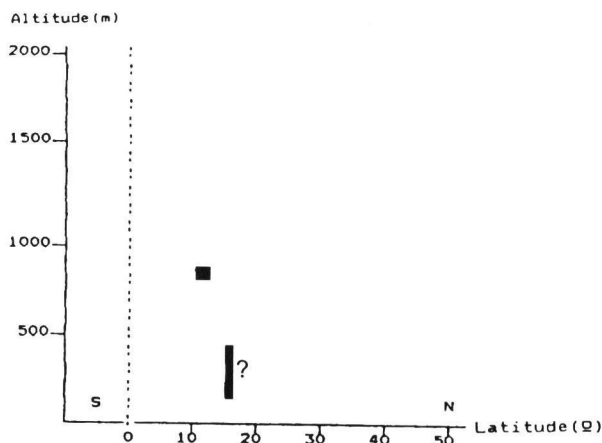
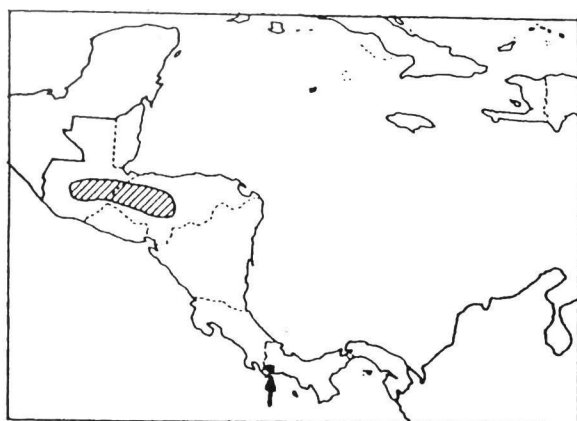


Fig. 17.105 - *Triatoma ryckmani* Zeledón & Ponce, 1972. **Guatemala. Honduras. Costa Rica.** (6, 8, 19, 24, 32).

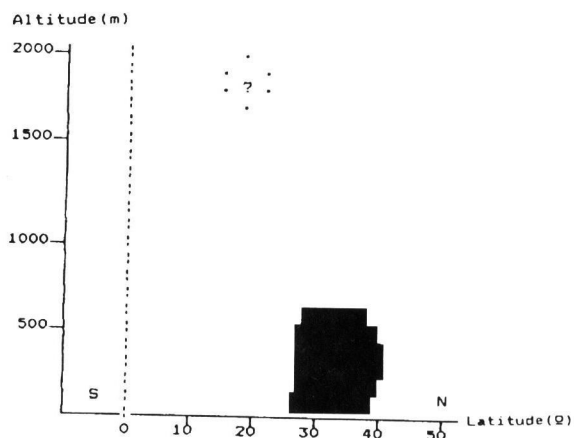
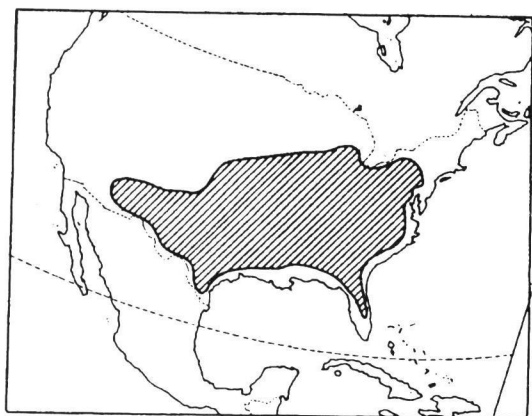


Fig. 17.106 - *Triatoma sanguisuga* (Leconte, 1855). **United States** (Alabama, Arizona, Arkansas, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia). **Mexico** (Mexico State?) (2, 6, 24, 34, 36, 38, 39).

