DOWNLOAD PDF SYNOPSIS OF THE DESCRIBED LEPIDOPTERA OF NORTH AMERICA

Chapter 1 : The North American Journal of Lepidoptera Biodiversity

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Facultad de Ciencias Exactas y Naturales. New synonyms are proposed: Twelve species are recorded from Paraguay, four of them are relatively common and have been previously reported from the country [Synpalamides phalaris Fabricius , Synpalamides rubrophalaris Houlbert , Castnia invaria penelope Schaufuss, Gazera heliconioides micha H. The other eight species are much less common in collections [Imara satrapes, Castnia juturna Hopffer, Telchin licus laura H. Telchin licus laura H. Druce and Frostetola gramivora Schaus are reported from this country for the first time. Four species not known from Paraguay, but suitable to be found within, are also mentioned [Yagra fonscolombe Godart , Castnia lecerfi Dalla Torre, Geyeria uruguayana Burmeister , Ceretes thais Drury]. The later appears to be a certain possibility for some of the Paraguayan species. With a subtropical climate, it is divided in two large natural regions: This region has been dramatically deforested since the s. There are very few works with detailed information on Paraguayan Castniidae, and the present contribution aims to summarize what is known on the several species recorded from the country as well as those we suspect might be present. Material and methods Selected institutional and private collections mainly from Paraguay but also from South-, North America and Europe containing specimens of Castniidae were examined. Their codens are as follows: Roberto Vinciguerra Collection, Palermo, Italy. Thierry Porion Collection, Jaujac, France. Map of Paraguay showing the Departments in capital letters and localities where Castniidae have been collected. Rio Jejui-mi; 7 R. San Rafael, Estancia Nueva Gambach; Arroyo Las Hermanas; We have been able to record twelve species in the country based on the literature and study of the insect collections cited above. At least four of the species [Synpalamides phalaris Fabricius , S. We were unable to find specimens of at least two of the species cited [Ceretes marcelserres Godart ; Prometheus cochrus Fabricius] but we list them here because they have been previously collected in the country and reported by reputed entomologists. Most species mentioned herein have been collected within the Paraguayan territory, indicating that they might have well established populations in the country Figure 1. We also include herein some general comments on the natural history and biology of the species found or recorded, as well as some of probable occurrence in Paraguay. We did not provide descriptive notes on each species since they will be easily identified from figures 2â€” Imara satrapes Kollar, Fig. Imara satrapes catharina Lamas, , n. Preiss described the subspecies catharina as Castnia catharina based on color differences with the nominate subspecies and illustrated a female with a band of red spots on the hind wings which are not present in the material later studied by Strand He also mentions that the red spots could be a sexual difference present always in females but only occasionally in males Strand Breyer mentions that he collected catharina in Puerto Aguirre, Misiones, Argentina. Miller , does not consider sapucaya [erroneously mentioned as sapuca in Miller] and catharina as valid subspecies placing them as synonyms. Based on that premise Lamas, pers. The hindwing coloration of Imara satrapes is highly variable, and we do not see much sense in considering the Santa Catharina, Brazil and Paraguay specimens as a separate subspecies. Furthermore, Miller ; pers. This species is known to be sympatric with Imara pallasia Eschscholtz, They are both commonly found in the southeastern region of Brazil and even though the color pattern of their forewings are quite different, their hindwings are highly variable and in cases might be sligthly similar to each other Miller Does this mean that the species used to be more common? Biezanko b mentions that the larva of this species feeds on Bromelia fastuosa Lindl. This species has been recorded flying high over 10 m above ground normally at mid-day Druce described Castnia sora separating it from Castnia mygdon Dalman, a junior subjective synonym of phalaris basically by being darker. Strand clearly follows Druce and keeps the species as valid. Houlbert place Castnia sora in the genus Sympalamides[sic]. Miller , keeps the species as Synpalamides sora while Lamas placed sora as a synonym of phalaris. Back in November , A. Even though

