Xalpirta, n. gen., and *Neoxestus* Crotch (1876) from Chile and South America (Coleoptera: Erotylidae: Tritominae)

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Abstract. Members of the genera *Neoxestus* Crotch (1876) and *Xalpirta*, n. gen., are reviewed. *Neoxestus* is an endemic Chilean genus of flightless species. *Xalpirta* has 9 species restricted to southern South America, most of which are found only in Chile. New species described are *Neoxestus cauquenes*, *N. lucile*, *N. nahuelbuta*, *N. nonguen*, *N. norma*, *Xalpirta elsa*, *X. stellaris*, *X. arnetti*, and *X. peckorum*. A new name, *Xalpirta guerini*, nom. nov., is proposed for the species *Triplax bicolor* Guérin (1952). Diagnoses, keys to species, maps and illustrations are provided for the genera and species.

Resumen. Se revisan especímenes de los géneros *Neoxestus* Crotch (1876) y *Xalpirta*, n. gen. *Neoxestus* es un género chileno endémico de las especies que no vuelan. El género *Xalpirta* está representado por 9 especies restringidas al Sur de Sud América, la mayoría de las cuales se encuentran solo en Chile. Las nuevas especies que se describen son: *Neoxestus cauquenes*, *N. lucile*, *N. nahuelbuta*, *N. nonguen*, *N. norma*, *Xalpirta elsa*, *X. stellaris*, *X. arnetti*, y *X. peckorum*. Se propone el nombre de *Xalpirta guerini*, nom. nov., para la especie *Triplax bicolor* Guérin (1952). Se entregan diagnosis, claves, mapas e ilustraciones de los géneros y especies.

Introduction

The first description of an erotylid from Chile was for *Triplax valdiviana* Philippi and Philippi (1864), which was followed shortly by descriptions for *Mycotretus chilensis* Crotch (1876) and *Neoxestus chilensis* Crotch (1876). Then there were various catalogs which mentioned these Chilean species (Blackwelder 1945; Kuhnt 1909, 1911). The most complete paper covering the Chilean erotylid fauna is Guérin (1952), which added *Iphiclus* (*Saccomorphus*) *klugi* (Lacordaire 1842), *Megischyrus bifasciatus* Guérin (1952) (see ICZN 1996 regarding correct combination), *Triplax azureipennis* Guérin (1952), and *Triplax bicolor* Guérin (1952) to the list. This brought the total known taxa to four genera with seven species.

Since 1952, no work has added knowledge to any aspect of the Chilean erotylid fauna. Recent collecting has produced many specimens and several new species in two genera: *Neoxestus* Crotch and *Xalpirta*, n. gen. Yet, we studied no recent specimens of the other taxa mentioned by Guérin (1952). These common genera (*Megischyrus* Crotch, *Mycotretus* Lacordaire, and *Iphiclus* Chevrolat) are widespread throughout South America and each has systematic problems. Many species of *Megischyrus* appear to be nothing more than regional variations in color pattern. *Mycotretus* is extremely large and diverse, with species known to have numerous color pattern forms, as indicated in Crotch (1876). Specimens with strikingly similar morphology and color patterns to *M. chilensis* have been seen from Brasil. *Iphiclus klugi* is also known to occur in Argentina (Alvarenga 1994). The Chilean records of these species may represent mis-labeled specimens, or the rare straying individual. It is suspected that further collecting in the countries bordering Chile will discover additional populations of these species.

Based on the available label data, members of *Neoxestus* and most *Xalpirta* are restricted to the *Nothofagus* - *Araucaria* - *Chusquea* forests in Chile. Only a couple records for these taxa include fungal host information. These beetles apparently feed on fungi which support erotylids elsewhere: polypore bracket fungi and gilled mushrooms.

There is no phylogenetically based classification of South American erotylids in which to place the two genera covered here. However, they appear to represent monophyletic lineages within a mass of genera related to *Mycotretus*. Until such an analysis

is undertaken, we will consider these taxa as distinct genera.

This project was undertaken to study the endemic Chilean erotylids. During the study, two species from Brazil and Argentina (*Triplax maderi* Delkeskamp, and *X. peckorum* n.sp.) were found to be congeneric with species of *Xalpirta* n. gen. from Chile. These two species are discussed to make the coverage of *Xalpirta* complete. The purposes of this paper are to correct nomenclatural problems, diagnose genera, describe species, present identification keys to species, report distributional records, and where available discuss biological data for *Neoxestus* and *Xalpirta*.

Materials and Methods

A total of 1175 specimens of the 13 species was studied from 18 collections. Specimens studied are deposited in the following collections, with the associated acronym referenced in the text and Appendix: **AAC** - Albert Allen, Boise, ID-USA; **CMNC** - Canadian Museum of Nature, Ottawa, CANADA; **CNCI** - Canadian National Collection, Ottawa, CANADA; **CUIC** - Cornell University, Ithaca, NY-USA; **FMNH** - Field Museum of Natural History, Chicago, IL-USA; **FSCA** - Florida State Collection of Arthropods, Gainesville, FL-USA; **GRCC** - G. R. Crotch Erotylidae Collection, Cambridge University, Cambridge, UK; **HNHM** - Hungarian Natural History Museum, Budapest, HUNGARY; **JVC** - J. Valencia, Valparaiso, CHILE; **MNHN** - Museo Nacional Historia Natural, Santiago, CHILE; **NHML** - Natural History Museum, London, UK; **NMNH** - United States National Museum of Natural History, Washington, DC-USA; **PESC** - P. E. Skelley, Gainesville, FL-USA; **POC** - Parque Oncol, CHILE; **PRC** - Pedro Ramirez, Chillán, CHILE; **SEMC** - Snow Entomological Museum, University of Kansas, Lawrence, KS-USA; **TCKC** - Tomas Cekalovic K., Concepcion, CHILE; **UCC** - University of Chile, Santiago, CHILE; **ZMHU** - Zoologischen Museum, Humboldt Universität, Berlin.

Two authors have attempted to produce generic keys to Erotylidae: Kuhnt (1909) and Deelder (1942). These keys are not adequate to confidently identify many currently known taxa. The generic accounts below do not include "placement in existing keys" statements, as it would only add to the confusion. In addition, there are many more genera in South America than currently described. A more comprehensive study is needed to produce a key that works, and that is not the purpose of this paper.

Some of the new names proposed are latinized and follow traditional rules for name formation. Other specific names are not latinized as they are presented as nouns in apposition. As such, these names follow Article 31.2 of the International Code of Zoological Nomenclature (ICZN 1999), and do not need to agree in gender with the generic name.

Full label data are presented only for primary types. All other label data may have been altered, updated, abbreviated, or completed and are presented in an Appendix. In several cases, political boundaries have changed since the specimen was collected. An attempt was made to present the current province name for all localities. In the Appendix, an asterisk (*) is used to indicate data for the type specimen of that species.

Because of these boundary changes, approximate longitudes and latitudes have also been gathered to aid in relocating localities. Some specimen labels have these coordinates, or they were supplied by the collectors. Most label data lacked coordinates, which were gathered from the US Board on Geographic Names, Gazetteer for Chile or, when necessary, directly from maps. Coordinates we gathered, presented in brackets "[]", are approximations based on the label data, and should not be taken as precise. Localities lacking coordinates in the table were not found, or are problematic in some of their data.

The maps presented were created to cover areas where these erotylids occur. These maps are the best approximation for both the current political boundaries and position of the localities. The small numbers on the maps correspond to the following provinces: CHILE - 1. Petorca, 2. San Felipe Aconcagua, 3. Los Andes, 4. Quillota, 5. Valparaiso, 6. San Antonio, 7. Santiago, 8. Cardenal Caro, 9. Cachapoal, 10. Colchagua, 11. Curico, 12. Talca, 13. Cauquenes, 14. Linares, 15. Ñuble, 16. Concepcion, 17. Bio Bio, 18. Arauco, 19. Malleco, 20. Cautin, 21. Valdivia, 22. Osorno, 23. Llanquihue, 24. Chiloe, 25. Palena; ARGENTINA - 26. Mendoza, 27. Neuquen, 28. Rio Negro, 29. Chubut.

Taxonomic Treatment

Xalpirta Skelley and Cekalovic, **n. gen.**

Triplax Herbst 1793:146; of authors.

Type species: *Triplax valiviana* Philippi and Philippi 1864:401-402, present designation.

Diagnosis: *Xalpirta* is readily distinguished from all other tritomine genera in the New World by the following characters: elongate parallel-sided body; lack of umbilicate pronotal angle pores; pronotum with lateral margin pore at basal 1/4 to 1/3 (difficult to see on some specimens, Fig. 1); lack of brush on terminal maxillary palpomere; small antennomere VIII, giving the antenna a distinct 3-segmented club; and restricted distribution in southern South America.

Description: Length = 2.7-6.0 mm, width = 1.1-1.6 mm. Body elongate, parallel-sided (both pronotum and elytra). Head black to orange. Prothorax yellow to orange, with or without black spots on the pronotum. Mesothorax to abdomen and elytra usually black (exception being *X. valdiviana*). Elytra usually with a metallic sheen (purple, blue, or green).

Head with ocular striae fine, nearly reaching epistome lateral angle; eyes finely faceted. Antennal club loose, 3-segmented, abrupt; antennomere IV-VII narrow, not elongate, weakly moniliform; antennomere VIII angled apically, length = width, only slightly wider than antennomere VII; antennomere IX trapezoidal, wider than long.

Mentum plate variable, pentagonal to triangular (Figs. 3-5). Terminal maxillary and labial palpomeres dilated, lacking distinct terminal brush; terminal maxillary palpomere triangular, 1.5 to 3 times wider than long; terminal labial palpomere securiform to circular, length = width. Pronotum lateral margin with 3 pores: anterior angle, posterior angle, and marginal pore at basal 1/4 to 1/3 (sometimes small, Fig. 1); pronotal margin often weakly angulate around pore; pronotal angle pores normal (not umbilicate as in *Triplax*, Fig. 2), usually large; not margined at front between eyes. Prosternum lacking keel, broadly convex; prosternal lines not extending in front of procoxae.

Scutellum pentagonal, width = 1.5 times length. Base of elytra and pronotum strongly, completely margined; elytral striae usually distinct, punctures = 1 to 2 times larger than interval punctures. Wings present, normally developed.

Etymology: *Xalpirta* (gender feminine) is the reverse spelling of "a-*Triplax*" meaning not-*Triplax*. The spelling is reversed to reflect the Southern Hemisphere distribution of this genus (Fig. 14), which contrasts the primarily Northern Hemisphere distribution of the distantly related *Triplax*.

Remarks: Because of their similarity in body form, members of this genus were originally described in *Triplax*. In his review of Neotropical *Triplax*, Johnson (1967) recognized the Chilean members of *Triplax* (*T. valdiviana* Philippi and Philippi, *T. azureipennis* Guérin, and *T. bicolor* Guérin) did not belong in *Triplax* and considered them *incertae sedis*. Our study confirmed Johnson's findings, as these species lack the defining characters of true *Triplax* (umbilicate pronotal angle pores, Fig. 2, and a large distinct brush at apex terminal maxillary palpomere), necessitating their removal from the genus..

Johnson (1967) recognized that the Brazilian *Triplax maderi* Delkeskamp did not belong to the genus *Triplax*. He transferred it into *Haematochiton* based on a few tenuous characters (body shape, terminal maxillary palpomere weakly dilated, small pronotal angle pores, etc.) that could easily have been used to place *T. maderi* in other genera.

The Chilean "*Triplax*" and *T. maderi* all appear similar to *Haematochiton* Gorham and *Triplax* Herbst, primarily sharing a parallel-sided body. All of these species and the newly described ones share a number of unique characters, most notably the general body coloration and pronotal marginal pore at basal 1/4 to 1/3. These characters are here considered to be synapomorphies, and in combination with other characters (body shape, distribution, antennal club characters, etc.), define a clade. We consider this clade worthy of full generic rank.

