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I N S E C T P E S T S U R V E Y B U L L E T I N

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I N S E C T N O T E S F R O M C O S T A R I C A I N 1 9 3 5

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This paper is supplemental to the Insect Notes from Costa Rica in 1934, published as a Supplement to No. 4, Insect Pest Survey Bulletin, Vol. 15, 1935.

The list does not represent the complete collection for the year, but only those notes that give additional data to the previous year.

The same arrangement has been followed as in the previous list. It is not deemed necessary to reissue the map of Costa Rica, as it may be consulted in the original paper. The abbreviations for the localities given in the previous list apply in this one.

C O L L E O P T E R A

Insect and locality	Collected on	Date and notes
ANTHICIDAE		
Anthicus asphaltinus Champ. Paso Ancho	Annona muricata Brassica pekinensis Citrus aurantifolia Citrus nobilis Citrus sinensis Cornutia cymosa	January, February, May, August, October, December
Notoxus eximius Champ. Guadalupe San Pedro	Cinnamomum camphora Coffea arabica Epidendrum sp. Eugenia uniflora	January August to November
BRENTHIDAE		
Brentus mexicanus Boh. San Jose San Pedro	Acnistus arborescens Annona cherimola Coreopsis lanceolata Dombeya wallichii	April, in flowers June, at sap in wound August, October to December
CANTHARIDAE		
Chaulioglyphus histrio (Dej.) San Pedro	Iris laevigata	June
CARABIDAE		
Euproctus subdeletus Bates San Pedro	Persea drymifolia	January
Lebia soror Chaud. Waldeck	Theobroma cacao	April

Insect and Locality	C o l l e c t e d o n	Date and notes
CERAMBYCIDAE		
Acanthoderes circumflexus Thv. Santa Rosa de Cartago	Citrus sinensis	September
Callichroma holochlora Bates Liberia	Zea mays	February
Esthlogena porosa Bates San Jose	Ficus carica	September, in dry rolled leaf
Hippopsis lemniscata (F.) San Pedro	Chrysanthemum sp.	June
Ochresthes pollinosus (Chevr.) San Pedro	Acanthus arborescens	December
Pterichtya pisciformis Thomson San Pedro	Chayota edulis	October
Ptychodes lecontei Thomson Liberia	Calathea insignis	July
CHRYSOMELIDAE		
Aliochroma sexmaculatum Clark San Pedro	Chayota edulis	June
Altica amethystina Oliv. San Pedro	Phaseolus vulgaris	December
Asphaera nobilitata (F.) Waldeck	Panicum maximum	July
Calliographa elegantula Jacoby El Pisote		September

Insect and locality	C o l l e c t e d o n		Date and notes
Cerotoma rogersi Jacoby Juan Vinas Pejivalle San Pedro Santiago	Amygdalus persica Panicum maximum Phaseolus lunatus Zea mays		Throughout year
Cerotoma salvini Baly Descamparados El Pisote San Pedro	Chayota edulis Cucurbita pepo Galinzoga hispida Impatiens balsamina	Phaseolus lunatus Phaseolus vulgaris	July to December
Chirida guttata (Oliv.) San Pedro Waldeck	Ipomoea sp. Phaseolus vulgaris Zea mays		July
Colaspis fulvotestacea Lef. Waldeck	Theobroma cacao		April
Colaspis prasina Lef. Sarchi	Chayota edulis Vernonia brachiata		January October, November
Colaspis sculpta Jacoby Waldeck	Theobroma cacao		April July
Colaspis submetallica Jacoby Waldeck	Theobroma cacao		April July
Cryptoccephalus trizonatus Suffr. Guadalupe	Annona cherimola Byrsonima crassifolia	Citrus limonia Coffea arabica	

Insect and locality	C o l l e c t e d o n	Date and notes	
<i>Cryptocephalus trizonatus</i> -Cont'd San Jose San Juan	<i>Croton gossypifolium</i> <i>Eugenia uniflora</i> <i>Ficus carica</i> <i>Gerbera jamesoni</i> <i>Lactuca sativa</i> <i>Ligustrum japonicum</i> <i>Malus sylvestris</i>	<i>Parkinsonia aculeata</i> <i>Prunus selicina</i> <i>Pyrus communis</i> <i>Rosa</i> sp. <i>Schinus molle</i> <i>Spondias mombin</i>	March July October
<i>Ctenocnira cumulata</i> (Boh.) Orosi San Pedro Waldeck	<i>Chayota edulis</i> <i>Cornutia cymosa</i> Gramineae (grass) <i>Ipomoea</i> sp.		
<i>Ctenochira vivida</i> (Boh.) Waldeck	<i>Ipomoea</i> sp.		July
<i>Diabrothica balteata</i> Lec.	<i>Ageratum conyzoides</i> <i>Asparagus officinalis</i> <i>Beaumontia grandiflora</i> <i>Beta vulgaris crassa</i> <i>Canarium odoratum</i>	<i>Brassica oleracea capitata</i> <i>Citrus aurantium</i> <i>Datura stramonium</i> <i>Daucus carota</i> <i>Phaseolus lunatus</i> <i>Vicia faba</i>	
<i>Diabrotica fulvicornis</i> Jacoby Cartago Juan Vinas	<i>Acnistus arborescens</i> <i>Chayota edulis</i> <i>Codiaeum variegatum</i> <i>Datura candida</i> <i>Erythrina glauca</i>	<i>Euphorbia</i> sp. <i>Hibiscus rosa-sinensis</i> <i>Phaseolus vulgaris</i> <i>Spondias mombin</i> <i>Zea mays</i>	February
<i>Diabrotica fulvosignata</i> Bely Waldeck	<i>Theobroma cacao</i>		July

Insect and locality	Collected on	Date and notes
<i>Diabrotica nummularis</i> Harold Juan Vinas San Jose San Juan San Pedro San Rafael	Allamenda cathartica Brassica pekinensis Beta vulgaris crassa Casimiroa edulis Cestrum nocturnum Chenopodium ambrosioides Citrus aurantium Citrus nobilis Coffea arabica Colocasia esculenta Conostegia lanceolata Dahlia rosea Datura candida Datura stramonium Daucus carota Fortunella margarita Hemerocallis sp. Lactuca sativa	July Important injury to dahlia, allamenda, and pet-sai. <u>Zelus ruficeps</u> Stal eating this beetle on July 11. Lippia berlandieri Lycopersicum esculentum Myosotis sylvatica Panicum barbinode Phaseolus lunatus Poinsettia pulcherrima Prunus salicina Psidium molle Pyrus communis Roystonea regia Solanum torvum Solanum wendlandi Sterculia diversifolia Trichillia havanensis Tropaeolum majus Verbesina turbacensis
<i>Diabrotica porracea</i> Harold Barba El Pisote San Jose San Isidro San Rafael	Amygdalus persica Dahlia rosea Gladiolus sp. Ipomoea sp. Pennisetum clandestinum	Pennisetum purpureum Persea americana Phaseolus vulgaris Tripsacum latifolia Zantedeschia aethiopica
<i>Diabrotica theimei</i> Baly San Pedro <i>Diabrotica viridula</i> (F.) San Pedro	Chayota edulis Impatiens balsamina Vicia faba	October Important injury to snap beans January

Insect and locality	C o l l e c t e d o n		Date and notes
Diabrotica vittata (F.) Tres Rios	Allium cepa Brassica oleracea capitata	Brassica pekinensis Daucus carota Persea americana	January April Serious injury to pe-tsai cabbage
Disonycha trifasciata Clark Paso Ancho Waldeck	Musa sapientum Spondias mombin		July August
Epitrix fuscata (Duv.) San Pedro San Rafael	Acnistus arborescens Cleome spinosa Datura stramonium Gramineae (grass)	Ipomoea batatas Ipomoea tiliacea Phaseolus vulgaris	
Galeruca encaustica Germ.	Chayota edulis Erythrina rubrinervia Hedychium coronarium	Vernonia brachiata Zea mays	
Homophoea cyanipennis octomaculata (Crotch) La Irma Pejivalle San Antonio San Jose	Ananas sativus Annona squamosa Asclepias curassavica Brassica japonica Citrus limonia Codiaeum variegatum Crotalaria spectabilis Datura candida Datura suaveolens	Ficus carica Lycopersicum esculentum Mangifera indica Oryza sativa Panicum barbinode Poinsettia pulcherrima Punica granatum Rheedia edulis	January
Malacorhinus decempunctatus Jacobby Waldeck	Tineobroma cacao		July
Metriona angularis (Champ.) Waldeck	Ipomoea sp.		July

Insect and locality	Collected on	Date and notes
Metriona emarginata (Boh.) Guadalupe	Chayota edulis Coffea arabica	June September
Metriona judaica (F.) Waldeck	Coix lacryma-jobi	July
Metriona propinqua (Dej.) Waldeck	Coix lacryma-jobi	July
Metriona puella (Boh.) Waldeck	Elaeis guineensis Ipomoea sp.	July
Metriona zona (F.) Waldeck	Ipomoea sp.	July
Nodonota irazuensis (Jacoby) Barba Paraiso San Jose	Albizia lophantha Alnus acuminata Amygdalus davidiana Ancistus arborescens Annona squamosa Artemisia absinthium Asparagus officinalis Averrhoa carambola Bauhinia monandra Byrsonima crassifolia Canna indica Capsicum annuum Cassia sophora Cedrela montana mexi- cana Ceiba pentandra Chrysanthemum maximum Chrysophyllum cainito Citharexylum caudatum Citrus aurantium	Clerodendron fragrans Cobaea scandens Colocasia esculenta Congee velutina Crotalaria spectabilis Cucurbita ficifolia Datura candida Daucus carota Dombeya wallichii Gerbera jamesoni Gomphrena globosa Grevillea robusta Hamelia erecta Heliotropium peruvianum Hibiscus abelmoschus Holcus sorghum Indigofera suffruticosa
		Destroyed tip of <u>Prunus</u> <u>davidiana</u> and <u>P.</u> <u>salicina</u> Destroyed flowers of African daisy