Miller mentions that this is a highly variable species, she keeps several taxa as valid Miller which were later synonymized by Lamas We suggest that Synpalamides orestes Walker , Synpalamides phalaris Fabricius and Synpalamides rubrophalaris Houlbert could possibly represent stages of a morphological cline. It has been reported from Brazil. There is not much known about the life history of this species, however, females have been observed laying eggs on Guzmania sp. It has been seen flying in forest clearings during January and February in certain areas of Brazil Biezanko b. Typical specimens of his species can be easily distinguished from typical Synpalamides phalaris based mainly in color differences. It was originally described by Houlbert from Brazil, Bahia as Castnia rubrophalaris. It was later placed in the genus Sympalamides[sic] Houlbert Rothschild mentions the species [as Castnia Sympalamides[sic] mygdon form rubrophalaris Houlbert collected in November, , from Sapucay, Paraguay. It has been collected in Atlantic Forest in the areas of occurrence in Paraguay, where it is possible to find specimens perching on leaves of bushes or small size plants Fig. The hosts are Unknown. Castnia invaria penelope Schaufuss, Figs. Druce, Castnia juturna f. Breyer corroborates that endelechia is common in Paraguay. Castnia invaria invaria was originally described from, and appears to be restricted to Rio de Janeiro, in Southeast Brazil Walker ; Houlbert , Miller , , Lamas Castnia jordani Houlbert, could be an intermediate phenotype between those found in both regions. The species is also known as a minor pest of pineapples [Ananas comosus L. Pastrana mentions Aechmea sp. Herbert Druce, , Slide No. Castnia juturna Hopffer, Fig. The species was originally described from Brazil by Hopffer Preiss mentions the species erroneously as Castnia inturna in the text, but correctly in the included plate from Rio Grande do Sul, Brazil. Burmeister confirms the presence of the species in Paraguay, but says that it is smaller than the Argentinian specimens and that the black marginal band of the hindwings is interrupted by two rows of white rededged spots which are parallel to the margin. After carefully studying the available literature and information on this and similar species, as well as discussions with experts on the group, we now consider that paraguayensis should be regarded as a new synonym of Castnia invaria penelope, and not of Castnia juturna. Specimens were seen flying around Dyckia floribunda Griseb. Druce , Taxonomic history. Miller considered it a synonym of Leucocastnia licus Drury and Lamas placed it as a ssp. The first author visited this collection in and only saw specimens of Synpalamides phalaris Fabricius , Castnia invaria penelope Schaufuss and Gazera heliconioides micha H. One specimen collected in , and deposited at the MNHNPY see below , appears to be the first valid Paraguayan record of the species. It was collected in a region with a mixture of Atlantic Forest and Cerrado vegetation. Ceretes marcelserres Godart, [] Figs. We could not find recent records of this species in Paraguay, but a few specimens have been collected in Misiones province, Argentina Miller ; F. It appears that the larvae live in Miltonia flavescens Lindl. The genus was discerned thanks to its resemblance to certain species in the genus Actinote Nymphalidae: Since this proposed genus was found to be preoccupied, Oiticica replaced it for Riechia. Berg, Myrtaceae, at midday. The species has been detected flying during the day in December and January in some locations in Brazil Biezanko a. The larvae have been found feeding on Tillandsia meridionalis Baker and T. Morren Baker Bromeliaceae Miller They have been reared in Argentina under laboratory conditions using pseudobulbs of Miltonia flavescens Lindl. A female was observed ovipositing on Oncidium jonesianum Rchb. Biezanko a mentions that the larvae feed on Tillandsia aeranthos Loisel L. Prometheus cochrus Fabricius, Fig. Miller recognizes three species [cochrus Fabricius , garbei Foetterle, and houlberti Rothschild] in the genus and two subspecies for cochrus [cochrus Fabricius and intermedia Raymundo , however the enormous variation within the species [mentioned also by Miller] led Lamas to synonymize them all under cochrus. This species has been seen in Brazil flying from Biezanko a mentions that the larvae feed on several Bromeliaceae Ananas comosus L. Gazera heliconioides micha H. Described in the genus Castnia by Druce but later included in the genus Cabirus by Houlbert It is, apparently, together with Castnia invaria penelope, the commonest castniid species in Paraguay. It is frequently found perching close to the ground at the base of leaves or grasses and the way the moth rests and its wing and body coloration Fig. Like all taxa in the genus, they have a close resemblance to members of Lycorea Doubleday Nymphalidae: Danainae, Ithomiini , and to Notophyson heliconides Swainson Erebidae: Arctiinae, Pericopini