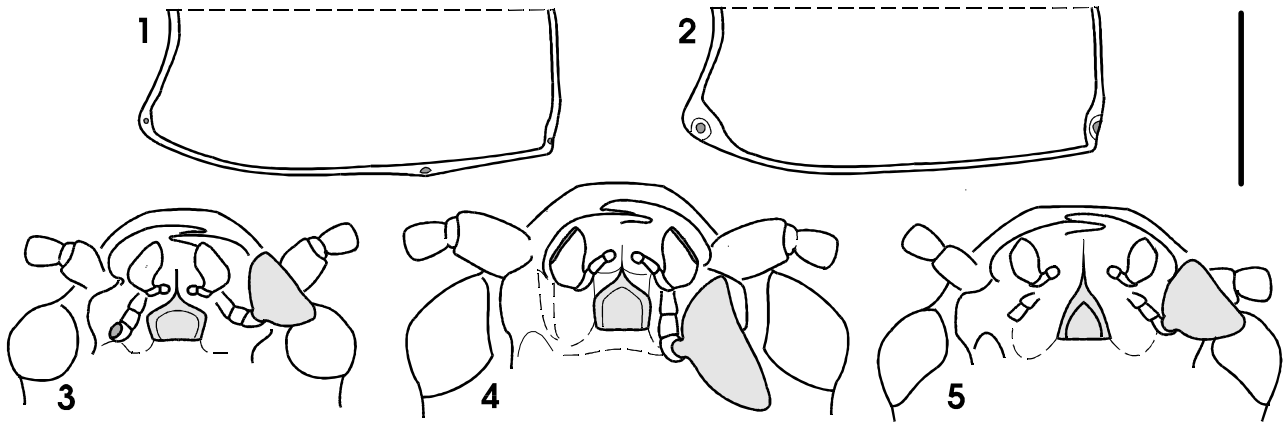
The relationship of *Xalpirta* with other genera is problematic. Apparently, *Xalpirta* belongs to a group of genera centered around *Mycotretus*. It is hoped that a more comprehensive phylogenetic work will resolve relationships.

Biological information for members of this genus is sparse and their larvae remain unknown. The only fungal records are with the the genera *Panaeolus* Fr. and *Armillariella* P.A.Karsten (Agaricales). Both of these are gilled mushrooms. More collecting on the ephemeral fruiting bodies of this group would surely produce more information on these beetles.

Additional Reference: Guérin 1952 (as *Triplax*).

Key to species of *Xalpirta* Skelley and Cekalovic

1. Legs black, same color as metasternum 2
— Legs yellow to red, contrasting in color with the black metasternum 6



Figures 1-5. 1-2. Lateral pronotal margins, left side, 1. *Xalpirta valdiviana*, 2. *Triplax thoracica* Say. 3-5. Head, ventral view, 3. *Xalpirta azureipennis*, 4. *Xalpirta elsa*, 5. *Xalpirta maderi*. Line = 0.5 mm.

2(1). Pronotum with 4 free spots, not touching any margin (Figs. 6-7); mentum triangular (Fig. 5) 3

— Pronotum lacking free spots (Figs 8-13); pronotal spots, if present, all broadly touching a margin; mentum pentagonal or quadrate (Figs. 3-4) ... 4

3(2). Pronotum lacking spots on anterior margin (Fig. 6); metathorax and abdomen yellowish, same color as pronotum ..... *X. peckorum*, **sp. nov.**

— Pronotum with 2 spots touching anterior margin (Fig.7); metathorax and abdomen mostly black *X. maderi* (Delkeskamp)

4(2). Pronotum with basal spot; anterior pronotal spot flattened or bluntly bilobed 5

— Pronotum lacking basal spot; anterior spot with 4 points (Fig. 8) ..... *X. stellaris*, **sp. nov.**

5(4). Anterior pronotal spot bluntly bilobed (Fig. 9); terminal maxillary palpomere 2.5-3.0 x wider than long (Fig. 4) ..... *X. elsa*, **sp. nov.**

— Anterior pronotal spot flattened, rounded (Fig. 10); terminal maxillary palpomere 1.5 x wider than long (Fig. 3) ..... *X. azureipennis* (Guérin)

6(1). Head black, or distinctly darker than yellow-orange of thorax; pronotum with two anterior spots (often weak, rarely missing, Fig. 11); abdomen and metepisternum yellowish, contrasting with the black metasternum ..... *X. valdiviana* (Philippi and Philippi)

— Head orange, same color as thorax; pronotum entirely orange; abdomen and metepisternum mostly black, not notably contrasting with the black metasternum 7

7(6). Basal half of elytron orange (Fig. 12) ..... *X. guerini*, **nom. nov.**

— Elytron entirely black (Fig. 13) ..... *X. arnetti*, **sp. nov.**

Xalpirta arnetti Skelley and Cekalovic, **n. sp.**
(Figs. 13, 15)

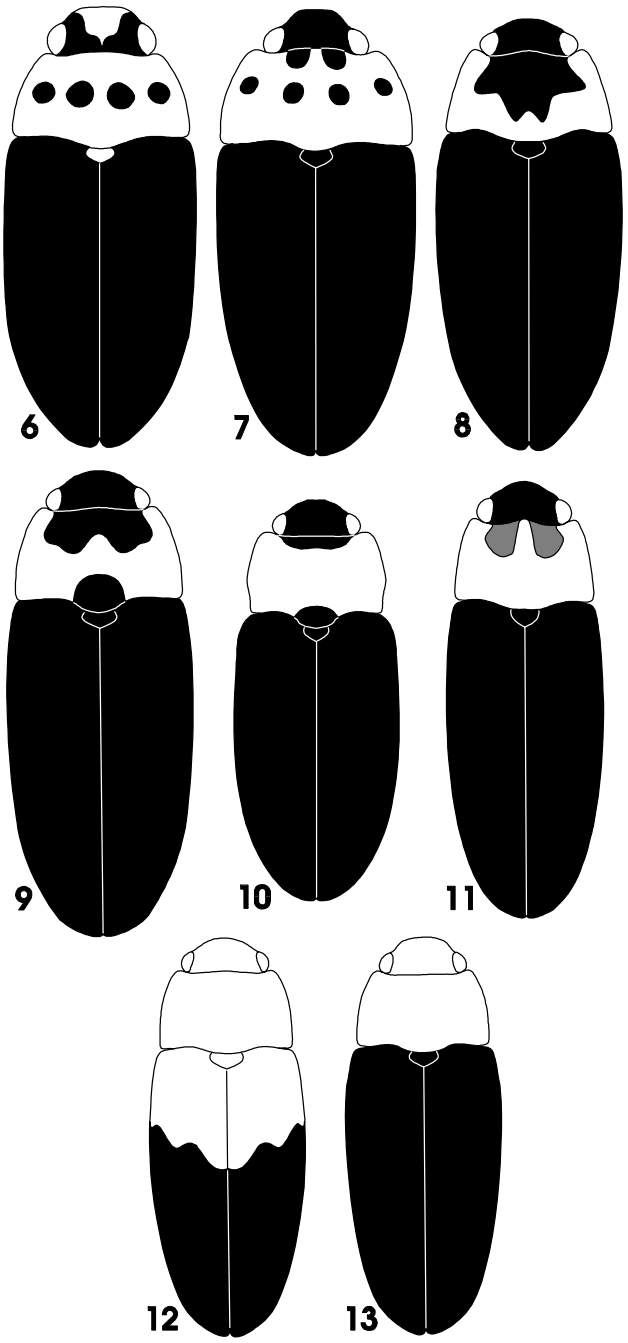
Description: Holotype length = 3.9 mm, width = 1.7 mm. Head and pronotum entirely orange (Fig. 13). Elytra and scutellum entirely black; elytra lacking metallic sheen. Mesothorax to abdomen and legs black.

Body nitidus. Head with vertex puncture = facet diameter, separated by 2 to 3 times puncture diameter. Terminal maxillary palpomere width = 2 times length. Mentum with delineated plate pentagonal, sides parallel, weakly angled anteriorly. Pronotal disc punctures = facet, separated by 2 to 3 times puncture diameter; lateral margin weakly angulate at basal 1/3, over a marginal pore.

Variation: Length = 3.3-3.9 mm, width = 1.3-1.7 mm.

Type data: Holotype of *X. arnetti* label data: "CHILE: Malleco, 13.1 km. E. Manzanar, 38°28'S, 71°30'W, 1000m, 2 Dec 1994, R. Leschen & C. Carlton #199, ex: *Panaeolus - Nothofagus*/ [red paper] HOLOTYPE Xalpirta arnetti Skelley & Cekalovic" (SEMC, sex undetermined, not dissected).

Additional specimens: A total of 10 specimens was studied: the holotype and 9 paratypes. Label data are presented in the Appendix and plotted on Fig. 15.



Figures 6-13. *Xalpirta* spp. dorsal habiti. 6. *X. peckorum*, 7. *X. maderi*, 8. *X. stellaris*, 9. *X. elsa*, 10. *X. azureipennis*, 11. *X. valdiviana*, 12. *X. guerini*, 13. *X. arnetti*.

Etymology: This species is named in honor of Ross H. Arnett, Jr., (1919-1999), author of "The Beetles of the United States" (Arnett 1963), who died while this work was in progress. His book has been the single most important reference influencing young coleopterists in North America for the past 40 years, including the first author. An updated version of this volume, titled "American Beetles", has recently been published (Arnett *et al*. 2000, 2002).

Xalpirta azureipennis (Guérin), **new combination**
(Figs. 3, 10, 15)

Triplax azureipennis Guérin 1952:181 fig.4, 182; Alvarenga 1994:40.
Triplax azureipennis Guérin, *incertae sedis*; Johnson 1967:1, 2.
Xalpirta azureipennis (Guérin), **new combination**.

Diagnosis. Length = 2.8-3.9 mm, width = 1.2-1.7 mm. Head back. Pronotum yellow-orange; anterior pronotal margin with a narrow, rounded spot; posterior margin with a central semicircular spot over scutellum (Fig. 10). Elytra and scutellum entirely black; elytra with a blue metallic sheen. Mesothorax to abdomen and legs black.

Body dull. Head with vertex puncture = 2 times facet diameter, separated by 1 to 2 times puncture diameter. Terminal maxillary palpomere width = 1.5 times length (Fig. 3). Mentum with delineated plate broadly pentagonal, width = 2 times length. Pronotal disc punctures = 2 to 3 times facet, separated by 1 to 2 times puncture diameter; lateral margins notably angulate at basal 1/3, over a marginal pore.

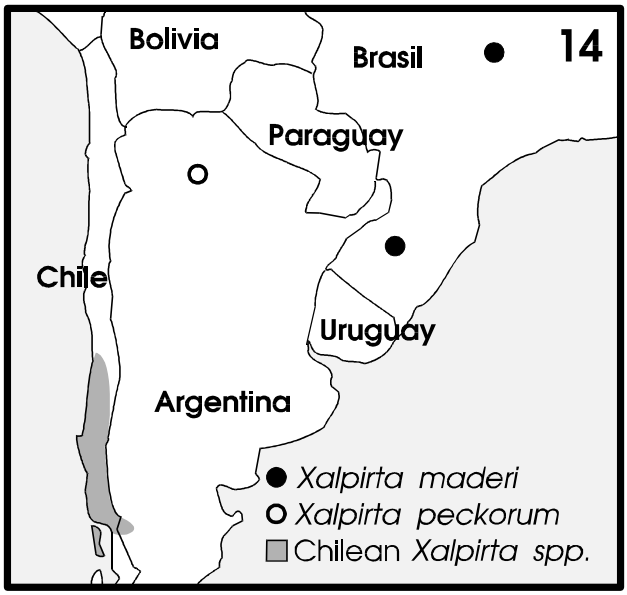


Figure 14. Distribution map for Chilean *Xalpirta* spp., *X. maderi*, and *X. peckorum*.

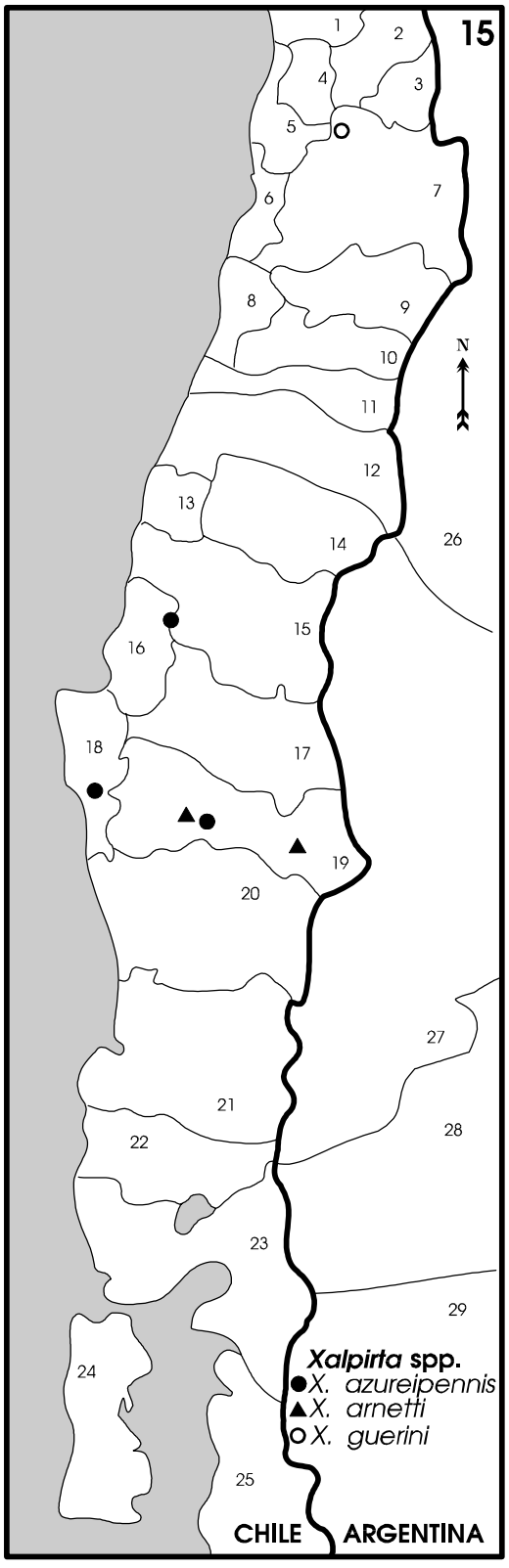


Figure 15. Distribution map for *Xalpirta arnetti*, *X. azureipennis*, and *X. guerini*. Names for province numbers are listed in Materials and Methods.