Insect and locality	Collected on	Date and notes	
Nodonota irazuensis - Cont'd.	Inga laurina	Polygonum acre	
	Lagerstroemia speciosa	Prunus salicina	
	Lantana camara	Psidium molle	
	Lucuma nannosa	Punica granatum	
	Lupinus sp.	Rheeda edulis	
	Melaleuca leucadendron	Rosmarinus officinalis	
	Nicotiana tabacum	Solanum nigrum	
	Passiflora quadrangularis	Tabebuia guayacan	
	Pennisetum clandestinum	Tagetes patula	
	Persea pittieri	Taraxacum officinale	
	Phaseolus lunatus	Thespesia populnea	
	Plantago major	Trema micrantha	
	Poinsettia pulcherrima	Triumfetta josefina	
		Zinnia elegans	
Nodonota lateralis (Jacoby) Juan Vinas Paso Ancho San Jose	Acanthus arborescens	Lupinus sp.	Seriously damaging dahlia and lupine flowers
	Annona squamosa	Malacra radiata L.	
	Asparagus officinalis	Malpighia glabra	
	Canarium odoratum	Manihot esculenta	
	Citrus aurantifolia	Pelargonium zonale	
	Cobaea scandens	Pennisetum purpureum	
	Codiaeum variegatum	Persea americana	
	Congea velutina	Persea pittieri	
	Coreopsis lanceolata	Poinsettia pulcherrima	
	Croton gossypifolium		
	Dahlia rosea	Schinus molle	
	Daucus carota	Solanum sp.	
	Dombeya wallichii	Tagetes patula	
	Gliricidia maculata	Verbena sp.	
Oedionychis reichei Harold Juan Vinas	Vernonia brachiata	August	

Insect and locality	Collected on	Date and notes
<i>Oedionychis tenuicincta</i> Jacoby	<i>Dombeya wallichii</i>	August
<i>Pachybrachys femoratus</i> (Oliv.)	<i>Arracacia xanthorrhiza</i> <i>Asparagus officinalis</i> <i>Cupressus benthami</i> <i>Hibiscus rosa-sinensis</i> <i>Lippia berlandieri</i>	<i>Psidium guajava</i> <i>Sterculia diversifolia</i> <i>Vitis tiliacifolia</i> <i>Zinnia elegans</i>
CICERIDAE		
<i>Enoclerus villicus</i> (Gorh.)	<i>Chayota edulis</i> <i>Jussiaea decurrens</i> <i>Zea mays</i>	June July August, October
Paso Ancho		
San Pedro		
COCCINELLIDAE		
<i>Epilachna abrupta</i> Gorh.	<i>Cestrum macrophyllum</i> <i>Erythrina rubrinervia</i> <i>Solanum aculeatissimum</i>	May July August
San Isidro de Coronado		
San Pedro		
<i>Epilachna borealis</i> (F.)	<i>Chayota edulis</i>	June to August Serious injury
<i>Epilachna varivestis</i> Muls.	<i>Chayota edulis</i>	August Serious injury September
San Jose		
San Pedro		
<i>Epilachna defecta</i> Muls.	<i>Annona cherimola</i> <i>Capsicum annuum</i> <i>Cestrum aurantiacum</i>	<i>Conostegia lanceolata</i> <i>Cucurbita pepo</i>
San Jose		
<i>Epilachna virgata</i> Muls.	<i>Duranta plumieri</i>	Serious injury
<i>Thalassia glauca</i> (Muls.)	<i>Erythrina rubrinervia</i> <i>Persea americana</i>	January April
San Pedro		

Insect and locality	Collected on	Date and notes
ELATERIDAE <i>Monocrepidius aversus</i> Lec. San Pedro	<i>Persea americana</i>	May
ENDOMYCHIDAE <i>Bystus hemisphaericus</i> (Gerst.) Waldeck	<i>Theobroma cacao</i>	July
EROTYLIDAE <i>Coccimorphus dichrous</i> Lac. Pejivalle Waldeck	<i>Elaeis guineensis</i> <i>Phaseolus vulgaris</i>	February July
<i>Cypherotylus elevatus</i> (F.)	<i>Chayota edulis</i> <i>Citrus sinensis</i>	July August
<i>Hapalips fuscus</i> Reitt. Waldeck	<i>Theobroma cacao</i>	July
<i>Homoeotelus jansoni</i> Crotch San Pedro	<i>Coffea arabica</i>	November
LAMPYRIDAE <i>Aspidosoma aegrotum</i> Gorb. San Pedro	<i>Citrus sinensis</i> <i>Pyrus communis</i>	August December
<i>Aspidosoma laterale</i> (F.) Juan Vinas	<i>Coffea arabica</i>	August
NITIDULIDAE <i>Conotelus mexicanus</i> Murr. Paso Ancho San Pedro	<i>Chrysanthemum maximum</i> <i>Coreopsis lanceolata</i> <i>Cucurbita pepo</i>	Rosa sp. August January March
	<i>Persea pittieri</i>	

Insect and locality	C o l l e c t e d o n	Date and notes
STAPHYLINIDAE Philonthus feralis Erichs.	Charyota edulis	Phaseolus vulgaris
TENEBRIONIDAE Lobometopon guatemalensis (Champ.) Paso Ancho	Ageratum conyzoides Amygdalus davidiana Annona cherimola Annona reticulata Asparagus officinalis Averrhoa carambola Boehmeria nivea Casimiroa edulis Crotalaria striata Cucurbita pepo Dianthus caryophyllus Dillenia indica Eriobotrya japonica Ficus carica	Ficus religiosa Gliricidia maculata Impatiens balsamina Lippia berlandieri Panicum barbinode Persea pittieri Raphanus sativus Saccharum officinarum Schinus molle Solanum tuberosum Triumfetta josefina Tropaeolum majus Zea mays
Schoenicus panamensis Champ.	Annona cherimola Asparagus officinalis Eumelia erecta Mangifera indica	Prunus salicina Pyrus communis Vicia faba
Strongylium permodicum Micklin Waldeck	Theobroma cacao	April
RHYNCHOPHORA Anyptotactus exilis Boh.	Phaseolus vulgaris	November
Attelabus conicollis Sharp Paso Ancho	Psidium guajava	December

Insect and locality	C o l l e c t e d o n	Date and notes
Attelabus corvinus Gyll. Waldeck	Spondias mombin	August
Baris aerea (Boh.) San Pedro	Chrysanthemum sp.	January
Cleistolophus similis (Chevr.) San Rafael	Boehmeria nivea Chrysophyllum cainito Erythrina rubrinervia	Vitis vinifera Zea mays February June July, August
Conotrachelus fulvescens Champ. San Pedro	Canarium odoratum Persea americana	January February, October
Conotrachelus perseae Barber San Pedro	Persea americana	February, August, October, December
Conotrachelus signatus Kirsch. San Pedro	Persea americana	May
Copturus perseae Gunth. San Pedro	Persea americana	February March Serious damage by larvae, work under bark
Eurhinus festivus (F.)	Citharexylum caudatum	October
Exophthalmus jekelianus (White) Juan Vinas Santiago Siquirres Turrialba Waldeck	Citrus limonia Citrus paradisi Citrus sinensis Coffea arabica Cupressus benthami Dahlia rosea	Fragaria chiloensis Heliotropium sp. Hibiscus rosa-sinensis Musa sapientum Spondias purpurea July August Seriously damages coffee foliage
Exophthalmus sculptus Champ. Guadalupe Tres Rios	Coffea arabica Castanea sativa	August September

Insect and locality	C o l l e c t e d o n		Date and notes
Exophthalmus sulcicrus Champ. Liberia	Citrus sinensis Solanum sp.		July
Geraeus lentiginosus (Boh.)	Citrus medica Cyperus caracasanus Delhia rosea Daucus carota Dianthus caryophyllus	Heliotropium indicum Impatiens belsamina Lippia berlandieri Pyrus communis Verbesina turbacensis	October to March
Geraeus lineellus (Tec.) San Pedro	Impatiens belsamina		October
Geraeus senilis (Gyll.) Paso Ancio San Pedro Santiago	Zea mays		June Serious injury July to corn August
Heilipus trifasciatus F. Sixaola	Persea americana		July Reared in seed Serious injury
Metamasius sericeus (Oliv.) San Lezaro San Pedro	Acrocomia vinifera Musa textilis		March September
Pantomorus femoratus Sharp. Alajuela	Zea mays		October
Phyrdenus divergens (Germ.) San Pedro	Lycopersicum esculentum		June
Rhinospathe albomarginata Chev. San Jose San Pedro	Penicium barbinode Saccharum officinarum		July August October

Insect and locality	Collected on	Date and notes
<i>Rhodobaeus stigmaticus</i> (Farrerus) Liberia	<i>Chayota edulis</i> <i>Saccharum officinarum</i>	July
<i>Rhodobaeus tridecempunctatus</i> <i>eraphicus</i> Champ. Rio Grande	Gramineae (grass)	February
<i>Steirarrhinus nebulosus</i> Champ.	<i>Chayota edulis</i> <i>Passiflora edulis</i>	May July, September

D I P T E R A

<i>Anastrepha serpentina</i> (Wied).	<i>Lucuma mammosa</i>	<i>Chrysophyllum cainito</i>	August Larvae destroy the fruit
<i>Camptoprosopella xanthoptera</i> Hendel San Pedro	<i>Phaseolus vulgaris</i>		October November
<i>Carpolionchaea pendula</i> Bezzi Paraiso Paso Ancho San Pedro	<i>Manihot esculenta</i>		May Serious injury August to tips by September larvae December
<i>Chrysops variegata</i> Deg. Pejivalle	Horses		February
<i>Dermatobia hominis</i> (L.) Pejivalle San Pedro Sixnola	Man Cattle		January June

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Diolophus melanocephalus</i> V. d. Wulp Paraiso San Jose San Pedro San Rafael	<i>Cosmimiroa edulis</i> <i>Chrysanthemum maximum</i> <i>Cupressus benthami</i> <i>Mangifera indica</i> <i>Persea americana</i>	January February June October December
	<i>Solanum tuberosum</i>	September
<i>Plectia aterrima</i> Bell Sanatorio Duran		
<i>Rhynchosciara brevicornis</i> Guer. San Rafael	<i>Asparagus officinalis</i> <i>Averrhoa carambola</i> <i>Cosmimiroa edulis</i> <i>Casuarina equisetifolia</i> <i>Hibiscus rosa-sinensis</i>	<i>Ipomoea batatas</i> <i>Mangifera indica</i> <i>Prunus salicina</i> <i>Rhododendron</i> sp. <i>Rosa</i> sp. <i>Saccharum officinarum</i>
	<i>Canarium odoratum</i> <i>Chrysanthemum maximum</i> <i>Tabernaemontana big-noniaceflora</i>	<i>Theobroma cacao</i>
	<i>Theobroma cacao</i>	July
<i>Richardia telescopica</i> Gerst. Waldeck <i>Tetraneuraesta obscuriventris</i> Loew	<i>Croton gossypifolium</i> <i>Eugenia uniflora</i> <i>Ligustrum japonicum</i>	April August