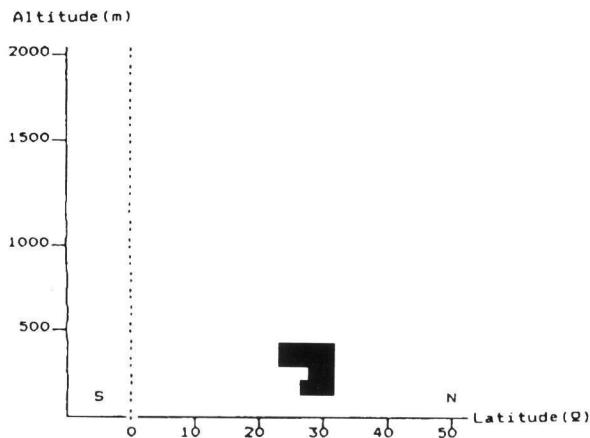
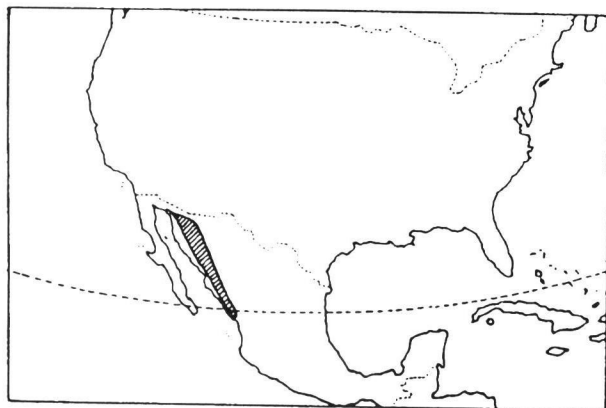


Fig. 17.107 - *Triatoma sinaloensis* Ryckman, 1962. **Mexico** (Sinaloa, Sonora) (2, 6, 24, 34, 39).

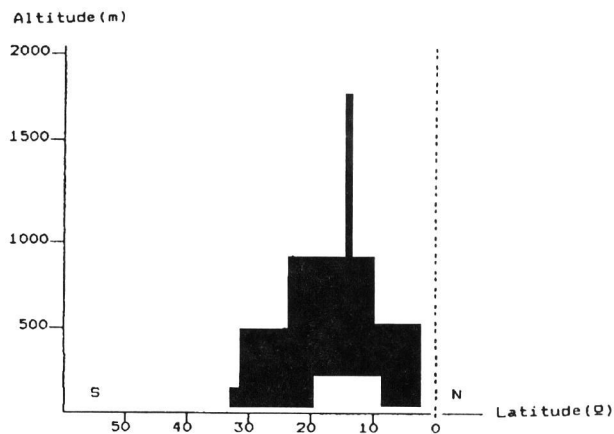


Fig. 17.108 - *Triatoma sordida* (Stal, 1859). **Argentina** (Misiones, Corrientes, Formosa, Chaco, Santa Fe). **Bolivia** (Cochabamba, La Paz, Santa Cruz, Beni, Tarija). **Brasil** (Bahia, Goiás, Mato Grosso, Mato Grosso do Sul, Maranhão, Minas Gerais, Paraná, Pernambuco, Piauí, Rio Grande do Sul, Santa Catarina, São Paulo). **Paraguay** (Concepción, Cordillera, Central, Nueva Asunción). **Uruguay** (3, 6, 11, 15, 18, 24, 25, 33, 51).

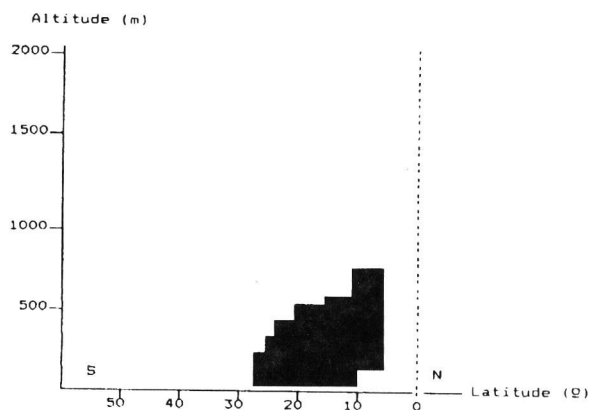


Fig. 17.109 - *Triatoma tibiamaculata* (Pinto, 1926). **Brasil** (Alagoas, Bahia, Espírito Santo, Rio de Janeiro, Minas Gerais, Paraná, Pernambuco, Santa Catarina, São Paulo, Sergipe) (6, 11, 24, 33).