Type data: Length = 3.9 mm, width = 1.5 mm. Holotype of *Triplax azureipennis* Guérin. Label data: "/ Paulsen / Izq. / [red paper, black border] HOLOTIPO / [white paper, blue border] Triplax azureipennis J. Guer., J. Guerin det. 1952 / CHILE M. N. H. N. Tipo No. 2826 /" (MNHN see Camouseight 1980, female not dissected, specimen studied).

Additional specimens: A total of 5 specimens was studied, the holotype and 4 others. Label data are presented in the Appendix and plotted on Fig. 15.
Etymology: The name "azureipennis" refers to the blue elytral sheen.

Remarks: Guérin's (1952) illustration of *X. azureipennis* presents the head as being red. The type and all specimens studied have black head.

Xalpirta elsa Skelley and Cekalovic, **n. sp.**
(Figs. 4, 9, 16)

Description: Holotype length = 6.0 mm, width = 2.5 mm. Head black. Pronotum yellow-orange; anterior pronotal margin with a large blunted, bilobed spot; posterior margin with a central semicircular spot over scutellum (Fig. 9). Elytra and scutellum entirely black; elytra with a purple metallic sheen. Mesothorax to abdomen and legs black.

Body dulled. Head with vertex puncture = 2 times facet diameter, separated by 2 to 3 times puncture diameter. Terminal maxillary palpomere width = 2.5 to 3 times length. Mentum with delineated plate pentagonal (Fig. 4). Pronotal disc punctures = 2 to 3 times facet, separated by 1 to 2 times puncture diameter; lateral margin weakly angulate at basal 1/3, over a marginal pore.

Variation: Length = 4.5-6.0 mm, width = 2.1-2.5 mm.

Type data: Holotype of *X. elsa* label data: "Bucalemito, Costa Stgo. XII-65, Coll. L. E. Peña G./ FMNH, 1986, L. Peña Coll. Acc. # 17-422/ [red paper] HOLOTYPE Xalpirta elsa Skelley & Cekalovic" (FMNH, sex undetermined, not dissected).

Additional specimens: A total of 26 specimens was studied, the holotype and 25 paratypes. Label data are presented in the Appendix and plotted on Fig. 16.

Etymology: *Xalpirta elsa* is named to honor Elsa Kuschevich Westerman, mother of author TCK, who died while this work was in progress (noun in apposition).

Xalpirta guerini Skelley and Cekalovic, **new name**
(Figs. 12, 15)

Triplax bicolor Guérin 1952:181 fig. 5, 182-183; not *Triplax bicolor* (Marsham 1802), nor *Triplax bicolor* Gyllenhal 1808, nor *Triplax bicolor* Stephens 1830.
Triplax (?) *bicolor* Guérin; Johnson 1967:1, 2.
Xalpirta guerini Skelley and Cekalovic, **nomen novum**

Diagnosis. Length = 3.8-4.3 mm, width = 1.7-1.8 mm. Head and pronotum entirely orange. Scutellum orange. Elytra with basal half orange, apical half black (Fig. 12); lacking metallic sheen. Mesothorax to abdomen and legs black.

Body with head and pronotum nitidus, elytra weakly dulled. Head with vertex puncture = 2 times facet diameter, separated by 1 to 2 times puncture diameter. Terminal maxillary palpomere width = 2 times length. Mentum with delineated plate quadrate. Pronotal disc punctures = 2 to 3 times facet, separated by 1 to 2 puncture diameter; lateral margin not angulate at basal 1/3, marginal pore not found.

Type data: Length = 3.8 mm, width = 1.7 mm. Holotype of *Triplax bicolor* Guérin label data: "/ Paulsen / Izq. / [red paper, black border] HOLOTIPO / [white paper, blue border] Triplax bicolor J. Guer., J. Guerin det. 1952/ CHILE M.N.H.N. Tipo No 2827 / NOMEN NOVUM Xalpirta guerini Skelley & Cekalovic/" (MNHN see Camouseight 1980, sex undetermined, specimen studied).

Additional specimens: Only 2 specimens were studied, the holotype and one other. Label data are presented in the Appendix and plotted on Fig. 15.

Etymology: This species should not be confused with the following European names: 1.) *Triplax bicolor* (Marsham 1802:122) in Dejean 1837:453; a synonym of *Triplax aenea* (Schaller 1783:254) by Bedel 1867:27. 2.) *Triplax bicolor* Gyllenhal 1808:205-206; a synonym of *Triplax scutellaris* Charpentier 1825:244 by Reitter 1887:8. 3.) *Triplax bicolor* Stephens 1830:89, pl.xvii fig.4; renamed *Triplax lacordairei* Crotch 1870:7.

These three and *T. bicolor* Guérin are all homonyms (primary and secondary). In accordance with the International Code of Zoological Nomenclature (ICZN 1999) a junior primary homonym is permanently invalid under Article 57.2. It is unfortunate that we are required to propose a new name as "*bicolor*" perfectly describes this species. We rename the species "*guerini*" after its original describer.

Additional Reference: Alvarenga 1994: 40.

Xalpirta maderi (Delkeskamp)
(Figs. 5, 7, 14)

Triplax maderi Delkeskamp 1957: 114, fig. 11.
Haematochiton maderi (Delkeskamp); Johnson 1967: 17, 20-21.
Xalpirta maderi (Delkeskamp); **new combination**.

Diagnosis. Length = 3.6-4.0 mm, width = 1.8-1.9 mm. Head black. Prothorax entirely yellow-orange; pronotum with 2 black spots on anterior margin and 4 free spots in a transverse row on the disc (Fig. 7). Elytra and scutellum entirely black, lacking metallic luster. Meso-, metathorax, and legs entirely black. Abdomen mostly black, can be brown.

Body shining. Head with vertex puncture = 2 times facet diameter, separated by 2-3 times puncture diameter. Terminal maxillary palpomere width = 1.5 times length. Mentum with delineated plate acutely triangular (Fig. 5). Pronotal disc punctures = 2 times facet diameter, separated by 2-3 times puncture diameter; lateral margin weakly angulate at basal 1/3, over a small marginal pore.

Type data: The type of *Triplax maderi* Delkeskamp label data: "S. Brasilien, Nova Teutonia" (ZMHU see Delkeskamp 1957 and Alvarenga 1994, specimen not studied, sex undetermined).

Additional specimens: A total of 28 specimens is known; the type with 2 paratypes (not examined) and 25 additional specimens. Label data are presented in the Appendix and plotted on Fig. 14.

Etymology: Named to honor L. Mader.

Remarks: The identity of this species is based on the original description, with a diagnostic habitus illustration, and on the fact that most of the specimens studied have the same locality data as the type

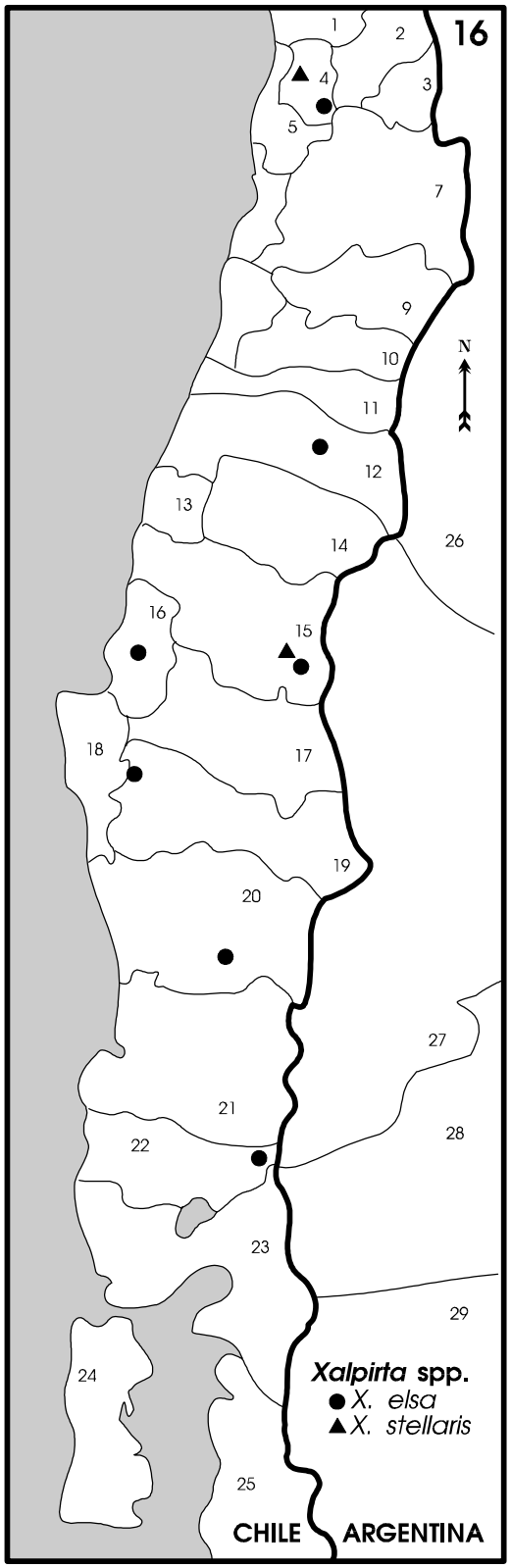


Figure 16. Distribution map for *Xalpirta elsa* and *X. stellaris*. Names for province numbers are listed in Materials and Methods.

specimens; being collected by F. Plaumann in Nova Teutonia.

Xalpirta peckorum Skelley and Cekalovic, **n. sp.**
(Figs. 6, 14)

Description: Holotype length = 4.4 mm, width = 2.0 mm. Head mostly black, epistome and frons orange. Prothorax and scutellum entirely yellow-orange; pronotum with 4 free spots in a transverse row on disc (Fig. 6). Elytra and legs entirely black, lacking metallic luster. Meso-, metathorax and abdomen yellow-orange.

Body shining. Head with vertex puncture = 2 times facet diameter, separated by 2-3 times puncture diameter.Terminal maxillary palpomere width = 1.5 times length. Mentum with delineated plate acutely triangular. Pronotal disc punctures = 2 times facet diameter, separated by 2-3 times puncture diameter, impressed; lateral margin weakly angulate at basal 1/3, over a small marginal pore.

Variation: Length = 3.9-4.4 mm, width =1.8-2.0 mm.

Type data: Holotype of *X. peckorum* label data: "ARG: Salta Prov., 45 km W Salta 1950m, 1-29.XII.87, El Alisal, S&J Peck, moist ravine thicket, Malaise FIT/ [red paper] HOLOTYPE Xalpirta peckorum Skelley & Cekalovic" (CMNC, sex undetermined, not dissected).

Additional specimens: Only 2 specimens were studied, the holotype and a paratype. Label data are presented in the Appendix and plotted on Fig. 14.

Etymology: This species is named in honor of Stewart and Jarmila Peck, whose collecting efforts have produced numerous specimens used in this study, as well as the only known specimens of this species.

Xalpirta stellaris Skelley and Cekalovic, **n. sp.**
(Figs. 8, 16)

Description: Holotype length = 4.6 mm, width = 2.1 mm. Head black. Pronotum yellow-orange; anterior pronotal margin with a large pointed, 4-lobed spot; posterior margin lacking any marking (Fig. 8). Elytra and scutellum entirely black; elytra lacking metallic sheen. Mesothorax to abdomen and legs black.