H O M O P T E R A

Insect and locality	C o l l e c t e d o n	Date and notes
ALEYRODIDAE		
<i>Aleurocanticus woglumi</i> Ashby San Jose Tres Rios	<i>Citrus sinensis</i> <i>Mangifera indica</i> <i>Persea americana</i>	Adults feed only on tender leaves of avocado.
<i>Aleuroplatus oculireiformis</i> Quaint. and Baker San Pedro	<i>Passiflora ligularis</i>	December
<i>Aleurothrixus howardi</i> (Quaint.) Santo Domingo de Heredia Tres Rios	<i>Citrus medica</i> <i>Citrus nobilis</i> <i>Fortunella japonica</i>	October November January
APHIDIDAE		
<i>Aphis nerii</i> Boyer San Pedro	<i>Asclepias curassavica</i> <i>Hibiscus rosa-sinensis</i>	January, March, May, September
<i>Cerataphis lataniae</i> (Boisd.) San Pedro	<i>Roystonia regia</i>	December
<i>Macrosiphum rosae</i> (L.) Paso Ancho San Pedro Sarchi	<i>Rosa</i> sp.	December, February May
<i>Rhopalosiphum pseudobrassicæ</i> (Davis) Guadalupe	<i>Brassica oleracea</i> <i>capitata</i> <i>Brassica pekinensis</i>	February March

Insect and locality	Collected on	Date and notes
Toxoptera nuntiae Boyer Tres Rios	Camellia japonica. Citrus aurantifolia Citrus medica	Citrus paradisi Fortunella margarita
CERCOPIIDAE Cephus siccifolius (Walk.) San Antonio de Belen	Bidens pilosa Citrus sinensis	Gliricidia maculata
Clastoptera funesta Stal Florida Paso Ancho Waldeck	Musa sapientum Tabernaemontana coro- naria Vernonia brochiatata	June
Clastoptera obtusa (Say) Santa Ana	Guazuma ulmifolia	April
Epicranion championi Fowl.	Cestrum macrophyllum Ficus carica	January September
Tomaspis bicincta (Say) San Pedro	Chrysotha edulis Cucurbita pepo Paspalum notatum Zea mays	July October November
Tomaspis inae (Guer.) San Pedro	Zea mays	July
Tomaspis postica (Walk.) Juan Vinas Pejivale San Pedro	Chrysanthemum maximum Malus sylvestris Panicum barbinode Panicum maximum	June July August

Insect and locality	Collected on	Date and notes
<i>Tomaspis simulans</i> (Wolk.) El Pisote	Gramineae (grass)	September
CICADELLIDAE		
<i>Aceratagallia sordida</i> Oman San Pedro	<i>Ipomoea batatas</i>	April
<i>Agallia ingens</i> Oman San Pedro	<i>Chayote edulis</i>	August
<i>Agallia lingula</i> Van D. Paso Ancho San Pedro	<i>Capriola dactylon</i> <i>Coreopsis lanceolata</i> <i>Dahlia rosea</i>	December, January, February, April, August
<i>Agallia modesta</i> O. & B.* Juan Vinas Paso Ancho San Pedro San Rafael Sarchi	<i>Acnistus arborescens</i> <i>Capriola dactylon</i> <i>Chenopodium ambrosioides</i> <i>Clerodendron fragrans</i> <i>Coreopsis lanceolata</i> <i>Dahlia rosea</i>	Throughout year
<i>Agallia novella tropicallis</i> Van D. Paraiso San Jose	<i>Acnistus arborescens</i> <i>Camellia japonica</i> <i>Chenopodium ambrosioides</i> <i>Grevillea robusta</i> <i>Hibiscus rosa-sinensis</i> <i>Ipomoea batatas</i> <i>Lippia berlandieri</i> <i>Lycopersicum esculentum</i>	Throughout year

* This species was incorrectly listed as *Aligia modesta* O. & B. in the Insect Pest Survey Bulletin, supplement to Vol. 15, no. 4, p. 188, June 1935.

Insect and locality	Collected on	Date and notes
<i>Agallia repleta</i> Van D. Waldeck	<i>Theobroma cacao</i>	April
<i>Agellus bisinuatus</i> DeLong Sarchi	<i>Cepriola ductylon</i>	January
<i>Aulacizes panamensis</i> Fowl. Juan Vinas	<i>Anacardium rhinocarpus</i> <i>Cornutia cymosa</i> <i>Croton gossypifolium</i>	October- December
<i>Carneocephala sagittifera</i> Uh1. La Ceja Juan Vinas Paso Ancho San Rafael Santiago Sarchi	<i>Dahlia rosen.</i> <i>Fragaria chiloensis</i> <i>Viola tricolor</i>	May August
<i>Cicadella anita</i> Fowl. Waldeck	<i>Coix lacryma-jobi</i>	April July
<i>Cicadella areolata</i> Sign. Alajuela Paso Ancho Paraiso San Jose Santiago Tres Rios	<i>Acnistus arborescens</i> <i>Anacardium occidentale</i> <i>Agapanthus umbellatus</i> <i>Casimiroa edulis</i> <i>Cedrela montana</i> , mexi- cana <i>Cestrum macrophyllum</i> <i>Citrus sinensis</i> <i>Cymbopogon citratus</i> <i>Dahlia rosen.</i>	Throughout year
	<i>Ficus carica</i> <i>Fortunella japonica</i> <i>Grevillea robusta</i> <i>Mangifera indica</i> <i>Panicum barbinode</i> <i>Persea americana</i> <i>Phaseolus lunatus</i> <i>Poinsettia pulcher-</i> <i>rima</i> <i>Vernonia brachiata</i>	

Insect and Locality	C o l l e c t e d o n	Date and notes
Cicadella coeruleovittata Sign. Ageratum conyzoides El Pisote Paso Ancho Waldeck	Beta vulgaris crassa Bidens pilosa Brassica japonica Brassica pekinensis Byrsonima crassifolia Caladium bicolor Coix lacryma-jobi Coleus blumei Colocasia esculenta Coreopsis lanceolata Eugenia uniflora Hedychium coronarium Fragaria chiloensis Hibiscus rosa-sinensis Ipomoea batatas Ipomoea tiliaea Jacobinia coccinea Lactuca sativa Polygonum acre Raphanus sativus Solanum tuberosum	September
Cicadella costaricensis Dist. El Pisote	Vernonia brachinta	August
Cicadella lativittata Fowl. Santiago	Fragaria chiloensis	August
Cicadella lutea Sign.	Ficus religiosa Grevillea robusta	Throughout year
Cicadella miniticeps Fowl. Alejuela Juan Vinas La Caja Paso Ancho Pejivalle San Rafael Waldeck	Acanthus arborescens Ageratum conyzoides Allamanda cathartica Baccharis nervosa Calyptanthus costaricensis Canna indica Cappirola ductylon Capsicum annuum Chayote edulis Chenopodium ambrosioides Coffea arabica Coix lacryma-jobi Crotalaria spectabilis Cynodermium sp. Datura candida Daucus carota Dillenia indica Dovyalis hebecarpa Eugenia malaccensis Gelinzoa hispida Jacaranda ovalifolia	Throughout year

Insect and locality	Collected on	Date and notes
Cicadella ministiceps Fowl. - Cont'd.	<i>Penicum barbinode</i> <i>Panicum maximum</i> <i>Phaseolus vulgaris</i> <i>Phytolacca octandra</i> <i>Pisum sativum</i> <i>Saccharum officinarum</i> <i>Schinus molle</i> <i>Solanum tuberosum</i>	Throughout year
Cicadella mollicella Fowl. Sarchi	<i>Capriola dactylon</i> <i>Panicum barbinode</i>	April
Cicadella occatoria (Say) San Rafael Sarchi Tres Rios	<i>Bauvardia humboldtii</i> <i>Beta vulgaris crassa</i> <i>Brassica pekinensis</i> <i>Chenopodium ambrosioides</i> <i>Citrus sinensis</i> <i>Codineum variegatum</i> <i>Crotalaria fulva</i> <i>Croton gossypifolium</i> <i>Cucurbita ficifolia</i> <i>Daucus carota</i> <i>Dombeira wallichii</i> <i>Eriobotrya japonica</i> <i>Eucalyptus trachyphloia</i> <i>Fragaria chiloensis</i> <i>Gossypium barbadense</i> <i>Heliotropium peruvianum</i> <i>Hibiscus abelmoschus</i>	<i>Hibiscus rosa-sinensis</i> <i>Holcus sorghum</i> <i>Indigofera suffruticosa</i> <i>Ipomoea tillicoca</i> <i>Legenaria leucantha</i> <i>Musa sapientum</i> <i>Phaseolus lunatus</i> <i>Phytolacca octandra</i> <i>Piper auritum</i> <i>Poinsettia pulcherrima</i> <i>Radicula armoracea</i> <i>Sesum acuparium</i> <i>Terminalia catappa</i> <i>Thespesia populnea</i> <i>Trifolium fragiferum</i>