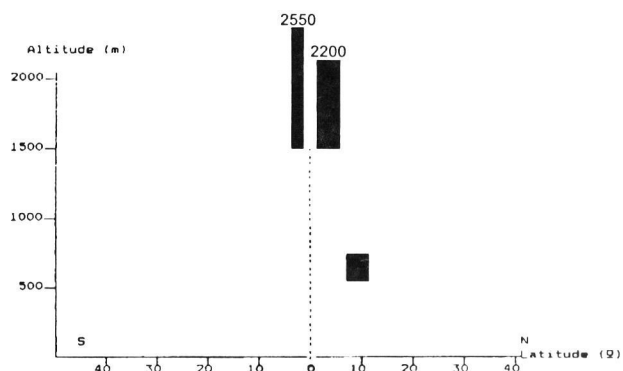
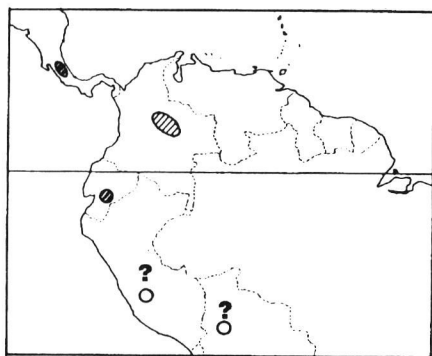


Fig. 17.110 - *Triatoma venosa* (Stal, 1872). **Colombia** (Boyacá, Santander). **Ecuador** (Azuay). **Costa Rica**. **Peru** (?). (4, 6, 8, 10, 20, 24).

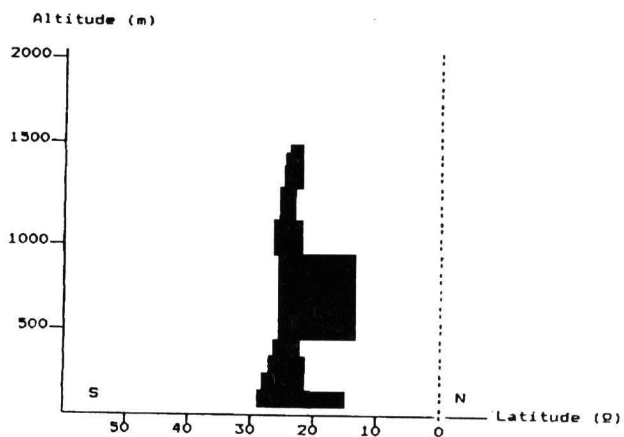
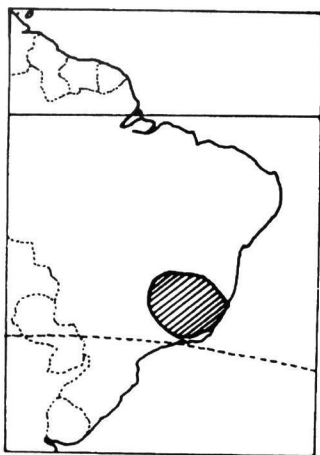


Fig. 17.111 - *Triatoma vitticeps* (Stal, 1859). **Brasil** (Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro) (6, 11, 24, 33).