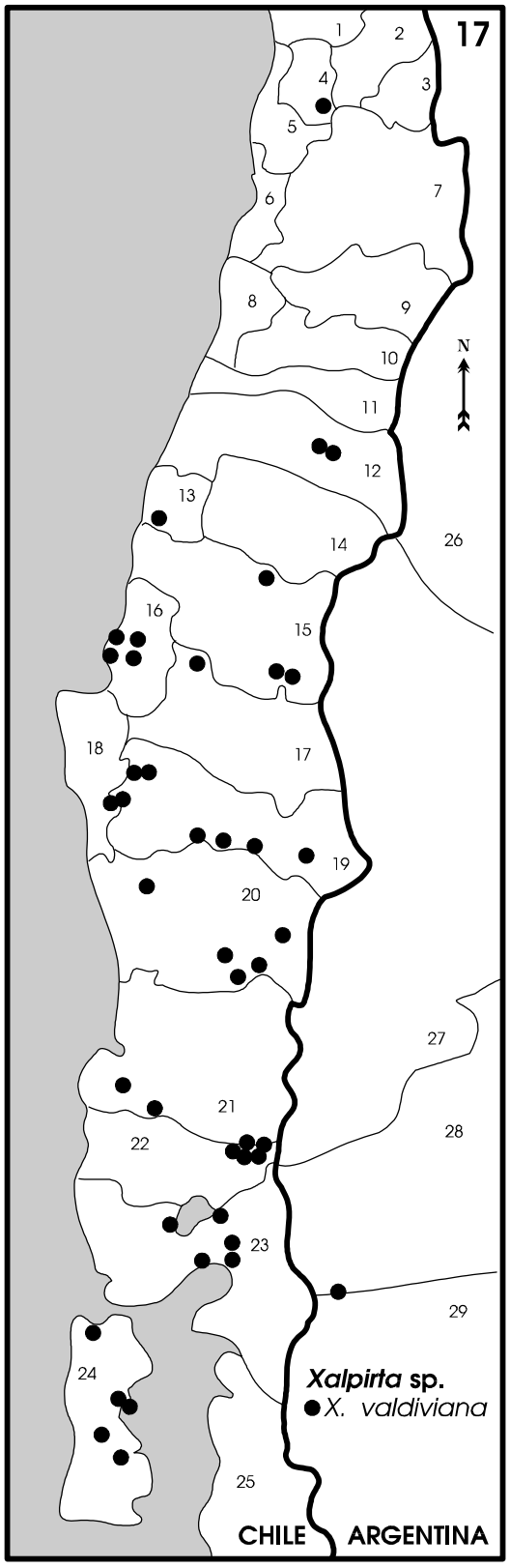


Figure 17. Distribution map for *Xalpirta valdiviana*. Names for province numbers are listed in Materials and Methods.

Body nitidus. Head with vertex puncture = 2 times facet diameter, separated by 2 times puncture diameter. Terminal maxillary palpomere width = 3 times length. Mentum with delineated plate pentagonal, parallel- sided, flattened. Pronotal disc punctures = 2 times facet diameter, separated by 2 times puncture diameter; lateral margin not angulate at basal 1/3, marginal pore minute.

Variation: Length = 4.3-4.6 mm, width = 1.9-2.1 mm.

Type data: Holotype of *X. stellaris* label data: "Las Trancas, Chillan I-79, Coll. L. E. Peña / FMNH, 1986, L. Peña Coll. Acc. # 17-422/ [red paper] HOLOTYPE Xalpirta stellaris Skelley & Cekalovic" (FMNH, sex undetermined, not dissected).

Additional specimens: Only 4 specimens were studied, the holotype and 3 paratypes. Label data are presented in the Appendix and plotted on Fig. 16.

Etymology: This species is named for the star-shaped pronotal spot. The word "*stellaris*" is Latin (feminine) meaning "of the stars".

Xalpirta valdiviana (Philippi and Philippi), **new combination**
(Figs. 1, 11, 17)

Triplax valdiviana Philippi and Philippi 1864:401-402; Alvarenga 1994:40-41.
Triplax valdiviana Philippi and Philippi, *incertae sedis*; Johnson 1967:1, 2.
Xalpirta valdiviana (Philippi and Philippi), **new combination**.

Diagnosis. Length = 2.7-4.0 mm, width = 1.1-1.6 mm. Head varies from yellow-brown to black. Prothorax pale yellow; anterior margin of pronotum with 2 squared spots, sometimes connected as one spot or greatly reduced in size, which vary from black to pale brown (weakly pigmented) (Fig. 11). Elytra entirely black, elytra frequently with a metallic sheen which can vary from green to blue-green. Scutellum varies from entirely black to entirely yellow. Metasternum black, contrasting sharply with yellow metepisternum, legs and abdomen.

Body nitidus. Head with vertex puncture = 2 times facet diameter, separated by 3-4 times puncture diameter. Terminal maxillary palpomere width = 2.5 times length. Mentum with delineated plate quadrate. Pronotal disc punctures = 2-3 times facet,

separated by 2-3 times puncture diameter; lateral margins weakly angulate at basal 1/3, over a marginal pore.

Type data: "Prope oppidum Valdivia invenit orn. Landbeck" (Philippi and Philippi 1864). The Landbeck collection is not listed in Horn and Kahle (1935-1937), its location is unknown. Regarding the Philippi collection, Horn and Kahle (1935-1937) stated "Vater und Sohn. Sammlung im Mus. Nacion. Santiago". No specimen was found that could be attributed to the Philippi collection in the MNHN with Guérin's types. The location of the type is unknown.

Additional specimens: A total of 1016 specimens was studied. Label data are presented in the Appendix and plotted on Fig. 17.

Etymology: Specific name based on the type locality, Valdivia.

Remarks: The type specimen for *Triplax valdiviana* was not located for our study. The identity of this species is based on the original description and specimens identified by Guérin (1952) located in the MNHN, Santiago, Chile. We did not feel a neotype needed to be designated. If a neotype is ever needed (if evidence is found showing that the type has been destroyed), we recommend one be chosen from the specimens studied by Guérin.

Numerous specimens have poorly defined or reduced pronotal spots that are brown and heads with varying shades of brown, not black. In some cases the pronotal spots and pigmentation of the head are nearly lacking. One specimen (FSCA) has a black head and lacks the pronotal spots entirely, but is identified as *X. valdiviana* by the unique ventral color pattern.

These variations may represent regional variations, teneral specimens, or distinct populations that vary in the development of their pigmentation. However, the ventral color pattern (yellow metepisternum and abdomen) is diagnostic, and the head is always darker than the pronotum.

This species deserves more detailed study of these variatons.

Additional References: Blackwelder 1945:468; Gemminger and Harold 1876:3699; Guérin 1952:181 fig. 3,182; Kuhnt 1911:65; Philippi 1887:787.

Neoxestus Crotch

Neoxestus Crotch 1876:100.

Type species: *Neoxestus chilensis* Crotch 1876:100, by monotypy.

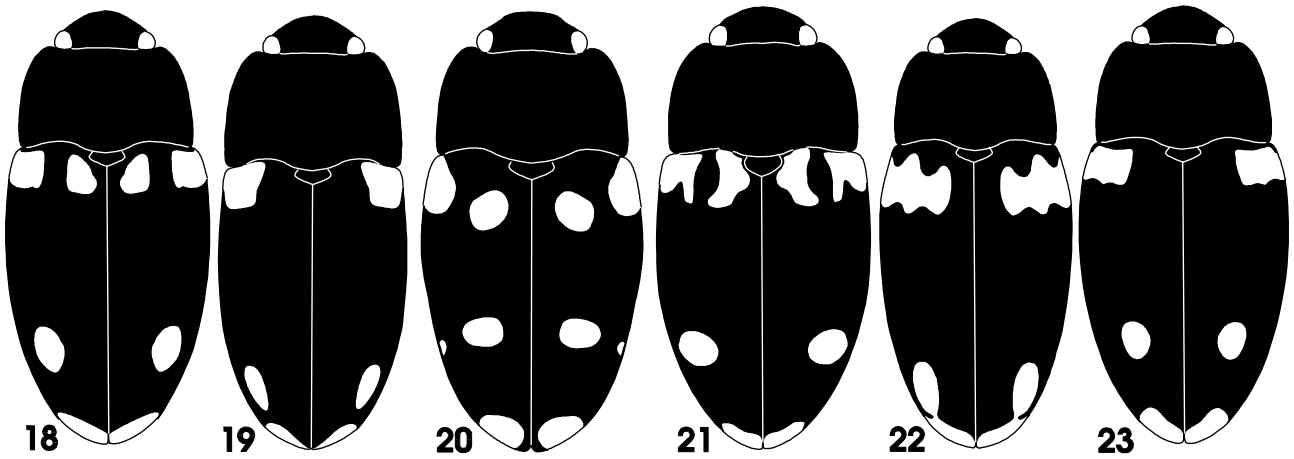
Diagnosis: Body elongate-oval to egg-shaped; flight wings reduced to narrow straps, flightless; base of pronotum with patch of pores on each side of midline at base; antennomere VIII not different from preceding antennomeres, antennomere IX triangular and as long or longer than wide. All known species are found only in Chile (Figs. 24-25).

Description. Length = 4.0-5.6 mm, width = 2.0-3.0 mm. Body elongate oval to somewhat egg-shaped, some slightly flattened; varying from strongly nitidus to dull with strong microreticulations; color black, frequently with a metallic blue or green sheen (best observed on fresh specimens or when wet), some specimens are opalescent. Elytra with yellow-orange spots varying in number and placement. Legs entirely pale yellow or appearing banded (with femur and tibia being basally black and apically pale).

Eye facets distinctly convex, but not large enough to be considered coarsely faceted; ocular stria reaching epistome lateral angle, faint over apical margin (if present). Antennal club 3-segmented; antennomeres IV-VIII narrow, elongate, longer than wide; antennomere IX triangular, as long or longer than broad. Mentum with plate broadly pentagonal. Terminal maxillary and labial palpomeres dilated; terminal maxillary palpomere triangular, length = width; terminal labial palpomere parallel-sided, width = 3/4 length. Pronotum with thick margins at angles, angle pores large; not margined in front between eyes; posterior angles project slightly over elytral humeri; base with patch of coarse pores and a slight depression on each side of midline; basal edge margined (often faint at middle). Prosternum lacking keel, broadly convex; prosternal line length variable, often extending in front of the procoxae onto the prosternum.

Scutellum transverse. Elytron with base strongly margined; striae obsolete, obscure, when visible, strial punctures same size as interval punctures. Wings reduced to narrow strips with a shagreened apical patch.

Remarks: The affinities of *Neoxestus* with other American erotylid genera is not clear. While it



Figures 18-23. *Neoxestus* spp. dorsal habiti. 18. *N. cauquenes*, 19. *N. chilensis*, 20. *N. nahuelbuta*, 21. *N. nonguen*, 22. *N. lucile*, 23. *N. norma*.

shares many general characteristics of the problematic genus *Mycotretus*, it is readily distinguished by characters listed above. A comprehensive phylogenetic study will help clarify the generic confusion.

As with other flightless erotylid genera, the species are not always readily distinguished. Flightless taxa can speciate by vicariant events, yet have no selective pressures to diverge morphologically. This is muddled by the fact that it is possible to have more than one flightless species in the same genus in a given area (Skelley 1997).

The species delineated below varied tremendously in a number of morphological characters which are usually quite conservative and taxonomically useful. These characters included pronotal shape, length of prosternal lines, and various antennomere proportions. Skelley (1998b) found that color patterns may vary in certain aspects, yet the position or presence of markings can be quite diagnostic. This is considered to be the case here, as the patterns displayed by these taxa showed little variation, with no intermediates, and each pattern correlated with certain morphological generalities, distributions, or specific genitalic characters. Further study of additional specimens may yield more new species or clarify some of the variability commented on above.

Biological information for members of this genus is sparse. Most specimens were collected from leaf litter. One collection of *N. nahuelbuta*, including larvae, is from an "encrusting polypore". These fungi typically live on dead hardwood and can be quite persistent. More collecting on these fungi may yield more information for this genus.

Additional References: Alvarenga 1965:87; 1994:45; Blackwelder 1945:468; Deelder 1942:54; Gemminger and Harold 1876:3696; Kuhnt 1909:55, 57, 93; 1911:68.

Etymology: The generic name "Austrischyrus" appears on the label of the type for *Neoxestus chilensis*, the type species of the genus. This name does not match the published name. Apparently E. Janson, who edited Crotch's (1876) revision after his death, changed the name before publication (Skelley 1998a). This is indicated by the note with the original description: "It seems to me impossible to range this with *Ischyrus*; it has at first sight the appearance of *Xestus*." Thus, the name *Neoxestus* refers to it being a "new-*Xestus*".