Insect and locality	Collected on	Date and notes	
<i>Cicadella pardalina</i> Fowl.	<i>Duranta plumieri</i> <i>Erythrina rubrinervia</i> <i>Hibiscus rosa-sinensis</i> <i>Mangifera indica</i> <i>Melaleuca leucodendron</i>	<i>Persea americana</i> <i>Schinus molle</i> <i>Sterculia diversifolia</i>	
<i>Cicadella pulchella</i> Guer. Juan Vinas Puraiso Pejivalle San Jose Santiago Sarchi	<i>Ananas sativus</i> <i>Calea urticifolia</i> axillaris <i>Coffea arabica</i> <i>Heliotropium</i> sp. <i>Panicum barbinode</i> <i>Phaseolus vulgaris</i>	<i>Euphorbia sativus</i> <i>Tetragonia expansa</i> <i>Zea mays</i>	January February April August October
<i>Cicadella reservata</i> Fowl.	<i>Asclepias curassavica</i> <i>Citrus sinensis</i> <i>Croton gossypifolium</i>	<i>Dahlia rosea</i> <i>Eugenia jambos</i>	August
<i>Cicadella rufoapicata</i> Fowl. Wildeck	<i>Theobroma cacao</i>		April
<i>Cicadella satellas</i> Fowl.	<i>Passiflora quadrangularis</i> <i>Spondias cythera</i>	<i>Tabernaemontana bignoniiflora</i>	August December
<i>Cicadella sexlineata</i> Sign. Juan Vinas San Rafael	<i>Ageratum conyzoides</i> <i>Amaranthus spinosus</i> <i>Baccharis nervosa</i> <i>Beta vulgaris crassa</i> <i>Boehmeria nivea</i> <i>Calyptranthes costaricensis</i>	<i>Chenopodium edulis</i> <i>Chenopodium rubroscoides</i> <i>Cobea scandens</i> <i>Coleus blumei</i> <i>Cornutia cythosa</i> <i>Croton gossypifolium</i>	

Insect and locality	C o l l e c t e d o n	Date and notes
Cicadella sexlineata Sign. - Cont'd.	Cucurbita ficifolia Cucurbita pepo Daturus stramonium Daucua carota Dovyalis hebecarpa Eugenia malaccensis Ficus carica Hamelia erecta Hibiscus abelmoschus Hibiscus rosa-sinensis Impatiens balsamina	Ipomoea tiliacea Jacobinia coccinea Lippia berlandieri Malacra radiata Morus rubra Phaseolus vulgaris Pyrus communis Raphanus sativus Spondias purpurea Terminalia catappa Zea mays
	Artemisia absinthium Brassica japonica Byrsonima crassifolia Ceiba pentandra Cestrum aurantiacum Chayota edulis Cinnamomum camphora Coffea arabica Coix lacryma-jobi Crotalaria juncea Cupressus benthami Eschscholtzia californica	Ipomoea tiliacea Iris laevigata Lactuca sativa Lippia berlandieri Morus rubra Phaseolus lunatus Psidium molle Rheedia sp. Saccharum officinarum Saccharum spontaneum Solanum tuberosum Solanum wendlandi Trifolium fragiferum
Cicadella similis Walk. Paso Ancho San Rafael Sarchi	Eugenia malaccensis Fragaria chiloensis Galinsoga hispida Gardenia florida Grevillea robusta Holcus sorghum Ipomoea batatas	Verbena sp. Vicia faba Viola odorata

February
April
October
November

Insect and locality	C o l l e c t e d o n	Date and notes
Cicadella testudinaria Fowl.	Asclepias curassavica Bauhinia monandra Calliandra grandiflora Calyptranthes costaricensis Citrus limonia Codiaeum variegatum Eugenia jambos Eugenia uniflora	Ficus curica Gliricidia maculata Hibiscus rose-sinensis Jasminum sambac Lucuma mammosa Malus sylvestris Tabebuia guayacana Thespesia populnea Vernonia brachiata Vinca rosea
Cicadula maidis DeLong and Wolcott Paso Ancho	Chayote edulis	
Deltoccephalus flavicosta Stal	Capriola dactylon Hemerocallis sp.	January October
Deltoccephalus spinosus San Pedro Sarchi	Capriola dactylon	January February
Draculacephala lenticula Ball Jurn Vinas Rio Grande San Pedro Waldeck	Canna indica Capriola dactylon Coix lacryma-jobi Grevillea robusta Panicum barbinode	January to April August December
Draculacephala soluta Gibs. San Pedro	Capriola dactylon Ipomoea batatas	January

Insect and locality	C o l l e c t e d o n	Date and notes
Empoasca perelegans Oman Paraiso Paso Ancho San Pedro	Annona cherimola Annona reticulata	January March August to December
Empoasca phaseola Oman San Pedro	Phaseolus lunatus Phaseolus vulgaris	April October to February
Exitianus picatus Gibbs. Paso Ancho San Pedro Sarchi	Capriola dactylon Paspalum notatum	October December - February
(Graphocephala coccinea (Forst.)) Juan Vinas Paso Ancho San Jose Sarchi	Acnistus arborescens Allamanda cathartica Boehmeria nivea Bombax ellipticum Canarium odoratum Carissa grandiflora Cinnamomum camphora Citrus aurantium Citrus limonia Citrus paradisi Citrus sp. (toronjo) Clerodendron fragrans Coix lacryma-jobi Congea velutina Cupressus benthami Cytisus fragrans Dahlia rosea Datura candida	Duranta plumieri Ficus carica Fortunella japonica Fortunella margarita Grevillea robusta Impatiens balsamina Jacobinia coccinea Jatropha aconitifolia Ligustrum japonicum Melaleuca leucadendron Pelargonium zonale Persea pitteri Plumeria rubra Spondias cythera Sterculia diversifolia Tabebuia pentaphylla Terminalia catappa Thunbergia erecta

Insect and locality	C o l l e c t e d o n	Date and notes
Gypsona vinula Stal San Pedro	Acnistus arborescens Panicum barbinode	August
Gypsona signoreti Stal El Pisote San Pedro	Hamelia erecta	November January
Gypsona vulnerata Walk. Tres Rios	Acnistus arborescens Ageratum conyzoides Albizzia lophantha Alnus acuminata Annona muricata Baccharis nervosa Bixa orellana Byrsonima crassifolia Calliandra grandiflora Callistemon lanceo- latus Canarium odoratum Castanea sativa Cestrum lanatum Chayota edulis Cinnamomum camphora Citrus aurantifolia Citrus medica Croton gossypifolium	Duranta plumieri Eriobotrya japonica Eucalyptus trachypho- ia Ficus religiosa Fortunella japonica Grevillea robusta Melus sylvestris Melaleuca leucaden- dron Pelargonium zonale Phaseolus lunatus Prunus salicina Pyrus communis Rosa sp. Solanum torvum Spondias cytherea
Kolla fasciata (Walk.)	Ageratum conyzoides Panicum barbinode Thespesia populnea	

Insect and locality	C o l l e c t e d o n	Date and notes
Kolla geometrica (Sign.)	Cleome spinosa Croton gossypifolium Grevillea robusta Hedychium coronarium Musa sapientum	Sapium sp. Solanum aculeatissimum Solanum tuberosum Tabebuia guayacana
Oncometopia undata (F.) Alajuela Juan Vinas Paraíso Sarcai	Citrus aurantium Citrus limonia Cocos nucifera Dahlia rosea Eugenia malaccensis Heliantus annuus	Hibiscus sabdariffa Lantana trifolia Passiflora edulis Pelargonium zonale Rosa sp.
Osbornellus mexicanus Osb. Paso Ancho San Pedro	Annona cherimola Capriola dactylon Chayote edulis Coreopsis lanceolata Cosmos sulphureus Gomphrena globosa Ipomoea batatas Ipomoea tiliacea	Parkinsonia aculeata Pelargonium zonale Persea americana Phaseolus lunatus Phaseolus vulgaris Tournefortia foetida Vincea rosea
Phera obtusifrons Fowl. San Pedro	Calistemon lanceolatus Carissa grandiflora Coix lacryma-jobi	Hibiscus rosa-sinensis Saccharum officinarum Zea mays
Platymetopius frontalis Van D. Paraíso Paso Ancho San Jose San Pedro Waldeck	Acanthus arborescens Amaranthus paniculatus Calyptanthus costaricensis Capsicum annuum	Cinnamomum camphora Cissus sicyoides Citrus sinensis Clerodendron fragrans Crotalaria spectabilis
		Throughout year
		March July to December

Insect and locality	C o l l e c t e d o n	Date and notes
Platymetopius frontalis Van D. - Cont'd.	Cyclanthera pedata Dahlia rosea Datura candida Dombeya wallichi Ficus carica Galinzoga hispida Gomphrena globosa Grevillea robusta Guarea caoba Hibiscus rosa-sinensis Impatiens balsamina Ipomoea tiliacea Jacaranda ovalifolia Lagenaria leucantha Malacra radiata Persea americana Phaseolus vulgaris	Througthout year
Protalebra decrata San Pedro	Poinsettia pulcherrima Raphanus sativus Sambucus mexicana Solanum tuberosum Spondias cytherea Tabernaemontana coronaria Tetragonia expansa Thespesia populnea Verbena sp. Vernonia brachiata Vicia faba Viola odorata Vitis tiliifolia Zea mays	March, April, October to January
Spanbergiella mexicana Bak. San Pedro	Vernonia brachiata Panicum barbinode	April
Stirellus bicolor (Van D.) Barba El Pisote San Pedro	Chayota edulis Pennisetum clandestinum	October November
Thamnotettix comatus (Ball) Juan Vinas Paso Ancho San Pedro Sarchi	Capriola dactylon Paspalum notatum	August October December to February

Insect and locality	C o l l e c t e d o n	Date and notes
Thamnotettix fasciaticollis (Stal) ? San Pedro San Rafael	Annona squamosa Brassica japonica Caesalpinia pulcher- rima Capriola dactylon Casimiroa edulis Cedrela montana mexi- cana Cestrum lanatum Cestrum macrophyllum Citharexylum caudatum Citrus aurantium Citrus limonia Citrus nobilis Crotalaria spectabilis	Cucurbita pepo Dombeya wallichii Ficus religiosa Hibiscus rosa-sinen- sis Ligustrum japonicum Lippia berlandieri Phytolacca octandra Pisum sativum Saccharum officinarum Solanum tuberosum Tetragonia expansa Vicia faba
Xestocephalus tessellatus Van D. San Pedro San Rafael	Panicum barbinode Tripsacum latifolia	August to March May February April
Coccidae Asterolecanium bambusae Boisd. San Isidro del General Aulacaspis pentagona (Targ.)	Bambusa sp. Amygdalus davidiana Schinus molle	August Chilocorus cacti L. is predacious on this scale