Miller ; Lamas They also perched close to the ground Fig. These observations clearly contrast with those made by Contreras in more disturbed habitats, where specimens were found flying fast, strongly and very high 7â€”8 m above ground.

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Chapter 2 : Lepidoptera - Wikipedia

Synopsis of the described Lepidoptera of North America. Part I--Diurnal and crepuscular Lepidoptera. Related Titles. Series: Publication (Smithsonian Institution.

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Chapter 3 : A synopsis of the Castniidae (Lepidoptera) - fauna paraguay home page - www.nxgvision.com

*Synopsis of the described Lepidoptera of North America [John G. Morris] on www.nxgvision.com *FREE* shipping on qualifying offers. This is a pre historical reproduction that was curated for quality.*

Head capsule well-developed, with chewing mouthparts Abdomen with up to 5 pairs of prolegs Mouthparts form a coiled tube proboscis beneath the head Antennal type: Nymphalidae brushfooted butterflies -- front legs reduced in size. This is the largest butterfly family; it includes the fritillaries, admirals, emperors, and tortoiseshells. Danaidae milkweed butterflies -- adults are reddish-orange with black and white markings. Larvae feed on various species of milkweed. Includes the monarch Danaus plexippus. Pieridae whites and sulfurs -- adults are predominantly white or yellow with black markings. The imported cabbageworm Pieris rapae is a pest throughout the world. Papilionidae swallowtails -- hind wings have a tail-like extension. The tiger swallowtail Papilio glaucus is a cosmopolitan species. Lycaenidae blues, coppers, and hairstreaks -- small butterflies with fluted hind wings. Some species are extinct or nearing extinction, others are very common. Hesperiidae skippers -- antennal club is hooked at the tip. The silverspotted skipper, Epargyreus clarus, is a common species. Tineidae clothes moths -- some larvae construct cases and feed on natural fibers. Pests include the webbing clothes moth Tineola bisselliella and the casemaking clothes moth Tinea pellionella. Gelechiidae -- one of the largest families of micro-lepidoptera. These larvae feed on plants or plant products. Pests include the Angoumois grain moth Sitotroga cerealella and the pink bollworm Pectinophora gossypiella. Sesiidae clearwing moths -- diurnally active adults mimic wasps. Many pests of fruit and vegetable crops, including the peachtree borer Synanthedon exitiosa and squash vine borer Melittia cucurbitae. Tortricidae -- fourth largest family of Lepidoptera. Larvae feed inside stems, leaves, and fruit. Contains many pest species, including the codling moth Cydia pomonella and the oriental fruit moth Grapholita molesta. Pyralidae snout moths -- second largest family of Lepidoptera. Pests include the European corn borer Ostrinia nubilalis , the Indianmeal moth Plodia interpunctella , and the greater wax moth Galleria mellonella. Geometridae -- third largest family of Lepidoptera. Larvae are often called inchworms or spanworms. Includes the winter moth Operophtera brumata and the fall cankerworm Alsophila pometaria. Lasiocampidae lappet moths -- larvae feed on the leaves of trees and some spin large webs or tents on the foliage. Pests include the eastern tent caterpillar Malacosoma americana and the forest tent caterpillar M. Saturniidae giant silk moths large, colorful moths. Larvae feed on a wide range of trees and shrubs. Well-known species include the cecropia moth Hyalophora cecropia and the luna moth Actias luna. Sphingidae hawk moths -- medium to large adults with long proboscis for collecting nectar. Larvae are frequently called hornworms. Pests include the tobacco hornworm Manduca sexta and tomato hornworm M. Arctiidae tiger moths -- distinctive adults, usually white with black, red, yellow, or orange markings. Many larvae are covered with long hairs woollybears. Includes the fall webworm Hyphantria cunea. Lymantriidae tussock moths -- larvae are characterized by tufts of hair along the body. Adults do not feed. Pests include the gypsy moth Lymantria dispar and the browntail moth Euproctis chrysorrhoea. Noctuidae loopers, owlet moths, and underwings -- this is the largest family in the Lepidoptera. Larvae are leaf feeders and stem borers. Many species are pests, including the fall armyworm Spodoptera frugiperda , the black cutworm Agrotis ipsilon , and the cabbage looper Trichoplusia ni. Bug Bytes Some butterflies family Lycaenidae are considered "endangered species". In flight, front and hind wings are linked together by a bristle frenulum or a membranous flap jugum so both wings move up and down in synchrony. According to folklore, larvae of the banded woollybear, Pyrrharctia isabella, can forecast the severity of winter weather. A wide brown band means the winter will be harsh, a narrow brown band means the winter will be mild. Adults of most Noctuidae and Arctiidae have "ears" in the thorax that help them detect and evade echo-locating bats. Some species of Arctiidae even produce high-pitched ticks that confuse the bats.