Key to species of *Neoxestus* Crotch

1. Legs unicolorus, pale 2
— Legs banded, base of femur and tibia distinctly darker than apex 3

2(1). Elytron with circular scutellar spot; elytron with subapical spot far from apical spot (Fig. 18) .... *N. cauquenes*, **sp. nov.**
— Elytron lacking a scutellar spot; elytron with subapical spot nearly touching apical spot (Fig. 19) *N. chilensis* Crotch

3(1). Elytron with scutellar spot 4
— Elytron lacking a scutellar spot 5

4(3). Elytron with circular scutellar spot separated from elytral base; elytron with 2 subapical spots;

dorsal surface nitidus, weakly microreticulate (Fig. 20) ..... *N. nahuelbuta*, **sp. nov.**

— Elytron with C-shaped scutellar spot touching elytral base; elytron with 1 subapical spot; dorsal body surface with dulling microreticulations (Fig. 21) ..... *N. nonguen*, **sp. nov.**

5(3). Elytron with humeral spot having strongly sinuate, dentate edges; elytron with subapical spot touching (or nearly touching) apical spot (Fig. 22) *N. lucile*, **sp. nov.**

— Elytron with humeral spot sub-rectangular, edges weakly sinuate; elytron with subapical spot far from apical spot (Fig. 23) .... *N. norma*, **sp. nov.**

Neoxestus cauquenes Skelley and Cekalovic, **n. sp.**
(Figs. 18, 24)

Description: Holotype length = 5.0 mm, width = 2.9 mm. Body dull with microreticulations. Each elytron with four yellow spots: quadrate humeral spot that touches only the lateral margin, nearly circular scutellar spot that nearly touches the base, apical spot that touches the apex, and subapical spot which is well removed from the apical spot (Fig. 18). Prosternal lines are parallel, if extending beyond procoxae. Antenna entirely brown. Legs entirely pale yellow.

Variation: Length = 4.2-5.0 mm, width = 2.3-2.9 mm.

Type data: Holotype of *N. cauquenes* label data: "CHILE: Maule Province, Cayurranquil, 400m, W. Cauquenes, 23-31 Jan 1981, L. Peña/ [red paper] HOLOTYPE Neoxestus cauquenes Skelley & Cekalovic" (NMNH, sex undetermined, not dissected).
Additional specimens: A total of 10 specimens was studied, the holotype and 9 paratypes. Label data are presented in the Appendix and plotted on Fig. 24.

Etymology: Named after a town near the type locality (noun in apposition).

Remarks: Label data for the type state "Maule Province", which is presently Cauquenes Province.

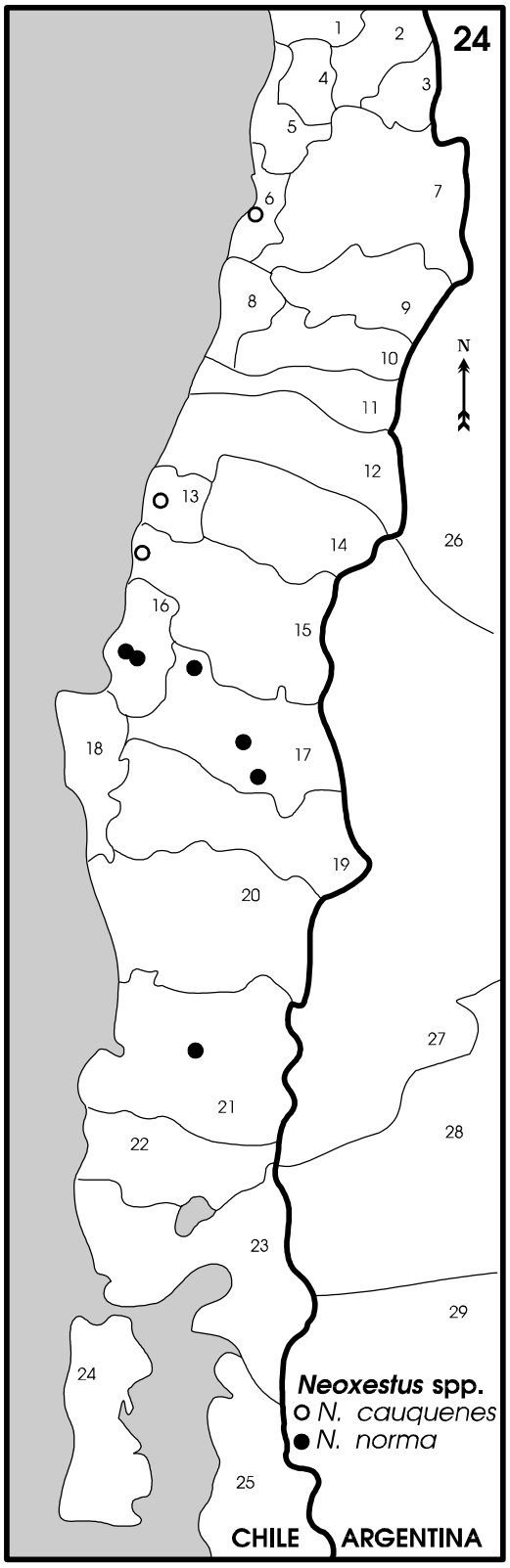


Figure 24. Distribution map for *Neoxestus cauquenes* and *N. norma*. Names for province numbers are listed in Materials and Methods.

Neoxestus chilensis Crotch
(Fig. 19)

Neoxestus chilensis Crotch 1876:(476)100.

Diagnosis. Length = 4.4-5.6 mm, width = 2.1-2.5 mm. Body lacking metallic sheen and strongly dulled by microreticulations; shape slightly more elongate, and more flattened than the other species. Each elytron with three yellow spots: quadrate humeral spot that touches both lateral margin and elytral base, apical spot that touches apex, and subapical spot which nearly touches apical spot (Fig. 19). Prosternal lines are parallel, if extending beyond procoxae. Antennae entirely pale brown. Legs entirely pale yellow-orange.

Type data: Length = 5.6 mm, width = 2.5 mm. The type of *Neoxestus chilensis* Crotch label data: "/ TYPE [blue paper]/ TYPE austischyrus chilensis/ Neoxestus chilensis Crotch, det. P. Skelley" (GRCC, sex undetermined, specimen studied; see Skelley 1998a). Crotch (1876) stated it is from "Chili."

Additional specimens: A total of 4 specimens was studied, the type and 3 others. Available label data (see Appendix) are not adequate to create a distribution map for this species.

Etymology: Named for its country of origin.

Remarks: Crotch bought many of the specimens he described in his 1876 revision (Skelley 1998a). Expeditions at this time were frequently paid for by selling the natural history specimens collected on the trip. Other species described by Crotch (1876), with types present in his collection, appear to have additional specimens in other collections. The four known specimens of *N. chilensis* are of similar age and have similar label data, indicating a similar origin (pers. obs. PES). They may represent a single collection from a mid-1800's expedition to Chile. Poor collection locality information presently prevents any local exploration for existing populations. More general collecting, or research into Chilean expeditions in the mid-1800's, is needed to rediscover this species.

Additional References: Alvarenga 1994:45; Blackwelder 1945:468; Gemminger and Harold 1876:3696; Guérin 1952:181 fig. 6, 183; Kuhnt 1909:93; 1911:68; Philippi 1887:787.

Neoxestus lucile Skelley and Cekalovic, **n. sp.**
(Figs. 22, 25)

Description: Holotype length = 4.8 mm, width = 2.3 mm. Body dull with microreticulations. Each elytron with three yellow spots: rectangular, sinuately edged humeral spot that touches only the lateral margin of elytral, apical spot that touches the apex, and subapical spot which touches the apical spot (Fig. 22). Prosternal lines weakly convergent, if extending anteriorly beyond procoxae. Antenna entirely dark brown to black. Legs banded.

Variation: Length = 4.3-4.8 mm, width = 2.1-2.3 mm.

Type data: Holotype of *N. lucile* label data: "Alto de Vilches, Talca: 10-XII-76/ FMNH, 1986, L. Peña Coll. Acc. # 17-422/ [red paper] HOLOTYPE Neoxestus lucile Skelley & Cekalovic" (FMNH, female, not dissected).

Additional specimens: A total of 9 specimens was studied, the holotype and 8 paratypes. Label data are presented in the Appendix and plotted on Fig. 25.

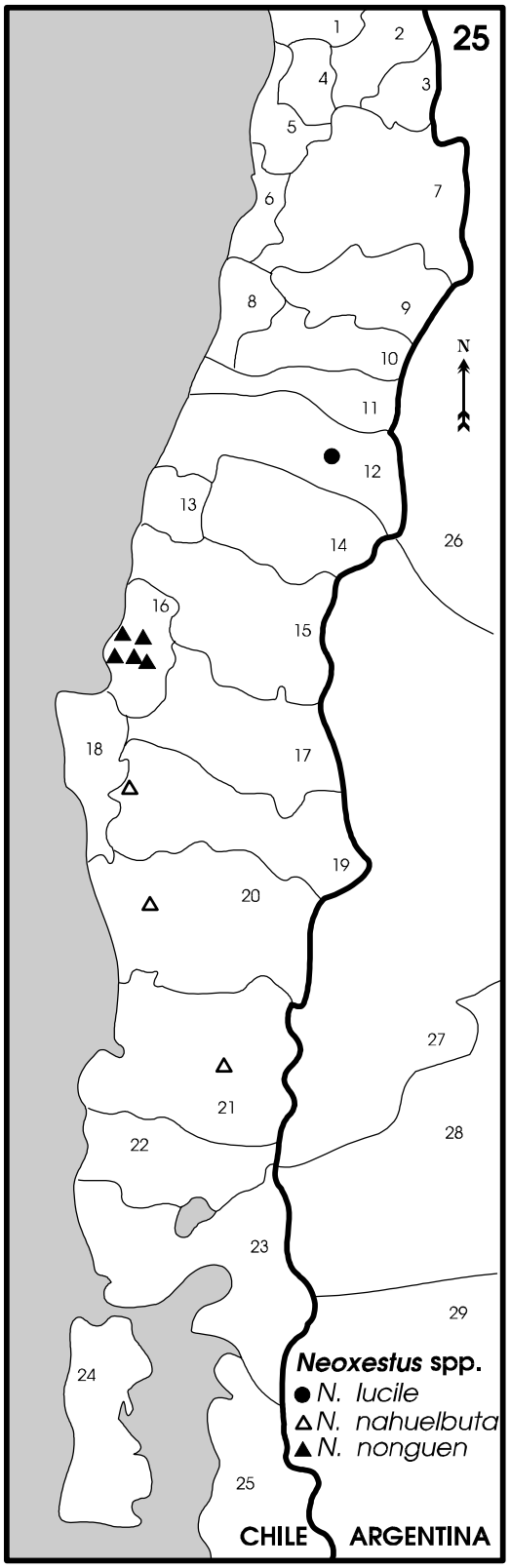
Etymology: Named to honor Lucile Skelley, wife of author PES, for her support with all of his studies (noun in apposition).

Neoxestus nahuelbuta Skelley and Cekalovic,
n. sp.
(Figs. 20, 25)

Description: Holotype length = 5.4 mm, width = 2.8 mm. Body strongly nitidus, mostly lacking microreticulations. Each elytron with five yellow spots: circular humeral spot that only touches lateral margin of elytra, circular scutellar spot that is well removed from any margin, apical spot that touches the apex, and two subapical spots (central and lateral) which are well removed from apical spot; lateral subapical spot small and near the lateral margin of elytra (Fig. 20). Prosternal lines not extending anteriorly beyond procoxae on specimens studied. Antennae black. Legs banded.

Variation: Length = 4.5-5.4 mm, width = 2.3-2.8 mm.

Type data: Holotype of *N. nahuelbuta* label data: "CHILE, near P. N. Nahuelbuta, 51 km.E.Canete, II-12-1968, 3400'/ at night L.&C.W.O'Brien/ [red



Figures 25. Distribution map for *Neoxestus lucile*, *N. nahuelbuta*, and *N. nonguen*. Names for province numbers are listed in Materials and Methods.

paper] HOLOTYPE Neoxestus nahuelbuta Skelley & Cekalovic" (FSCA, sex male, dissected).

Additional specimens: A total of 5 specimens was studied, the holotype and 5 paratypes. Label data are presented in the Appendix and plotted on Fig. 25.

Etymology: Named after the national park near the type locality (noun in apposition).

Neoxestus nonguen Skelley and Cekalovic, **n. sp.**
(Figs. 21, 25)

Description: Holotype length = 4.8 mm, width = 2.8 mm. Body somewhat nitidus, with weak but distinct microreticulations. Each elytron with four yellow spots: subquadrate, lobed humeral spot that touches both the base and lateral margin of elytra, C-shaped scutellar spot that touches base of elytral, apical spot that touches the apex, and subapical spot which is well removed from apical spot (Fig. 21). Prosternal lines converge anteriorly, if extending beyond procoxae. Antenna entirely dark brown to black. Legs banded.