Insect and locality	C o l l e c t e d o n	Date and notes
Ceroplastes floridensis Comst. Alajuela San Pedro San Rafael	Beaumontia grandiflora Casimiroa edulis Citrus aurantium Citrus limonia Citrus nobilis Cydonia oblonga	Ficus religiosa Guarea caoba Nephrolepis sp. Persea americana Plumeria rubra
Chrysomphalus dictyospermi (Morg.)	Garcinia tinctoria	February August
Coccus acuminatus (Sign.) Paso Ancho Tres Rios	Gardenia florida Ixora chinensis	August September December
Coccus hesperidum (L.) San Miguel del Sur de Santo Domingo de Heredia	Achyranthes aspera Cecropia grandiflora Chamaedora bifurcata Citrus mitis Citrus nobilis Diospyros virginiana	April August October December to February
Coccus viridis (Green) San Isidro del General	Citrus sinensis	August
Eriococcus araucariae Mask. San Pedro Tres Rios	Araucaria excelsa	May September
Hemichionaspis aspidistrae (Sign.) Imon San Pedro	Nephrolepis sp.	March Serious injury May to ferns

Insect and locality	C o l l e c t e d o n	Date and notes
Icerya montserratensis Riley and Howard San Pedro	Cyphomandra betacea	November
Ischnaspis longirostris (Sign.) Tres Rios	Chrysaliidocarpus lutescens	September
Lepidosaphes beckii (Newm.)	Citrus aurantium Citrus limonia	Citrus medica Fortunella japonica
Orthezia insignis Dougl. San Rafael	Ruta graveolens Solanum pseudocapsicum	Thunbergia alata Viola odorata
Pseudischaspis bowreyi (Ckll.)	Hicoria pecan Prunus salicina	Sterculia diversifolia
Pseudococcus citri (Risso)	Citrus trifoliata Fortunella japonica Persea americana	January March April
Pseudococcus nipae (Mask.)	Anacardium occidentale	October
Pseudococcus virgatus (Ckll.) San Pedro	Althaea rosea	December
Pulvinaria psidii Mask. San Rafael	Garcinia tinctoria Phyllanthus angustifolia	Plumeria rubra
Rhizococcus coffeae Irving Sabanilla	Coffea arabica	November Serious damage

Insect and locality	Collected on	Date and notes	
<i>Saissetia hemisphaerica</i> (Targ.) San Francisco San Rafael Santa Ana	<i>Annona cherimola</i> <i>Asparagus plumosus</i> <i>Bauhinia monandra</i> <i>Beaumontia grandiflora</i> <i>Callistemon lanceolatus</i> <i>Carissa grandiflora</i> <i>Cestrum aurantiacum</i> <i>Chrysophyllum cainito</i> <i>Citrus nobilis</i> <i>Codiaeum variegatum</i> <i>Congea velutina</i> <i>Cydonia oblonga</i> <i>Erythrina rubrinervia</i> <i>Eugenia jambos</i> <i>Eugenia malaccensis</i> <i>Ficus carica</i>	<i>Fortunella japonica</i> <i>Garcinia tinctoria</i> <i>Gonolobus edulis</i> <i>Guazuma ulmifolia</i> <i>Ixora chinensis</i> <i>Lagerstroemia indica</i> <i>Lagerstroemia speciosa</i> <i>Mangifera indica</i> <i>Piper auritum</i> <i>Phyllanthus angustifolia</i> <i>Plumeria rubra</i> <i>Spondias cytherea</i> <i>Sterculia diversifolia</i> <i>Trichillia havensis</i>	
<i>Saissetia oleas</i> (Bern.)	<i>Bauhinia monandra</i> <i>Chrysophyllum cainito</i>	<i>Citrus nobilis</i> <i>Thunbergia erecta</i>	November
FULGORIDAE			
<i>Acanalonia virescens</i> (Stal)	<i>Chayota edulis</i>	<i>Tournefortia foetida</i> <i>dissima</i>	March, April,
	<i>Citrus sinensis</i>	<i>Vernonia brachiata</i>	October
<i>Bothriocera tinealis</i> (Klug)	<i>Piper auritum</i>	<i>Verbesina turbacensis</i>	January, October
<i>Colgorma proxima</i> (Fowl.) Paso Ancho	<i>Croton gossypifolium</i>		August

Insect and locality	Collected on	Date and notes	
<i>Colpoptera</i> sp. San Rafael Sarchi Waldeck	<i>Acanthus arborescens</i>	<i>Hamelia erecta</i>	
	<i>Ageratum conyzoides</i>	<i>Hibiscus esculentus</i>	
	<i>Begonia</i> sp.	<i>Impatiens sultani</i>	
	<i>Blakea gracilis</i>	<i>Ipomoea tiliacea</i>	
	<i>Buddleia davidi</i>	<i>Jacobinia coccinea</i>	
	<i>Caladium bicolor</i>	<i>Lycopersicum esculentum</i>	
	<i>Cattleya skinneri</i>	<i>Myosotis sylvatica</i>	
	<i>Cestrum aurantiacum</i>	<i>Passiflora quadrangularis</i>	
	<i>Cestrum nocturnum</i>	<i>Persea americana</i>	
	<i>Chenopodium ambrosioides</i>	<i>Petunia hybrida</i>	
	<i>Citrus aurantifolia</i>	<i>Poinsettia pulcherrima</i>	
	<i>Citrus sinensis</i>	<i>Raphanus sativus</i>	
<i>Colpoptera sinuata</i> Burm. Waldeck	<i>Coleus blumei</i>	<i>Ricinus communis</i>	
	<i>Congea velutina</i>	<i>Salvia splendens</i>	
	<i>Cucurbita pepo</i>	<i>Solanum muricatum</i>	
	<i>Cupressus benthami</i>	<i>Solanum nigrum</i>	
	<i>Datura candida</i>	<i>Solanum seaforthianum</i>	
	<i>Datura stramonium</i>	<i>Theobroma cacao</i>	
	<i>Dieffenbachia</i> sp.	<i>Tropaeolum majus</i>	
	<i>Eriobotrya japonica</i>	<i>Zea mays</i>	
	<i>Eugenia uniflora</i>		
	<i>Ficus carica</i>		
	<i>Fragaria chiloensis</i>		
	<i>Theobroma cacao</i>		
<i>Copicerus irroratus</i> Swartz San Pedro	<i>Acanthus arborescens</i>	<i>Hibiscus rosa-sinensis</i>	March
	<i>Ageratum conyzoides</i>	<i>Rumex crispus</i>	August
	<i>Croton gossypifolium</i>	<i>Tournefortia foetida</i>	September

Insect and locality	Collected on	Date and notes
<i>Cotyleceps maculata</i> Fowl. Waldeck	Theobroma cacao	April
<i>Delphacodes nigra</i> Crawford. San Pedro	Gramineae (grass)	February
<i>Delphacodes nigrifacies</i> Muir Juan Vinas San Pedro	Gramineae (grass)	August October
<i>Delphacodes propinqua</i> Fieb. San Pedro Sarchi	<i>Capriola dactylon</i> <i>Galinzoga hispida</i>	January February
<i>Liburnia teapae</i> Fowl. San Pedro	<i>Colerus blumei</i> Gramineae (grass)	February
<i>Dictyophara herbida</i> (Walk.) Waldeck	<i>Elaeis guineensis</i> Theobroma cacao	July
<i>Dictyophara obtusifrons</i> (Walk.) Rio Grande	Gramineae	February
<i>Epibidius godmani</i> Fowl. Waldeck	Theobroma cacao	July
<i>Flatoides humeralis</i> Walk. Guadalupe San Pedro	<i>Amygdalus persica</i> <i>Citrus limonia</i> <i>Croton gossypifolium</i>	February April December
<i>Gaetulia plenipennis</i> (Walk.) Waldeck	Theobroma cacao	July

Insect and locality	Collected on	Date and notes
Oecleus addendus Fowl. Juan Vinas	Coffea arabica	August
Peregrinus maidis (Ashm.) San Pedro	Zea mays	August
Sogata furcifera Horv. San Pedro	Phaseolus vulgaris	October
MEMBRACIDAE		
Aconophora nitida Fowl. Juan Vinas	Coffea arabica	May August
Aconophora pallescens Stal La Caja Pejivalle San Rafael	Acnistus arborescens Amygdalus persica Boehmeria nivea Calyptranthes costaricensis Canarium odoratum Cestrum macrophyllum Dovyalis hebecarpa Eugenia uniflora	Ficus religiosa Fortunella japonica Grevillea robusta Hicoria pecan Lagerstroemia indica Parkinsonia aculeata Prunus armeniaca Pyrus communis
Acutalis fusconervosa Fairm. Paso Ancho Turrialba	Dahlia rosea Musa sapientum	July August
Aethalion reticulatum (L.)	Bauhinia purpurea Fortunella japonica Grevillea robusta Jacaranda ovalifolia	March August October

Insect and locality	C o l l e c t e d o n	Date and notes
Alchisme grossa (Fairm.) San Pedro	Coffea arabica Inga tonduzii	Zea mays July October
Amastris obtegens (F.) Waldeck	Theobroma cacao	July
Antianthe expansa (Germ.) Paraíso San Rafael	Cestrum nocturnum Ipomoea batatas Verbesina turbacensis	
Bolbonota inaequalis (Fairm.) Juan Vinas Paraíso Santiago Siquirres Turrialba Waldeck	Acalypha hispida Alnus acuminata Amygdalus persica Anacardium rhinocarpus Annona muricata Baubinia purpurea Byrsonima crassifolia Casimiroa edulis Cassia sophora Cestrum macrophyllum Cestrum nocturnum Citrus aurantifolia Citrus nobilis	Conostegia lanceolata Garcinia tinctoria Grevillea robusta Hibiscus rosa-sinensis Inga edulis Lagerstroemia speciosa Piper auritum Rheedia sp. Spondias cythera Theobroma cacao Thespesia populnea Verbesina turbacensis Vernonia brachiata
Bolbonota insignis Fowl. Alajuela La Oaja Paso Ancho San Francisco de Dos Rios San Jose	Acalypha hispida Acalypha wilkesiana Acanthus arborescens Anacardium occidentale Annona cherimola Annona muricata	Baubinia monandra Baubinia violacea Canavalia ensiformis Camellia japonica Canarium odoratum Cassia sophora
December		