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Chapter 4 : Lycaena phlaeas - Wikipedia

Synopsis Of The Described Lepidoptera Of North America, Part One: Diurnal And Crepuscular Lepidoptera () by John Gottlieb Morris (Author), Brackenridge Clemens (Contributor).

Eggs[edit] Lepidoptera usually reproduce sexually and are oviparous egg-laying , though some species exhibit live birth in a process called ovoviviparity. A variety of differences in egg -laying and the number of eggs laid occur. Some species simply drop their eggs in flight these species normally have polyphagous larvae, meaning they eat a variety of plants e. The number of eggs laid may vary from only a few to several thousand. Females lay smaller eggs as they age. Larger females lay larger eggs. It is lined with a thin coating of wax , which prevents the egg from drying out. Each egg contains a number of micropyles , or tiny funnel-shaped openings at one end, the purpose of which is to allow sperm to enter and fertilize the egg. Butterfly and moth eggs vary greatly in size between species, but they are all either spherical or ovate. The egg stage lasts a few weeks in most butterflies, but eggs laid prior to winter, especially in temperate regions, go through diapause , and hatching may be delayed until spring. Other butterflies may lay their eggs in the spring and have them hatch in the summer. These butterflies are usually temperate species e. Caterpillar Larval form typically lives and feeds on plants The larvae or caterpillars are the first stage in the life cycle after hatching. Caterpillars, are "characteristic polypod larvae with cylindrical bodies, short thoracic legs, and abdominal prolegs pseudopods ". Some species are carnivorous and others are even parasitic. Some lycaenid species such as Maculinea rebeli are social parasites of Myrmica ants nests. The larvae of both butterflies and moths exhibit mimicry to deter potential predators. Some caterpillars have the ability to inflate parts of their heads to appear snake-like. Many have false eye-spots to enhance this effect. Some caterpillars have special structures called osmeteria family Papilionidae , which are exposed to produce smelly chemicals used in defense. Host plants often have toxic substances in them and caterpillars are able to sequester these substances and retain them into the adult stage. This helps make them unpalatable to birds and other predators. Such unpalatability is advertised using bright red, orange, black, or white warning colors. The toxic chemicals in plants are often evolved specifically to prevent them from being eaten by insects. Insects, in turn, develop countermeasures or make use of these toxins for their own survival. This "arms race" has led to the coevolution of insects and their host plants. Wing disks develop in association with a trachea that runs along the base of the wing, and are surrounded by a thin peripodial membrane, which is linked to the outer epidermis of the larva by a tiny duct. Wing disks are very small until the last larval instar, when they increase dramatically in size, are invaded by branching tracheae from the wing base that precede the formation of the wing veins, and begin to develop patterns associated with several landmarks of the wing. Within hours, the wings form a cuticle so hard and well-joined to the body that pupae can be picked up and handled without damage to the wings.

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