Variation: Length = 4.0-5.2 mm, width = 2.1-3.0 mm. Male genitalia with relatively short, thickened flagellum; median strut length 1.5 times length of median lobe; median strut with strong anterior swelling.

Type data: Holotype of *N. nonguen* label data: "CHILE: Concepcion Pr., Estero Nonguen, 26-III-1997, T. Cekalovic/ [red paper] HOLOTYPE Neoxestus nonguen Skelley & Cekalovic" (MNHN, sex undetermined, not dissected).

Additional specimens: A total of 18 specimens was studied, the holotype and 17 paratypes. Label data are presented in the Appendix and plotted on Fig. 25.

Etymology: Named after the type locality (noun in apposition).

Remarks: This species and *N. norma* appear to be sympatric. Comparison of the male genitalia confirmed them as distinct. However, use of color pattern characters will readily distinguish these species.

Neoxestus norma Skelley and Cekalovic, **n. sp.**
(Figs. 23, 24)

Description: Holotype length = 5.0 mm, width = 2.8 mm. Body somewhat nitidus, weakly microreticulate. Each elytron with three yellow spots: rectangular humeral spot that only touches lateral margin of elytron, apical spot that touches the apex, and subapical spot which is well removed from apical spot (Fig. 23). Prosternal lines weakly convergent, if extending anteriorly beyond procoxae. Antenna basally brown, becoming black towards club. Legs banded.

Variation: Length = 4.0-5.0 mm, width = 2.0-2.8 mm. Male genitalia with long, narrow flagellum, not "fleshy"; median strut length 2 times length of median lobe; median strut with weak anterior swelling.

Type data: Holotype of *N. norma* label data: "CHILE: Concepcion Pr., Periquillo, 24-I-1997, T. Cekalovic, TC-515/ [red paper] HOLOTYPE Neoxestus norma Skelley & Cekalovic" (MNHN, sex undetermined, not dissected).

Additional specimens: A total of 37 specimens was studied, the holotype and 36 paratypes. Label data are presented in the Appendix and plotted on Fig. 24.

Etymology: Named to honor Norma Cekalovic, wife of author TCK, for her support with all of his studies (noun in apposition).

Remarks: This species and *N. nonguen* appear to be sympatric. Comparision of the male genitalia confirmed them as distinct. However, use of color pattern characters will readily distinguish these species.

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APPENDIX. Specimen data.

Country	Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
***Neoxestus cauquenes* Skelley and Cekalovic, sp. nov.**								
Chile	Cauquenes	Ninquini			JUL-1984	L.Pena		1-PESC
Chile*	Cauquenes	Cayurranquil, W. Cauquenes	400m	[35°58'S-72°21'W]	23-31-JAN-1981	L.Pena		3-NMNH
Chile	Cauquenes	W.Cauquenes		[35°58'S-72°21'W]	MAY-1984	L.Pena		1-AAC
Chile	Ñuble	Cobquecura		[36°08'S-72°47'W]	JAN-1988	P.Ramirez	2833-2	1-PRC
Chile	San Antonio	Fundo Llo-Lleo		[33°37'S-71°37'W]	13-OCT-1987	P.Ramirez	2834-3	1-PRC
***Neoxestus chilensis* Crotch**								
Chile								1-PESC
Chile							[old det.label "Engis rufopictus"]	1-NHML
Chile							[det.label "Dacne cu...Chevr" illedgible]	1-NHML
Chile*								1-GRCC
***Neoxestus lucile* Skelley and Cekalovic, sp. nov.**								
Chile	Talca	Alto de Vilches		[35°36'S-71°12'W]	DEC-1977	L.E.Pena		1-PESC
Chile*	Talca	Alto de Vilches		[35°36'S-71°12'W]	10-DEC-1976	L.E.Pena		1-FMNH
Chile	Talca	Alto de Vilches		[35°36'S-71°12'W]	DEC 1976	L.E.Pena		1-FMNH
Chile	Talca	Alto de Vilches		[35°36'S-71°12'W]	OCT-1978	L.Pena		2-PESC
Chile	Talca	Vilches		[35°36'S-71°12'W]	JAN-1981	L.E.Pena		2-FMNH
Chile	Talca	Vilches Alto		[35°36'S-71°12'W]	DEC-1973	Vidal-Elgueta		1-FMNH
Chile	Talca	Vilches Alto		[35°36'S-71°12'W]	JAN-1997	P. Diaz	Figuero de Arce	1-HNHM
***Neoxestus nahuelbuta* Skelley and Cekalovic, sp. nov.**								
Chile	Cautin	Fdo.LasSelvas,NW.NuevaImperial W.Temuco	600-700m	[38°45'S-72°55W]	18-FEB-1981	L.E.Pena	20194-01	1-USNM
Chile	Malleco	45 km.W.Angol, Nahuelbuta Nat. Park	1500m	[37°40'S-73°00'W]	9-DEC-1984	S.Peck	*Araucaria-Nothofagus* litter Berlese	1-FMNH
Chile*	Malleco	51 km.E.Canete, near P.N.Nahuelbuta	3400 ft	[37°40'S-73°00'W]	12-FEB-1968	C.O'Brien	at night	1-FSCA
Chile	Valdivia	30 km.SE.Panguipulli	200m	[39°50'S-72°08W]	15-NOV-1994	R.Leschen	#103, encrusting polypore [with 2 larvae]	2-SEMC
***Neoxestus nonguen* Skelley and Cekalovic, sp. nov.**								
Chile	Concepcion	Camino a Ramntcho		36°41'S-73°46'W	25-JAN-1985	T.Cekalovic	TC-150	1-MNHN
Chile*	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	26-MAR-1997	T.Cekalovic		1-MNHN
Chile	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	6-FEB-1996	T.Cekalovic	TC-462	1-PESC
Chile	Concepcion	Lagunillas	10m	37°00'S-73°10'W	6-NOV-1993	T.Cekalovic	TC-366	1-NMNH
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	22-NOV-1992	T.Cekalovic	TC-335	1-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	10-FEB-1997	T.Cekalovic	TC-518	1-SEMC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	15-SEP-1992	T.Cekalovic	TC-311	2-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	10-APR-1999	T.Cekalovic	TC-592	1-TCKC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	26-SEP-1992	T.Cekalovic	TC-313	4-PESC
Chile	Concepcion	Pinares		36°48'S-73°04'W	10-OCT-1993	T.Cekalovic	TC-365	3-PESC
Chile	Concepcion	Tome		[36°37'S-72°57'W]	12-DEC-1982	T.Cekalovic	TC-116	1-FMNH
Chile	Concepcion	Tome		[36°37'S-72°57'W]	12-DEC-1982	T.Cekalovic		1-AAC
***Neoxestus norma* Skelley and Cekalovic, sp. nov.**								
Chile	Bio Bio	[Alto] Caledonia-Mulchen	750m	[37°25'S-71°58'W]	6-FEB-1981			1-AAC
Chile	Concepcion	Cuesta Chivilingo			25-SEP-1997	T.Cekalovic	TC-595	1-FMNH
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	4-OCT-1999	T.Cekalovic	TC-598	3-CMNC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	3-OCT-1999	T.Cekalovic	TC-596	4-PESC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	16-OCT-1999	T.Cekalovic	TC-600	1-FMNH
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	23-OCT-1999	T.Cekalovic	TC-601	7-PESC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	6-NOV-1999	T.Cekalovic	TC-602	3-TCKC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	20-SEP-1999	T.Cekalovic	TC-594	1-TCKC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	4-FEB-1997	T.Cekalovic	TC-519	1-SEMC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	24-DEC-1996	T.Cekalovic	TC-510	2-FMNH
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	22-MAR-1997	T.Cekalovic	TC-538	1-TCKC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	21-DEC-1996	T.Cekalovic	TC-509	3-NMNH
Chile*	Concepcion	Periquillo	20m	36°57'S-72°57'W	24-JAN-1997	T.Cekalovic	TC-515	2-MNHN
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	22-NOV-1992	T.Cekalovic	TC-335	3-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	20-APR-1997	T.Cekalovic	TC-546, ex *Chusquea quila*	1-PESC
Chile	Concepcion	Quebrada Pinares		[36°48'S-73°04'W]	20-NOV-1971	T.Cekalovic	TC-35	3-PESC
Chile	Valdivia	Bosque Sta. Rosa		[40°02'S-72°34'W]	21-DEC-1971	J.Valencia		1-JVC

APPENDIX. continued.

Country	Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
***Xalpirta arnetti* Skelley and Cekalovic, sp. nov.**								
Chile*	Malleco	13.1 km E. Manzanar	1000m	38°28'S-71°30'W	2-DEC-1994	R.Leschen	#199 ex. *Panaeolus* on *Nothofagus*	8-SEMC
Chile	Malleco	15 km. W. Victoria	200m	[38°18'S-72°30'W]	28-31-DEC-1976	S.Peck		1-CNCI
Chile	Malleco	Sierra Nevada Cord. Longuimay			1-5-JAN-1962			1-UCC
***Xalpirta azureipennis* (Guérin)**								
Chile	Arauco	Rinconada	25m	37°53'S-73°18'W	8-NOV-1994	R.Leschen	#069 beating *Nothofagus*	1-SEMC
Chile	Malleco	3 km. W. Victoria	100m	[38°13'S-72°25W]	13-DEC-1984~12-FEB-1985	S&J.Peck	FIT, mix *Nothofagus* forest	1-CMNC
Chile	Ñuble	E.Quillon, C°Cayumanqui		[36°44'S-72°28'W]	8-APR-1974	L.Pena		2-UCC
Chile*	Ñuble[?]	Izq. [Izquierdo]				Paulsen		1-MNHM
***Xalpirta elsa* Skelley and Cekalovic, sp. nov.**								
Chile*		Bucalemito, Costa Stgo.			DEC-1965	L.E.Pena		12-FMNH
Chile		Laguna San Rafael N. P., Leones V.		[46°33'S-73°31'W]	JAN-FEB-1998			2-NHML
Chile	Cautin	Cudico, Villarrica		[39°16'S-72°13'W]	JAN-1980	J. Traimo		1-FMNH
Chile	Concepcion	Quebrada Nonguen		[36°50'S-73°00'W]	21-DEC-1994	T.Cekalovic		1-TCKC
Chile	Curico	El Coigual			FEB-1955	M.Riviera		1-UCC
Chile	Malleco	40 km.W.Angol, Nahuelbuta Nat.Park	12-1500m	[37°40'S-73°00'W]	9-DEC-1984~17-FEB-1985	S&J.Peck.	FIT in *Nothofagus-Araucaria* For.	1-CMNC
Chile	Malleco	45 km.W.Angol, Nahuelbuta Nat.Park	1400m	[37°40'S-73°00'W]	9-DEC-1984~16-FEB-1985	S&J.Peck.	Car trap- *Nothofagus-Araucaria* For.	1-CMNC
Chile	Ñuble	Las Trancas		[36°55'S-71°25'W]	JAN-FEB-1994			1-AAC
Chile	Osorno	Parque Nac. Puyehue, Antillanca Rd.	965m	[40°45'S-72°09'W]	18-25-DEC-1982	A.Newton	Site 658, *N.pumilio* forest, FIT	3-FMNH
Chile	Quillota	Olmue, La Campana N.P.		[33°00'S-71°12'W]	2-DEC-1984	S. Peck	hygrophilous forest leaf litter Berlese	1-PESC
Chile	SanAntonio	Fundo Miltil			8-SEP-1985	R. Ramirez	en puntilla	1-PRC
Chile	Talca	Vilches Alto	1172m	[35°36'S-71°12'W]	25-I-1969	J. Valencia		1-JVC
***Xalpirta guerini* Skelley and Cekalovic, nom. nov.**								
Chile	Santiago	Tiltil, Cuesta la Dormida		[33°05'S-70°56'W]	5-NOV-1965	Mahunka	Nr.P-B.103	1-PESC
Chile*	Ñuble[?]	Izq. [Izquierdo]				Paulsen		1-MNHM
***Xalpirta maderi* (Delkeskamp)**								
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	4-OCT-1957	F.Plaumann		1-PESC
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	OCT-1957	F.Plaumann		1-FMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	30-SEP-1957	F.Plaumann		1-FMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W		F.Plaumann		2-NMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	1-OCT-1957	F.Plaumann		3-NMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	2-OCT-1957	F.Plaumann		2-NMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	5-OCT-1957	F.Plaumann		2-NMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	15-OCT-1957	F.Plaumann		4-NMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	16-OCT-1957	F.Plaumann		2-NMNH
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	2-OCT-1957	F.Plaumann		1-PESC
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	22-OCT-1957	F.Plaumann		1-PESC
Brasil	Santa Catarina	Nova Teutonia, Correio, Ita.		[27°11'S-52°23'W]	24-SEP-1948	F.Plaumann		1-NMNH
Brasil*	Santa Catarina	Nova Teutonia		[27°11'S-52°23'W]				2-ZMHU
Brasil		N. Friburgo						1-ZMHU
Brasil		Petropolis						1-HNHM
Brasil		Petropolis						1-PESC
Brasil	Santa Catarina	Nova Teutonia	300-500m	27°11'S-52°23'W	3-OCT-1957	F.Plaumann		1-PESC
Brasil	Minas Gerais	V. Monte Verde			18-SEP-1962	J.Halik	20282	1-NMNH
***Xalpirta peckorum* Skelley and Cekalovic, sp. nov.**								
Argent.*	Salta	45 km.W.Salta	1950m		1-29-DEC-1987	S&J.Peck	moist ravine thicket, Malaise-FIT	1-CMNC
Argentina	Salta	17 km.N.La Caldera, Alto de la Sierra	1550m		2-30-DEC-1987	S&J.Peck	subtrop.humid forest, Malaise-FIT	1-PESC
***Xalpirta stellaris* Skelley and Cekalovic, sp. nov.**								
Chile	Ñuble	22.7 km. ESE. Recinto	1330m	[36°55'S-71°25'W]	10-DEC-1982~3-JAN-1983	A.Newton	Site 646, *Nothofagus* forest, FIT	1-PESC
Chile	Ñuble	72 km. SE. Chillan, Trancas nr Termas	1700m	[36°55'S-71°25'W]	6-DEC-1984~19-FEB-1985	S. Peck	*Nothofagus* forest FIT	1-FMNH
Chile*	Ñuble	Las Trancas, Chillan		[36°55'S-71°25'W]	JAN-1979	L.E.Pena		1-FMNH
Chile	Quillota	Quillota		[32°53'S-71°16'W]	JAN-1919	C.Porter		1-CUIC