Insect and locality	C o l l e c t e d o n	Date and notes
Bolbonota insignis Fowl.- Cont'd.	Codiaeum variegatum Cynadennium sp. Dahlia rosea Dovyalis hebecarpa Lagerstroemia speciosa Spondias cytherea	Spondias purpurea Tamarindus indica Thespesia populnea Vernonia brachiata Zea mays
Campyllocentrus hamifer (Fairm.) Guadalupe	Coffea arabica Gonolobus edulis	Petiveria alliacea
Campyllocentrus pusillus (Fairm.) El Pisote San Pedro Tres Rios	Cucurbita ficifolia Cucurbita pepo Gramineae (grass)	Ipomoea tiliacea Zea mays
Ceresa togstacea Fairm. Paraíso Paso Ancho San Pedro San Rafael	Amygdalus persica Celosia cristata Cupressus benthami Dahlia rosea Erythrina rubrinervia	Musa sapientum Parkinsonia aculeata
Ceresa vitulus (F.) San Pedro	Chayota edulis Ipomoea tiliacea	Ipomoea purga
Ceresa vitulus minor Fowl. Juan Vinas Waldeck	Elaeis guineensis Erythrina glauca	July
Cyphonia clavata (F.) Waldeck	Theobroma cacao	July
Enchenopa binotata (Say) San Pedro	Amygdalus persica Annona squamosa Bauhinia purpurea	January February, April May, August, September, November, December

Insect and locality	C o l l e c t e d o n	Date and notes
Enchenopa binotata (Say) - Cont'd.	Cydonia oblonga Diphyssa robinioides Erythrina rubrinervia Eugenia uniflora	Hymenaea courbaril Malus sylvestris Melilotus alba Parkinsonia aculeata
Enchenopa lanceolata (Stoll) San Rafael	Annona muricata Conostegia lanceolata	Cydonia oblonga December
Enchophyllum dubium Fowl. San Pedro	Persea americana	May
Entylia sinuata (F.) Paraiso San Rafael	Acanthus arborescens Ageratum conyzoides Beta vulgaris crassa Cappirola dactylon Cedrela montana mexi- cana Cestrum macrophyllum Chayota edulis Clerodendron fragrans Datura candida Daucus carota Eriobotrya japonica	Gelinzoza hispida Hymenaea courbaril Nicotiana tabacum Panicum barbinode Pelargonium zonale Pyrus communis Solanum aculeatis- simum Tournefortia foeti- dissima Verbosina turbacensis
Erechtia sallaei (Fowl.) Alajuela	Byrsonima crassifolia Canarium odoratum	Persea americana
Horiola arcuata (F.) Juan Vinas Waldeck	Coffea arabica Theobroma cacao	April May
Horiola composita Walk. Waldeck	Theobroma cacao	July

Insect and locality	Collected on	Date and notes
<i>Horiola picta</i> (Coque.) Santiago Turrialba	<i>Cassia spectabilis</i> <i>Citrus limonia</i> <i>Eugenia jambos</i>	July August
<i>Membracis mexicana</i> Guer. Santa Ana Siquirres	<i>Acalypha wilkesiana</i> <i>Alnus acuminata</i> <i>Bauhinia nonandra</i> <i>Bauhinia violacea</i> <i>Byrsonima crassifolia</i> <i>Cestrum macrophyllum</i> <i>Chrysophyllum cainito</i> <i>Codiaeum variegatum</i> <i>Crotalaria striata</i> <i>Cupressus benthami</i> <i>Enterolobium cyclocarpum</i>	Causes considerable damage by oviposition
<i>Micrutalis ephippium</i> (Burm.) San Pedro	<i>Anacardium paniculatus cruentus</i> <i>Anacardium spinosus</i>	January March to May
<i>Micrutalis lugubrina</i> (Stal) San Pedro	<i>Cornutia cynosa</i>	March
<i>Potnia brevicornis</i> Fowl. San Pedro	<i>Xylosma</i> sp.	August, October, December
<i>Pterygia bituberculata</i> Fowl. La Caja	<i>Coffea arabica</i>	May
<i>Spongophorus ballista</i> (Germ.) Gundalupe	<i>Chayota edulis</i> <i>Coffea arabica</i> <i>Crotalaria striata</i>	January, June, July, August, December

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Stictocephala festina</i> (Say) Paso Ancho San Rafael	<i>Amgdalus persica</i> <i>Annona reticulata</i> <i>Beta vulgaris crassa</i> <i>Capriola dactylon</i> <i>Cassia</i> sp. <i>Dahlia rosea</i> <i>Fragaria chiloensis</i> <i>Galinzoga hispida</i> <i>Grevillea robusta</i> <i>Ipomoea tiliaceae</i> <i>Lippia berlandieri</i> <i>Melaleuca leucaden-</i> <i>dron</i>	March August October November
<i>Umbonia crassicornis</i> (Amy. and Serv.) Aserries Santa Ana	<i>Guazuma ulmifolia</i> <i>Inga laurina</i> <i>Inga spuria</i> <i>Inga tonduzii</i>	February April August
<i>Vanduzeeae segmentata</i> (Fowl.) San Pedro Santa Ana Santiago Siquirres Waldeck	<i>Acalypha wilkesiana</i> <i>Bauhinia monandra</i> <i>Bauhinia violacea</i> <i>Cassia sophora</i> <i>Cupressus benthami</i> <i>Mimosa asperata</i>	April July August December Very harmful to <u><i>Cassia sophora</i></u>
H E M I P T E R A		
<i>Acanthocephala bicoloripes</i> (Stal) Waldeck <i>Acanthocephala declivis</i> Guatemalena Dist.	<i>Theobroma cacao</i> <i>Annona muricata</i>	July Fortunella margarita

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Acroleucus brevicollis</i> (Stal) San Pedro	<i>Canarium odoratum</i>	August
<i>Acrosternum marginatum</i> (Beuv.) San Pedro	<i>Zea mays</i>	September
<i>Allocoris elegans</i> McA. & M. Paso Ancho	<i>Dahlia rosea</i>	August
<i>Anasa andresii</i> (Guer.) San Jose	<i>Chayota edulis</i> <i>Cucurbita ficifolia</i> <i>Dahlia rosea</i>	January July
<i>Anasa madida</i> Dist. San Pedro	<i>Acnistus arborescens</i> <i>Persea americana</i>	February December
<i>Anasa bellator</i> (F.) Waldeck	<i>Elaeis guineensis</i>	July
<i>Anasa scorbutica</i> (F.) San Jose	<i>Amgdalus persica</i> <i>Chayota edulis</i>	July September
<i>Castolus plagiaticollis</i> Stal San Rafael Waldeck	<i>Theobroma cacao</i> <i>Panicum barbinode</i>	February April
<i>Cebrenis modesta</i> Dist. San Pedro	<i>Vernonia brachiata</i>	March
<i>Charicsternus moestus</i> Burm. Santa Ana	<i>Pedilanthus tithymal-</i> <i>oides</i>	April
<i>Chlorocoris aberrans</i> Dist. San Pedro	<i>Citrus sinensis</i>	March

Insect and Locality	C o l l e c t e d o n		Date and notes
Collaria oleosa Dist. El Pisote San Rafael Turrialba	Ageratum conyzoides Chayota edulis Coffea arabica Coix lacryma-jobi	Pennisetum purpureum Phaseolus lunatus Saccharum officinarum Saccharum spontaneum	January July August
Corecoris fusca (Thunb.) San Jose San Pedro	Ageratum conyzoides Chayota edulis Coffea arabica	Pelargonium zonale Solanum nigrum	April to October
Corizus hyalinus (F.) San Pedro	Lactuca sativa		February
Corizus pictipes (Stal) San Pedro	Hibiscus rosa-sinensis Malacra radiata		February July
Corizus sidae F. Waldeck	Theobroma cacao		July
Cosmopepla coerulescens Montd. San Jose	Daucus carota Ipomoea sp.	Panicum barbinode	January August, October
Creontiades rubrinervus (Stal) San Jose	Asparagus officinalis Chayota edulis Cupressus benthami Cucurbita pepo	Datura suaveolens Dianthus caryophyllus Impatiens balsamina Tetragonia expansa	August October
Cyrtocapsus caliginosus (Stal) San Pedro	Ipomoea batatas Ipomoea tiliacea		January April
Debilis angustata Champ. Waldeck	Theobroma cacao		July
Dysdercus flavolimbatus Stal Waldeck	Sida rhombifolia		July

Insect and Locality	Collected on	Date and notes
Dysdercus mimulus Hussey San Pedro San Rafael	Chayota edulis Ipomoea batatas Myosotis sylvatica	Nephrolepis sp. February to April October
Dysdercus obliquus (H. S.) Desamparades	Acalypha wilkesiana Boehmeria nivea Datura candida Dombeya wallichii Galinzoga hispida	Hibiscus abelmoschus Impatiens balsamina Malacra radiata Malus sylvestris Morus rubra June, Important injury September, to <u>Hibiscus</u> to <u>abelmoschus</u> December
Dysdercus oncopeltus Dist. Liberia	Saccharum officinarum	February
Ecclitotarsus pallidirostris Stal San Pedro	Ipomoea tiliacea	January
Edessa cornuta Burm. El Pisote San Jose Santiago	Acnistus arborescens Brassica japonica Brassica rapa Chayota edulis Citrus limonia	June July September
Edessa junix Stal San Pedro	Erythrina rubrinervia	October
Edessa nigrispina Dallas Las Juntas de Abangares	Oryza sativa	
Edessa rufomarginata (DeG.) San Lazaro	Sida rhombifolia	March

Insect and locality	C o l l e c t e d o n		Date and notes
<i>Euryophthalmus cinctus</i> (H.S.) Juan Vinas Rosario de Naranjo San Rafael	<i>Chrysanthemum maximum</i> <i>Coffea arabica</i> <i>Inga paterno</i>		February August November
<i>Euschistus bifibulus</i> (Beauv.) San Pedro Turrialba	<i>Cestrum macrophyllum</i> <i>Chayota edulis</i> <i>Hibiscus schizopetalus</i>	<i>Malacra radiata</i> <i>Musa sapientum</i> <i>Passiflora ligularis</i> <i>Solanum nigrum</i>	April to July October
<i>Euschistus crenator</i> (F.) Waldeck	<i>Theobroma cacao</i>		April
<i>Gargaphia patricia</i> (Stal) Guadalupe	<i>Coffea arabica</i> <i>Erythrina rubrinervia</i>		October
<i>Halticus bractatus</i> (Say) Gayolar	<i>Artemisia absinthium</i> <i>Asparagus plumosus</i> <i>Beta vulgaris crassa</i> <i>Bidens pilosa</i> <i>Brassica japonica</i> <i>Brassica pekinensis</i> <i>Chayota edulis</i> <i>Corcopsis lanceolata</i> <i>Cucumis melo</i>	<i>Datura stramonium</i> <i>Daucus carota</i> <i>Galinzoga hispida</i> <i>Lycopersicum esculentum</i> <i>Phytolacca octandra</i> <i>Raphanus sativus</i> <i>Trifolium fragiferum</i> <i>Verbena</i> sp.	June Very destructive August to melons October
<i>Heraeus guttata</i> (Dallas) San Pedro	<i>Phaseolus vulgaris</i>		November
<i>Heza similis</i> Stal Guadalupe Waldeck	<i>Coffea arabica</i> <i>Theobroma cacao</i>		July October