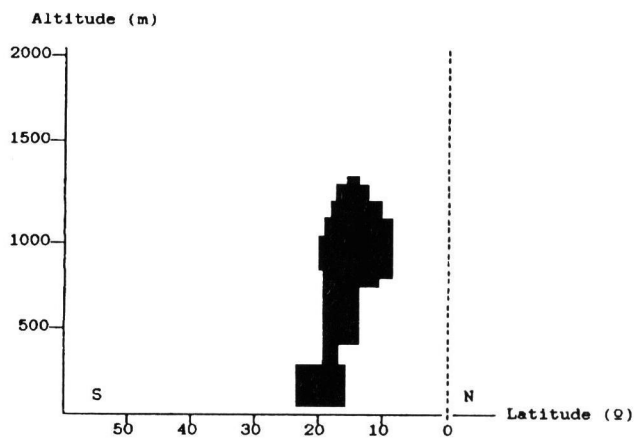
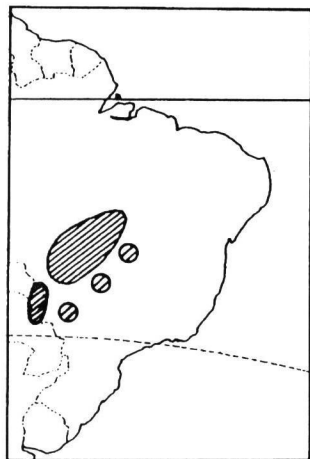


Fig. 17.112 - *Triatoma williamsi* Galvão, Souza & Lima, 1965. **Brasil** (Goiás, Mato Grosso, Mato Grosso do Sul) (6, 11, 24, 33).

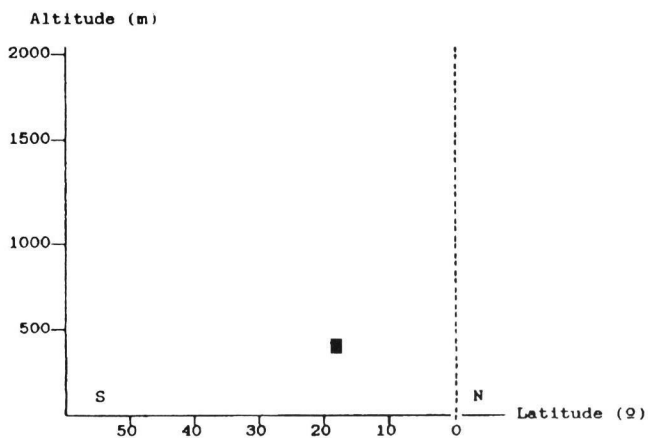
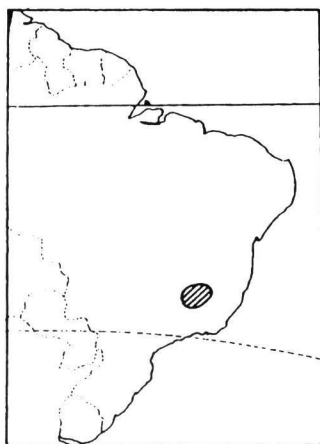


Fig. 17.113 - *Triatoma wygodzinskyi* Lent, 1951. **Brasil** (Minas Gerais) (6, 11, 24).

ADDENDA

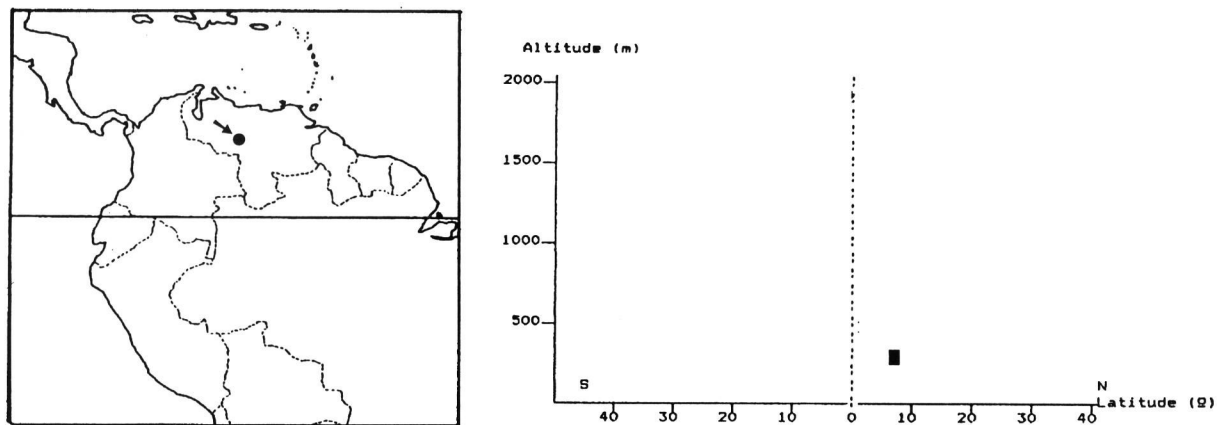


Fig. 17.114 - *Torrealbaia martinezi* Carcavallo, Jurberg & Lent, 1998. **Venezuela** (Portuguesa) (48).