APPENDIX. continued.

Country	Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
***Xalpirta valdiviana* (Philippi and Philippi)**								
Argentina	Chubut	El Turbio, Topál			11-JUL-1961		Nr. 493	1-HNHM
Argentina	Rio Negro	El Bolson, Topál		[41°58'S-71°31'W]	7-NOV-1961		Nr. 710, Nr.711	2-HNHM
Argentina	Rio Negro	El Bolson, Topál		[41°58'S-71°31'W]	29-OCT-1961		Nr. 674	1-HNHM
Argentina	Rio Negro	El Bolson, Topál		[41°58'S-71°31'W]	22-SEP-1961		Nr. 50	1-PESC
Argentina	Rio Negro	El Bolson, Topál		[41°58'S-71°31'W]	7-SEP-1961		Nr. 8	1-PESC
Chile [?]	Chubut	Lago Escelo			10-OCT-1961	A.Kovacs	BM-1964-193	1-NHML
Chile							[det. Johnson]	4-FMNH
Chile					1955	K.Branesik		2-FMNH
Chile								2-NHML
Chile		Laguna San Rafael N. P., Soler V.		[46°33'S-73°31'W]	JAN-FEB-1999	P.Hammond	BM-1999-107, Malaise trap at bottom	1-NHML
Chile		Laguna San Rafael N. P., Soler V.		[46°33'S-73°31'W]	JAN-FEB-1999	P.Hammond	BM-1999-107, rotting log	1-NHML
Chile		Laguna San Rafael N. P., Soler V.		[46°33'S-73°31'W]	JAN-FEB-1999	P.Hammond	BM-1999-107, FIT in forest	16-NHML
Chile		Laguna San Rafael N. P., Soler V.		[46°33'S-73°31'W]	JAN-FEB-1999	P.Hammond	BM-1999-107, Malaise trap	3-NHML
Chile		Laguna San Rafael N. P., Leones V.		[46°33'S-73°31'W]	23-26-JAN-1998	P.Hammond	BM-1999-107, FIT-1	1-NHML
Chile		Laguna San Rafael N. P., Leones V.		[46°33'S-73°31'W]	2-6-FEB-1998	P.Hammond	BM-1999-107, FIT-2	1-NHML
Chile	Arauco	8 km. W. Puren	35m	38°01'S-73°08'W	8-NOV-1994	R.Leschen	#072, ex *Armillariella*	5-SEMC
Chile	Cauquenes	Canelillos (E. Chovellén)		[35°58'S-72°39'W]	5-NOV-1991	M.Elgueta		1-MNHN
Chile	Cautin	38 km. NE. Pucon	775-1100m	39°04'S-71°46'W	22-NOV-1994	R.Leschen	#137, ex *Armillariella*	2-SEMC
Chile	Cautin	Bellavista, N.shore Lago Villarrica	310m	[39°15'S-72°10'W]	15-30-DEC-1982	A.Newton	Site 655, Valdivian rainforest, FIT	1-FMNH
Chile	Cautin	Chacamo, NW. Nueva Imperial	600-700m	[38°44S-72°57'W]	17-23-FEB-1981	L.Pena		2-NMNH
Chile	Cautin	10 km.S. Pucon, Vol. Villarrica N.P.	900m	[39°25'S-71°55W]	15-DEC-1984~10-FEB-1985	S&J.Peck	FIT, *Nothofagus* grove on ash	10-CMNC
Chile	Cautin	15 km.NE.Villarrica, Flor del Lago	300m	[39°12'S-72°15W]	14-DEC-1984~10-FEB-1985	S&J.Peck	FIT, *Nothofagus* forest	3-CMNC
Chile	Cautin	Volcan Villarrica	1120m	[39°25'S-71°57'W]	15-29-DEC-1982	A.Newton	Site 654, FIT	2-FMNH
Chile	Cautin	Volcan Villarrica	1250m	[39°25'S-71°57'W]	15-29-DEC-1982	A.Newton	Site 653, *N.domb.&pumilio, Chusquea*	1-PESC
Chile	Cautin	Volcan Villarrica	1250m	[39°25'S-71°57'W]	15-29-DEC-1982	A.Newton	Site 653, *N.dombeyi,pumilio,Chusq.*, FIT	1-FMNH
Chile	Chiloe	Angoi			OCT-1988	L.Pena	Malaise trap	5-PESC
Chile	Chiloe	Angoi, Alto			SEP-NOV-1988	L.Pena	Malaise	3-PESC
Chile	Chiloe	Dalcahue		[42°23'S-73°40'W]	8-15-FEB-1996	G.Barria		1-UCC
Chile	Chiloe	Chiloe I.				C.Darwin	Darwin Coll. 1885-119	1-NHML
Chile	Chiloe	Isla Chiloe, Ahoni Alto	70m	[42°46'S-73°34W]	APR-1988	L.Masner	primary forest	7-CMNC
Chile	Chiloe	Isla Chiloe, Camino a Melleico		42°37'S-73°41'W	14-FEB-1996	T.Cekalovic	TC-465	1-PESC
Chile	Chiloe	Isla Chiloe, San Juan de Chadmo		42°57'S-73°37'W	20-FEB-1997	T.Cekalovic		1-TCKC
Chile	Chiloe	Isla Chiloe, km 2 N. Puente Rio Pudeto		[41°57'S-73°47'W]	18-JAN-1998	T.Cekalovic	in branch	1-PESC
Chile	Chiloe	Isla Chiloe, km 2 N. Puente Rio Pudeto		[41°57'S-73°47'W]	8-FEB-1999	T.Cekalovic		2-PESC
Chile	Chiloe	Isla Chiloe, km 1 N. Puente Rio Pudeto	15m	41°57'S-73°47'W	17-FEB-1976	T.Cekalovic		1-TCKC
Chile	Chiloe	Isla Chiloe, km.1 N. Puente Rio Pudeto	15m	41°57'S-73°47'W	21-FEB-1996	T.Cekalovic	TC-495	1-PESC
Chile	Chiloe	Isla Chiloe, Compu Alto		43°00'S-73°47'W	18-JAN-1998	T.Cekalovic	in branch	1-PESC
Chile	Chiloe	Isla Quinchao, Quetro		42°24'S-73°34'W	19-FEB-1978	T.Cekalovic		1-PESC
Chile	Chiloe	Isla Quinchao, Quetro		42°24'S-73°34'W	20-JAN-1998	T.Cekalovic	branch in native forest	1-PESC
Chile	Chiloe	Isla Quinchao, Los Quetros		42°24'S-73°34'W	16-FEB-1996	T.Cekalovic	TC-468	1-PESC
Chile	Chiloe	Isla Quinchao, Los Quetros		42°24'S-73°34'W	19-FEB-1997	T.Cekalovic		1-PESC
Chile	Chiloe	Isla Quinchao, Hullar Bajo		42°24'S-73°34'W	10-FEB-1994	T.Cekalovic	TC-386	1-PESC
Chile	Coyhaique	10 km. NW. Coyhaique Reserva Nac.	900m		22-JAN-1985	S. Peck	mossy log & leaf litter beech for. Berlese	1-FMNH
Chile	Concepcion	c. 6 km. S. San Pedro	360m	[36°50'S-73°10'W]	12-DEC-1982~2-JAN-1983	A.Newton	Site 648, *Pinus* sp. forest, Berlese litter	4-FMNH
Chile	Concepcion	Camino a Chome		36°45'S-73°11'W	7-DEC-1995	T.Cekalovic	TC-457, ex *Chusquea*	1-PESC
Chile	Concepcion	Camino a las Escaleras		36°41'S-73°46'W	16-NOV-1991	T.Cekalovic		1-PESC
Chile	Concepcion	Chome		36°45'S-73°11'W	5-DEC-1993	T.Cekalovic		1-PESC
Chile	Concepcion	Escuadron	10m	36°54'S-73°10'W	10-APR-1988	T.Cekalovic	TC-206	1-PESC
Chile	Concepcion	Escuadron	10m	36°54'S-73°10'W	10-APR-1988	T.Cekalovic	TC-206	1-PESC
Chile	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	26-MAR-1997	T.Cekalovic		1-PESC
Chile	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	10-JAN-1997	T.Cekalovic	TC-512	1-PESC
Chile	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	26-MAR-1997	T.Cekalovic	TC-540, ex *Persea lingue*, "lingue"	1-PESC
Chile	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	10-JAN-1997	T.Cekalovic	TC-512	1-PESC
Chile	Concepcion	Estero Nonguen	25m	36°50'S-73°00'W	27-III-1997	T.Cekalovic	TC-541	2-CUIC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	11-OCT-1994	T.Cekalovic		1-PESC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	3-OCT-1999	T.Cekalovic	TC-596	1-PESC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	6-OCT-1999	T.Cekalovic	TC-600	1-TCKC
Chile	Concepcion	Fundo El Manzano		[37°09'S-72°20'W]	23-OCT-1999	T.Cekalovic	TC-601	1-TCKC

APPENDIX. continued.