Insect and locality	C o l l e c t e d o n	Date and notes
<i>Hypsilonotus atratus</i> Dist. Juan Vinas Pejivalle San Rafael Santiago	<i>Chrysanthemum maximum</i> <i>Colocasia esculenta</i> <i>Crotalaria striata</i> <i>Cupressus benthami</i> <i>Impatiens balsamina</i> <i>Inga patero</i> <i>Melanthra aspera</i>	August October
<i>Hypsilonotus loratus</i> Bredd. Waldeck	<i>Sida rhombifolia</i>	July
<i>Ischnodemus sallaei</i> (Sign.) San Pedro Paso Ancho	<i>Canna indica</i>	August to December
<i>Lampethusa anatina</i> Dist. San Pedro	<i>Chayota edulis</i>	August
<i>Leptocoris tipuloides</i> (Deg.) San Jose	<i>Annona cherimola</i>	August
<i>Leptoglossus stigma</i> (Hbst.)	<i>Citrus nobilis</i> <i>Cyphomandra botacea</i>	February to May
<i>Leptoglossus zonatus</i> (Dallas) Paraiso San Jose Santiago Sarchi	<i>Asparagus officinalis</i> <i>Chayota edulis</i> <i>Citrus aurantium</i> <i>Cupressus benthami</i> <i>Datura stramonium</i>	<i>Helianthus annuus</i> <i>Malus sylvestris</i> <i>Poinsettia pulcherrima</i> <i>Vigna sesquipedalis</i>
<i>Ligyrocoris litigiousus</i> (Stal) San Pedro	<i>Averrhoa carambola</i> <i>Fragaria chilensis</i>	January May

Insect and locality	Collected on	Date and notes
<i>Lyrocoris multispinus</i> Stal San Pedro	<i>Ligustrum japonicum</i> <i>Phaseolus vulgaris</i>	January October
<i>Lygaeus bistrigularis</i> Say Barba	<i>Annona squamosa</i> <i>Pennisetum clandestinum</i>	November
<i>Lygaeus reclivatus</i> Say	<i>Asclepias curassavica</i>	April
<i>Lygaeus uhleri</i> Stal San Pedro	<i>Zea mays</i>	July
<i>Lygus saldae</i> Stal San Pedro San Rafael	<i>Annona reticulata</i> <i>Beta vulgaris</i> crassa <i>Datura suaveolens</i> <i>Galinzoga hispida</i>	<i>Hibiscus rosa-sinensis</i> <i>Lactuca sativa</i> <i>Lagerstroemia speciosa</i> December to April
<i>Mecistorhinus tripterus</i> (F.) Siquirres Waldeck	<i>Hibiscus rosa-sinensis</i> <i>Theobroma cacao</i>	July
<i>Monanthia monotropidia</i> Stal La Caja	<i>Cassia spectabilis</i>	May
<i>Mormidea notulata</i> (H. S.) Guadalupe San Pedro San Rafael	<i>Chayota edulis</i> <i>Coffea arabica</i> <i>Panicum barbinode</i> <i>Zea mays</i>	February July to October Injurious to corn
<i>Myodocha unispinosa</i> Stal Waldeck	<i>Theobroma cacao</i>	April

Insect and locality	Collected on	Date and notes
<i>Neurocolpus mexicanus</i> Dist. San Pedro	<i>Myosotis sylvatica</i> <i>Vicia faba</i>	January
<i>Nezara viridula</i> (L.)	<i>Bixa orellana</i> <i>Chayota edulis</i> <i>Crotalaria striata</i> <i>Lippia berlandieri</i>	January March
<i>Nysius californicus</i> Stal San Pedro	<i>Tetragonia expansa</i> <i>Glinzogn hispida</i>	January May
<i>Nysius ementitus</i> Dist. San Pedro Santa Lucia	<i>Ageratum conyzoides</i> <i>Lippia berlandieri</i>	January February December
<i>Orthaea bilobata</i> (Say) Paso Ancho San Pedro	<i>Chayota edulis</i> <i>Dahlia rosea</i> <i>Zea mays</i>	June August
<i>Ortholomus jamaicensis</i> Dallas San Pedro	<i>Tetragonia expansa</i>	May
<i>Pachycoris torridus</i> (Scop.) Guadalupe	<i>Annona cherimola</i> <i>Coffea arabica</i> <i>Croton gossypifolium</i> <i>Eriobotrya japonica</i> <i>Erythrina rubrinervia</i>	February March August
<i>Padaeus viduus</i> (Voll.) San Pedro San Rafael	<i>Chayota edulis</i> <i>Hibiscus rosa-sinensis</i>	February October

Insect and locality	Collected on	Date and notes
Pangaeus piceatus Stal San Pedro	Casuarina equisetifolia Coffea arabica Colocasia esculenta	Fragaria chiloensis Phaseolus vulgaris
Paracalocoris annulatus Dist.	Amygdalus persica Chayota edulis Citrus limonia Diospyros virginiana	Mangifera indica Phaseolus vulgaris Poinsettia pulcherrima Zea mays
Paracalocoris jurgiosus (Stal) San Pedro	Chayota edulis	July to September
Paracalocoris molliculus Dist. San Pedro	Fortunella japonica Gerbera jamesoni Persea americana	Vicia faba Vinca minor
Piesma cinerea (Say) San Pedro	Amaranthus spinosus	April
Platycaenus humilis (H.S.) Waldeck	Theobroma cacao	July
Platytyllopsis latipennis (Stal) Grecia San Pedro	Gramineae (grass) Hibiscus rosa-sinensis	February August
Polymerus cuneatus (Dist.)	Amaranthus paniculatus cruentus Amaranthus spinosus	Chenopodium ambrosioides Phaseolus vulgaris
Proxys punctulatus (Beauv.) San Pedro	Verbesina turbacensis	March

Insect and locality	C o l l e c t e d o n	Date and notes
Proxys victor (F.) Waldeck	Theobroma cacao	April
Pycnoderes atratus (Dist.) San Pedro	Phaseolus vulgaris	October
Pycnoderes incurvus (Dist.) Paraiso	Chayota edulis Chrysophyllum cainito	January
Repipta flavicans (Amy. & Serv.) Waldeck	Theobroma cacao	April
Repipta taurus (F.) Waldeck	Theobroma cacao	July
Sphictyrtus longirostris Dist. San Pedro	Costus sanguineus	January
Staluptus marginalis Burm. San Jose San Pedro	Poinsettia pulcherrima Vernonia brachiata	February September to December
Stenomacra marginella (H.S.)	Amygdalus davidiana Camellia japonica Canarium odoratum Cestrum marginella Chalcas exotica Chayota edulis Citharexylum caudatum Congea velutina Croton gossypifolium Datura candida Dombeya wallichii Eugenia uniflora Ficus carica	Fortunella japonica Galinzoga hispid Grevillea robusta Hamelia erecta Heliotropium indicum Hibiscus rosa-sinensis Hicoria pecan Ipomoea batatas Lucuma mammosa Melaleuca leucodendron Piper auritum Terminalia catappa Zea mays

Insect and Locality	Collected on	Date and notes
Zicca taeniola (Dallas) San Jose San Pedro	Amaranthus paniculatus cruentus Amaranthus spinosus Brassica oleracea capitata Chayote, edulis Citrus aurantium Cucurbita pepo Verbena sp. Zea mays	January April July to September
HYMENOPTERA		
Angochlora seminigra Oкл. Waldeck	Theobroma cacao	July
Daphrata maculicollis Cam. San Pedro Waldeck	Annona cherimola Annona muricata	July A chalcid attacking seed and ruining the fruit October
Ectatomma ruidum Roger Waldeck	Theobroma cacao	April July
Gymnopolybia sulfureofasciata Buckl. San Pedro	Annona cherimola Byrsonima crassifolia Cupressus benthami Hedychium coronarium	Malus sylvestris Mangifera indica Zea mays December Gather tomentum from leaves of January February variety of plants. November
Halictus pseudotegularis Oкл. Waldeck	Theobroma cacao	July
Megalopta idalia Smith Waldeck	Theobroma cacao	July

Insect and locality	Collected on	Date and notes
Polistes major Beauv. San Lazaro	Man	March This wasp inflicts serious sting, causing difficulty in breathing
Rhopalictus lachnes Bachal San Pedro	Ageratum conyzoides	January
Solenopsis geminata (F.) Siquirres	Bauhinia purpurea Carissa grandiflora Cassia sophora Cestrum macrophyllum Citrus trifoliata Diospyros virginiana	July to February Fosters Vanduzee <u>segmentata</u> Fowl., and various coccids.
Spilochalcis femorata (F.) Waldeck	Theobroma cacao	July
Tatus tatus (Cuvier) San Pedro San Rafael	Citrus medica Tripsacum latifolia	February
Trigona amalthaea (Oliv.) Alajuela Waldeck	Byrsonima crassifolia Elaeis guineensis	July October
Trigona cupira Smith Waldeck	Citrus limonia Eschscholtzia californica	January March April, July
Trigona townsendi Ckll. Pejiville	Man	February A sweet bee