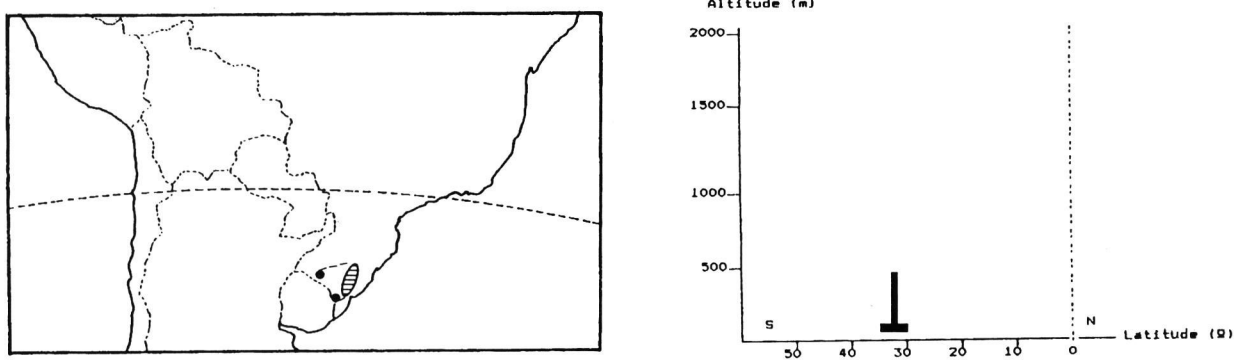


Fig. 17.115 - *Triatoma carcavalloi* Jurberg, Rocha & Lent, 1998. **Brasil** (Rio Grande do Sul) (49).

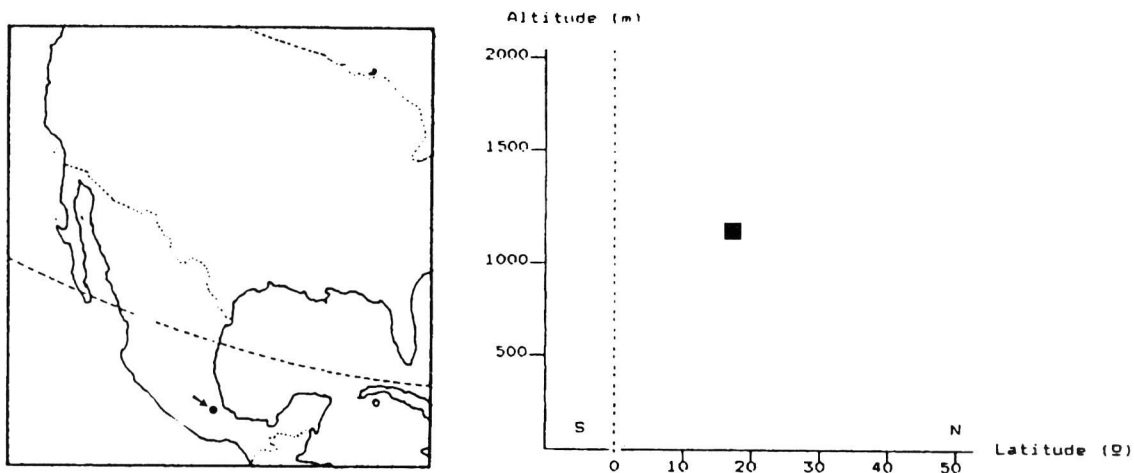


Fig. 17.116 - *Triatoma bassolsae* Alejandre-Aguilar, NogueraTorres, Cortez Jiménez, Jurberg, Galvão & Carcavallo, 1999. **Mexico** (Puebla) (50).

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