Country	Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
***Xalpirta valdiviana* (Philippi and Philippi)** [Continued]								
Chile	Concepcion	Lagunillas	10m	37°00'S-73°10'W	6-NOV-1993	T.Cekalovic	TC-366	2-CNCI
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	13-SEP-1992	T.Cekalovic		1-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	12-SEP-1992	T.Cekalovic		3-AAC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	30-JAN-1997	T.Cekalovic	TC-516	1-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	7-OCT-1994	T.Cekalovic		2-PRC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	26-SEP-1992	T.Cekalovic	TC-313	4-TCKC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	9-OCT-1993	T.Cekalovic		1-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	30-JAN-1997	T.Cekalovic	TC-516	1-PESC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	15-SEP-1992	T.Cekalovic	TC-311, ex *Chusquea quila*	1-TCKC
Chile	Concepcion	Periquillo	20m	36°57'S-72°57'W	13-OCT-1995	T.Cekalovic	TC-456	1-PESC
Chile	Concepcion	Pinares		36°48'S-73°04'W	12-OCT-1970	T.Cekalovic		1-PESC
Chile	Concepcion	[Camino a] Chome		36°45'S-73°11'W	5-DEC-1993	T.Cekalovic		1-PESC
Chile	Llanquihue	Casa Pangue			4-10-DEC-1926	F.Edwards	BM-1927-63	1-NHML
Chile	Llanquihue	Frutillar Bajo, Univ. Chile Forest Res.	100m	[41°15'S-73°05'W]	22-DEC-1984~2-FEB-1985	S&J.Peck	FIT, ravine mixed forest	1-CMNC
Chile	Llanquihue	Lago Chapo		[41°30'S-72°30'W]	Feb-1985	T.Malaise		1-MNHN
Chile	Llanquihue	Lago Chapo, 13.5 km.E.Correntoso	310m	[41°30'S-72°30'W]	16-27-DEC-1982	A.Newton	Site 656, Valdivian rainforest, FIT	23-FMNH
Chile	Llanquihue	Lago Chapo, 34 km.E.Pto.Montt	300m	[41°30'S-72°30'W]	24-DEC-1984~2-FEB-1985	S&J.Peck	FIT, 2nd growth *Nothofagus* forest	23-CMNC
Chile	Llanquihue	Puerto Montt		[41°28'S-72°57'W]	DEC-1926	R.Shannon		1-NMNH
Chile	Llanquihue	Salto Petrohue, V. Perez N.P.		[41°10'S-72°26W]	23-DEC-1984~4-FEB-1985	S&J.Peck	FIT-mixed moist forest	2-CMNC
Chile	Llanquihue	P.N.Vicente Perez R., Pta.Huano		[46°33'S-73°31'W]	26-JAN-1973	C.Vivar T.		1-MNHN
Chile	Malleco	17 km. W. Angol	800m	[37°48'S-72°50'W]	8-DEC-1984~16-FEB-1985	S&J.Peck	FIT, *Nothofagus* forest	10-CMNC
Chile	Malleco	17 km. W. Angol	1800m	[37°48'S-72°50'W]	8-DEC-1984~16-FEB-1985	S. Peck	mixed *Nothofagus* forest FIT	63-FMNH
Chile	Malleco	45 km. W. Angol, Nahuelbuta Nat. Pk.	1400m	[37°40'S-73°00'W]	19-DEC-1984~16-FEB-1995	S&J.Peck	Car.trap, *Nothofagus-Araucaria* for.	1-CMNC
Chile	Malleco	40 km. W. Angol, Nahuelbuta Nat. Pk.	1500m	[37°40'S-73°00'W]	9-DEC-1984~11-FEB-1985	S&J.Peck	FIT, *Nothofagus- Araucaria* forest	20-CMNC
Chile	Malleco	Cabreria	1100m	[37°48'S-73°15'W]	JAN-1977	L.E.Pena		2-FMNH
Chile	Malleco	Conguillo IX reg.			FEB-1996	T.Curkovic		1-UCC
Chile	Malleco	20 km. W. Curacautin	1000m	[38°30'S-72°05W]	12-DEC-1984~16-FEB-1985	S&J.Peck	FIT, *Nothofagus* forest	10-CMNC
Chile	Malleco	20 km. W. Curacautin, Princesa	1000m	[38°30'S-72°05W]	12-DEC-1984~16-FEB-1985	S&J.Peck	FIT, *Nothofagus* forest	10-CMNC
Chile	Malleco	40 km. W. Curacautin	1500m	[38°26'S-72°20'W]	12-DEC-1984~16-FEB-1985	S. Peck	*Nothofagus - Araucaria* forest Malaise	1-FMNH
Chile	Malleco	40 km. W. Curacautin	1500m	[38°26'S-72°20'W]	12-DEC-1994~16-FEB-1995	S&J.Peck	Malaise trap, *Nothofagus-Araucaria*	10-CMNC
Chile	Malleco	14.2 km. NW. Lonquimay	1650m	38°25'S-71°25'W	20-NOV-1994	R.Leschen	#121, rotten log	1-SEMC
Chile	Malleco	6.5 km. E. Malalcahuello	1080m	[38°27'S-71°30'W]	13-31-DEC-1982	A.Newton	Site 651, *N.dombeyi-Chusquea*, Berlese	56-FMNH
Chile	Malleco	12.5 km. E. Malalcahuello	1350m	[38°27'S-71°30'W]	13-31-DEC-1982	A.Newton	Site 650, *N.dombeyi-Araucaria* for, FIT	323-FMNH
Chile	Malleco	14 km. E. Malalcahuello	1570m	[38°27'S-71°30'W]	13-31-DEC-1982	A.Newton	Site 649, *N.pumilio-Araucaria* for.	2-PESC
Chile	Malleco	14 km. E. Malalcahuello	1570m	[38°27'S-71°30'W]	13-31-DEC-1982	A.Newton	Site 649, *N.pumilio-Araucaria* for., FIT	23-FMNH
Chile	Malleco	11.4 km. E. Manzanar	1425m	38°28'S-71°30'W	9-20-NOV-1994	R.Leschen	#117, FIT	5-SEMC
Chile	Malleco	11.4 km. E. Manzanar	1425m	38°28'S-71°30'W	18-NOV-2-DEC-1994	R.Leschen	#190, FIT	15-SEMC
Chile	Malleco	13.1 km. E. Manzanar	1000m	38°28'S-71°30'W	2-DEC-1994	R.Leschen	#149, *Panaeolus* sp.	1-PESC
Chile	Malleco	13.1 km. E. Manzanar	1000m	38°28'S-71°30'W	2-DEC-1994	R.Leschen	#199, ex *Panaeolus* / *Nothofagus*	16-SEMC
Chile	Malleco	Nahuelbuta Parque		[37°40'S-73°00'W]	14-DEC-1976	L.Pena		1-MNHN
Chile	Malleco	Puren Natur. Mon., Contulmo	350m	[38°00'S-73°14'W]	11-DEC-1984~13-FEB-1985	S. Peck	mixed evergreen forest FIT	14-FMNH
Chile	Malleco	Puren Contulmo Natur. Mon.	350m	[38°00'S-73°14'W]	11-DEC-1984~13-FEB-1985	S&J.Peck	FIT, mixed evergreen forest	11-CMNC
Chile	Malleco	4 km. W. Victoria	300m	[38°18'S-72°24'W]	26-31-DEC-1976	S.Peck		1-PESC
Chile	Malleco	3 km. W. Victoria	100m	[38°13'S-72°25W]	13-DEC-1984~12-FEB-1985	S&J.Peck	FIT, mixed *Nothofagus* forest	9-CMNC
Chile	Ñuble	60 km. SE. Chillan, Termas Rd.	1300m	[36°55'S-71°35'W]	7-DEC-1984~19-FEB-1985	S. Peck	beech forest FIT	1-FMNH
Chile	Ñuble	72 km. SE. Chillan, Trancas nr. Termas	1700m	[36°55'S-71°25'W]	6-DEC-1984~19-FEB-1985	S. Peck	*Nothofagus* forest FIT	17-FMNH
Chile	Ñuble	(72 km.E.) Chillan, Trancas, nr. Termas	1700m	[36°55'S-71°25W]	6-DEC-1984~19-FEB-1985	S&J.Peck	FIT, *Nothofagus* forest	1-CMNC
Chile	Ñuble[?]	Izq. [Izquierdo]					Det.J.Guérin 1952	7-MNHN
Chile	Ñuble	Las Trancas		[36°55'S-71°25'W]	20-SEP-1975	J.Valencia		2-JVC
Chile	Ñuble	Las Trancas		[36°55'S-71°25'W]	19-DEC-1983	L.E.Pena		1-FMNH
Chile	Ñuble	Las Trancas, 19.5 km. ESE. Recinto	1250m	[36°55'S-71°25'W]	10-DEC-1982~3-JAN-1983	A.Newton	Site 647, *Nothofagus* forest, pitfall & FIT	58-PESC
Chile	Ñuble	Los Ñirres	798m	36°32'S-71°32'W	10-MAR-1994	T.Cekalovic	TC-399	2-PESC
Chile	Ñuble	22.7 km. ESE. Recinto	1330m	[36°55'S-71°25'W]	10-DEC-1982~3-JAN-1983	A.Newton	Site 646, *Nothofagus* forest, pitfall & FIT	12-FMNH
Chile	Ñuble	22.7 km. ESE. Recinto	1330m	[36°55'S-71°25'W]	10-DEC-1982~3-JAN-1983	A.Newton	Site 646, *Nothofagus* for., FIT	1-PESC
Chile	Osorno	7.7 km. NE. Termas de Puyehue	200m	[40°42'S-72°18'W]	19-25-DEC-1982	A.Newton	Site 664, Valdivian rainforest, FIT	10-FMNH
Chile	Osorno	7.7 km. NE. Termas de Puyehue	200m	[40°42'S-72°18'W]	19-25-DEC-1982	A.Newton	Site 664, Valdivian rainforest, FIT	1-PESC
Chile	Osorno	Anticura, Puyehue		[40°39'S-72°10'W]	FEB-1978	L.E.Pena		4-FMNH
Chile	Osorno	Anticura, Puyehue		[40°39'S-72°10'W]	6-JAN-1986			3-AAC

APPENDIX. continued.

Country	Prov.	Locality	Elev.	Long-Lat	Date	Collr.	Method/Notes	No-Colln.
***Xalpirta valdiviana* (Philippi and Philippi)** [Continued]								
Chile	Osorno	La Picada [Mountain]		[41°04'S-72°26'W]	JAN-1980	L.E.Pena		1-FMNH
Chile	Osorno	Parque Nac. Puyehue, 4.1 km. E. Anticura	430m	[40°39'S-72°05'W]	19-26-DEC-1982	A.Newton	Site 662, Vadivian rainforest, Malaise	4-FMNH
Chile	Osorno	Parque Nac. Puyehue, 4.1 km. E. Anticura	430m	[40°39'S-72°05'W]	19-26-DEC-1982	A.Newton	Site 662, Valdivian rainforest, Malaise	1-PESC
Chile	Osorno	Parque Nac. Puyehue, Antillanca Rd.	470-720m	[40°45'S-72°09'W]	18-24-DEC-1982	A.Newton	Valdivian rainforest, screen sweeps, dusk	1-FMNH
Chile	Osorno	Pulelfu			FEB-1996			1-UCC
Chile	Osorno	Puyehue	500-700m	[40°39'S-72°19'W]	6-9-FEB-1978	L.E.Pena		1-FMNH
Chile	Osorno	Puyehue Nat. Park, Aguas Calientes	600m	[40°39'S-72°19'W]	18-DEC-1984~8-FEB-1985	S. Peck	*Nothofagus* forest Malaise trap	1-FMNH
Chile	Osorno	Puyehue Nat. Park, Aguas Calientes	500m	[40°39'S-72°19'W]	20-DEC-1984~8-FEB-1985	S&J.Peck	FIT, Derumbes Forest Trail	4-CMNC
Chile	Osorno	Puyehue Nat. Park, Aguas Calientes	600m	[40°39'S-72°19'W]	18-DEC-1984~8-FEB-1985	S&J.Peck	Malaise, *Nothofagus* forest	11-CMNC
Chile	Quillota	Olmue, La Campana N.P.		[33°00'S-71°12'W]	2-DEC-1984	S.Peck	hygrophilous forest leaf litter Berlese	15-FMNH
Chile	Santiago	Cerro El Roble, Cordillera de la Costa				Andrássy	Nr. P-B. 21	3-HNHM
Chile	Santiago	Cerro El Roble, Cordillera de la Costa			29-SEP-1965	Loksa	Nr. P-B. 18-2	1-HNHM
Chile	Santiago	Cordillera, Reserva Rio Clarillo		[33°39'S-70°38'W]	NOV-DEC-1989	L.Stange	Malaise trap	1-FSCA
Chile	Talca	66.5 km. E. San Clemente	625m	35°43'S-70°50'W	5-18-NOV-1994	R.Leschen	#113, FIT	1-SEMC
Chile	Talca	Alto de Vilches, 70 km. E. Talca	1300m	[35°36'S-71°12'W]	5-DEC-1984~20-FEB-1985	S. Peck	*Nothofagus* forest FIT	9-FMNH
Chile	Talca	Alto de Vilches, 70 km. E. Talca	1300m	[35°36'S-71°12'W]	5-DEC-1984~20-FEB-1985	S&J.Peck	FIT, *Nothofagus* forest	16-CMNC
Chile	Valdivia	4.1 km. W. Anticura	270m	[40°39'S-72°05'W]	19-25-DEC-1982	A.Newton	Site 663, Valdivian rainforest, FIT & fog	19-FMNH
Chile	Valdivia	30 km. W. La Union	500m	[40°15'S-73°25'W]	7-11-FEB-1988	G.B.Edwards		1-FSCA
Chile	Valdivia	34 km.WNW. La Union	700m	[40°15'S-73°25'W]	17-DEC-1984~7-FEB-1985	S&J.Peck	FIT-mixed evergreen forest	10-CMNC
Chile*	Valdivia	Valdivia				[Landbeck?]	[specimen not located]	1--?
Chile	Valdivia	Parque Oncol, Cruce Camino al Sendero Tepual			19-JAN-2001	T.Cekalovic		1-POC