LEPIDOPTERA

Insect and locality	Collected on	Date and notes
<i>Acraga coa Schaus</i> San Pedro	<i>Citrus nobilis</i> x para- disi	<i>Stereulia diversifolia</i> January August
<i>Appropos melantho</i> (Bates) San Jose	<i>Cyphomandra betacea</i>	August
<i>Automeris boucardi Druce</i> San Rafael	<i>Coffea arabica</i> <i>Trema micrantha</i>	Larva attacked by the wasps <i>Gymnopolybia sul-</i> <i>fureofasciata</i> Buckl. and <i>Parachartergus opicalis</i> (F.)
<i>Bertholdia specularis</i> (H.S.) Guadalupe	<i>Coffea arabica</i> <i>Psidium guajava</i>	February March
<i>Diaphania nitidalis</i> (Stoll) Coyolar San Pedro	<i>Cucumis sativus</i> <i>Cucurbita pepo</i>	February A very serious December pest of melons
<i>Dicentria sabella</i> San Pedro	<i>Lagerstroemia speciosa</i>	March Serious damage to April queen crappewrightle November, December
<i>Dicentria violascens</i> (H.S.)	<i>Dombeya wallichii</i> <i>Hicoria pecan</i>	December Defoliating trees January
<i>Eantis pallida</i> (Feld.)	<i>Citrus medica</i> <i>Citrus nobilis</i> X para- disi	Gonolobus edulis
<i>Euchaetes mitis Schaus</i> San Pedro	<i>Gonolobus edulis</i>	March, May, June, December, January

Insect and locality	Collected on	Date and notes
<i>Euglyphis castalia</i> (Druce) San Pedro	<i>Persea americana</i>	April
<i>Euglyphis melancholica</i> (Butl.)	<i>Phoebe tonduzii</i>	September
<i>Gloveria balloui</i> Schaus San Pedro	<i>Conostegia lanceolata</i> <i>Psidium guajava</i>	December January
<i>Halisidota schausi</i> Rothsch. San Pedro	<i>Morus rubra</i>	November
<i>Hemerocampa costaricensis</i> Schaus	<i>Cydonia oblonga</i> <i>Malus sylvestris</i> <i>Persea pittieri</i>	September to March
<i>Lichnoptera cavillator</i> Walk. San Jose San Pedro San Rafael	<i>Anacardium rhinocarpus</i> <i>Annona cherimola</i> <i>Cedreia montana mexicana</i>	November to January August
<i>Lycorea atergatis</i> (Doubl. and Hewits.) San Pedro	<i>Ficus carica</i>	November December
<i>Mesocondyla concordalis</i> Hon.*	<i>Tabebuia pentaphylla</i>	Defoliating trees
<i>Opsiphanes corrosus</i> Stick. San Pedro	<i>Musa paradisica</i>	August
<i>Papilio polydames</i> L. San Pedro	<i>Aristolochia regens</i>	December 21 Ovipositing

* In the Supplement to No. 4 of the Insect Pest Survey Bulletin, Vol. 15, 1935, p. 208, this insect was incorrectly reported as occurring on Couratella rosea.

Insect and locality	Collected on	Date and notes
Papilio polyxenes stabilis R. and J. San Pedro	Apium ammi	January November
Papilio thoas autocles Rothsch. Sarchi	Citrus aurantium Citrus paradisi	August to February Damaging <u>C.</u> aurantium . Eggs and larvae October 2 to January 4
Phobetron hipparchia Cram. Paso Ancho	Anacardium rhinocarpus Annona cherimola Annona squamosa Calyptranthes costaricensis	Citrus aurantium Eriobotrya japonica Erythrina rubrinervia Ligustrum japonicum
Pieris elodia Boisd. Paso Ancho San Rafael	Brassica pekinensis Tropaeolum majus	February A serious pest December of nasturtium
Plutella maculipennis (Curt.)	Bixa orellana Brassica oleracea botrytis	Brassica pekinensis January to March
Sibine epicalis Dyar	Coffea arabica Hibiscus rosa-sinensis Musa sapientum	January August September
Sibine ophelians Dyar San Pedro	Coffea arabica	March
Stenoma sororia (Zell.) Sarchi	Cinnamomum camphora	
Utetheisa ornatrix (L.) Paso Ancho San Pedro	Crotalaria spectabilis Crotalaria striata	August Causes serious in- November jury by eating December seed in pods. Seen ovipositing on pods August 5.

ORTHOPTERA

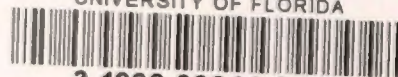
Insect and locality	Collected on	Date and notes
<i>Chiriquia serrata</i> Morse Waldeck	<i>Theobroma cacao</i>	April A grasshopper
<i>Chorisonneura gemmicula</i> Hebard Waldeck	<i>Theobroma cacao</i>	April A roach July
<i>Coccothotus ravus</i> Rehn Paso Ancho Tres Rios	<i>Annona cherimola</i> <i>Antigonon leptopus</i> <i>Canarium odoratum</i> <i>Citrus limonia</i> <i>Cupressus benthami</i> <i>Dracaena fragrans</i> <i>Erythrina rubrinervia</i>	<i>Lycaste</i> sp. <i>Rosa</i> spp. <i>Sobralia decora</i> <i>Stanhopaea costaricensis</i> <i>Vitis labrusca</i>
<i>Conocephalus cinereus</i> Thunb. Guadalupe Juan Vinas Paso Ancho	<i>Amygdalus persica</i> <i>Annona cherimola</i> <i>Asparagus officinalis</i> <i>Beta vulgaris crassa</i> <i>Chamaedorea bifurcata</i>	<i>Coffea arabica</i> <i>Dahlia rosea</i> <i>Impatiens balsamina</i> <i>Panicum maximum</i> <i>Pisum sativum</i>
<i>Ellipes minuta</i> (Scudd.)	<i>Beta vulgaris crassa</i> <i>Brassica oleracea capitata</i> <i>Chrysophyllum cainito</i> <i>Crotalaria spectabilis</i> <i>Cupressus benthami</i> <i>Daucus carota</i>	<i>Ficus carica</i> <i>Ipomoea batatas</i> <i>Persea pittieri</i> <i>Radicula armoracia</i> <i>Solanum tuberosum</i>
<i>Eriolus longipennis</i> Redt. San Pedro	<i>Citrus sinensis</i> <i>Grevillea robusta</i> <i>Persea americana</i>	November Causes injury December to trees by January oviposition
<i>Eumastax silvicola</i> R. & R. Waldeck	<i>Theobroma cacao</i>	April A grasshopper July

Insect and locality	Collected on	Date and notes
Euphyllodromia angustata (Latr.) Waldeck	Theobroma cacao	April
Holocompsa azteca Sauss. San Pedro Waldeck	Gramineae (Grass) Theobroma cacao	April A roach October
Insara intermedia (Brunn.) Paso Ancho San Jose Tres Rios	Ageratum conyzoides Brassica oleracea capitata Chayota edulis Citrus limonia Coffea arabica Coix lacryma-jobi Coleus blumei Cucurbita pepo Eschscholtzia californica Gomphrena globosa Heliotropium peruvianum	October October 14 November eggs and adults Serious damage to chayota and geranium
Neoxabea bipunctata (Deg.)	Annona cherimola Ceanothus odoratum Crotalaria juncea Croton gossypifolium Datura candida	May August November December
Panchlora cubensis Sauss.	Mangifera indica	December

Insect and locality	Collected on	Date and notes
Paratettix mexicanus abortus Hancock Las Juntas de Abangares Paso Ancho Tres Rios	Artemisia absinthium Beta vulgaris Coreopsis lanceolata Cucurbita ficifolia Dahlia rosea Daucus carota	Oryza sativa Phaseolus vulgaris Poinsettia pulcherrima Radicula amoracia Saccharum officinarum Solanum tuberosum
	Brassica oleracea capitata Calyptanthus costaricensis Coix lacryma-jobi Daucus carota Fragaria chiloensis Hibiscus rosa-sinensis	
Rhypipteryx biolleyi Sauss. Tres Rios	Amaranthus spinosus Asparagus officinalis Bauhinia purpurea Bidens pilosa Byrsonima crassifolia Citrus paradisi Crotalaria spectabilis Datura candida Dombeya wallichi Dracena spp. Galinzoga hispida Gerbera jamesoni Grevillea robusta Indigofera suffruticosa	Lactuca sativa Phaseolus vulgaris Raphanus sativus Solanum tuberosum Trifolium fragiferum
	Amaranthus spinosus Asparagus officinalis Bauhinia purpurea Bidens pilosa Byrsonima crassifolia Citrus paradisi Crotalaria spectabilis Datura candida Dombeya wallichi Dracena spp. Galinzoga hispida Gerbera jamesoni Grevillea robusta Indigofera suffruticosa	
Schistocerca impleta Walk. San Jose San Rafael	Ligustrum japonicum Lucuma mammosa Lycopersicon esculentum Panicum barbinode Persea americana Poinsettia pulcherrima Sida rhombifolia Tsetzia fruticosa Tripsacum latifolia Zea mays	January August Injuring African daisy, dracenas, and <u>Citrus</u> <u>para-</u> <u>dist.</u>
	Ligustrum japonicum Lucuma mammosa Lycopersicon esculentum Panicum barbinode Persea americana Poinsettia pulcherrima Sida rhombifolia Tsetzia fruticosa Tripsacum latifolia Zea mays	

Insect and locality	C o l l e c t e d o n		Date and notes
<i>Stilpnoclora azteca</i> (Sauss.) San Pedro	<i>Amygdalus persica</i> <i>Citrus sinensis</i> <i>Coffea arabica</i> <i>Dombeya wallichii</i> <i>Fortunella japonica</i> <i>Ligustrum japonicum</i>	<i>Malus sylvestris</i> <i>Mangifera indica</i> <i>Musa sapientum</i> <i>Passiflora quadrangulata</i> <i>Sapium</i> sp.	February March August September November December
<i>Taeniopoda varipennis</i> Rehn San Jose	<i>Cheyota edulis</i> <i>Coix lacryma-jobi</i> <i>Ipomoea tillicia</i> <i>Nephrolepis</i> sp.	<i>Panicum barbinode</i> <i>Viola odorata</i> <i>Zea mays</i>	July to October December
I S O P T E R A			
<i>Nasutermes costalis</i> Holmg. Waldeck	<i>Theobroma cacao</i>		July
D E R M A P T E R A			
<i>Metrosura ruficeps</i> Scudd. <i>Curridabat</i> San Pedro	<i>Citrus sinensis</i> <i>Daucus carota</i>		January Eating carrots November in a pantry. Eating bark from base of orange tree.
T H Y S A N O P T E R A			
<i>Liothrips zetekii</i> Hood San Jose	<i>Persea americana</i>		November to May August A serious pest
<i>Solenothrips rubrocinctus</i> (Gird) Santa Rosa	<i>Theobroma cacao</i>		July

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