*SHILAP Revta. lepid.,* 34 (134), 2006: 125-139 SRLPEF ISSN:0300-5267

# The Saturniidae fauna of Napo Province, Ecuador: an overview (Lepidoptera: Saturniidae)

L. Racheli & T. Racheli

**Abstract**

In this paper, an update inventory of 196 Saturniidae taxa (excluding Oxyteninae and Cercophaninae) recorded for Napo province, Ecuador, has been compiled. A review of all the available distributional data from the literature and additional records based on field expeditions conducted in this province have been used to arrange the present list. General information on the majority of the taxa found in this province have been summarized. Furthermore, a preliminary analysis of the species recorded along an altitudinal transect in this province is given.
KEY WORDS: Lepidoptera, Saturniidae, inventory, Napo, Ecuador.

**La fauna de Saturniidae de la provincia de Napo, Ecuador: una revisión (Lepidoptera: Saturniidae)**

**Resumen**

En este trabajo, se ha completado un inventario actualizado de 196 taxa de Saturniidae (excepto Oxyteninae y Cercophaninae), registrados para la provincia de Napo, Ecuador. Una revisión de todas las citas de distribución disponibles en la literatura y las citas adicionales procedentes de las expediciones realizadas en esta provincia, se han utilizado para actualizar la presente lista. Se ha resumido la información de carácter general sobre la mayoría de las taxa encontradas en esta provincia. Además, se da un análisis preliminar de cada especie citada a lo largo de un transecto altitudinal en esta provincia.
PALABRAS CLAVE: Lepidoptera, Saturniidae, inventario, Napo, Ecuador.

## Introduction

The present study deals with an inventory of the Saturniidae (excluding Oxyteniinae and Cercophaninae) recorded for Napo province, Ecuador. A provisional list of 196 taxa for this province is given on the total of 321 taxa known to occur in Ecuador (Tab. 2). The total number of 321 Saturniidae taxa recorded for this country is according to the recent update checklist given by RACHELI & RACHELI (2005b, and unpubl. observ.). After the publication of the general catalogue of the Ecuadorian Saturniidae by LEMAIRE & VENEDICTOFF (1989), the present list is the first attempt aimed at obtaining a most detailed view of the Saturniids present in each Ecuadorian province.

All the taxa belonging to the subfamilies Arsenurinae, Ceratocampinae, Hemileucinae and Saturniinae known to occur in this province are listed. The present inventory is based on a review of literature (e. g. LEMAIRE & VENEDICTOFF, 1989; LEMAIRE, 2002; PIÑAS & MANZANO, 2003) and according to some field expeditions to this province carried out during 1993-2001 (see RACHELI & RACHELI, 1998a, 1998b, 1999). In the most recent study concerning the Saturniids of Napo province (RACHELI & RACHELI, 2005c), it has been emphasized the importance to present a synthesis regard-

ing the Saturniid diversity of this province in particular to have a compendium which may be useful for further studies.

The Oxyteniinae and Cercophaninae species have been excluded from this study mostly because they have not been reviewed since a long time (JORDAN, 1924). In any case, they will be included in the third part of the planned checklist of the Ecuadorian Saturniidae (for the first part see RACHELI & RACHELI, 2005b). According to some preliminary investigations on the available Oxyteninae species, the total number of the species recorded for Ecuador, and in particular for Napo province, will increase if compared to those reported by JORDAN (1924). Unfortunately, the recent booklet by PIÑAS & MANZANO (2003) is not valid to understand the total number of the Oxyteninae species found in Ecuador due to the misidentification of some species (see RACHELI, 2004, and unpublished observations).

## Material and methods

### The province of Napo: some general information

The political province of Napo (11,930 kmq) includes a vast area in the eastern central Ecuador characterized by a variety of different vegetation types and habitats (Fig. 1). In this province, it is possible to find typical Andean sites (e. g. Papallacta, 2800 m ca.) as well as typical Amazonian-like sites (e. g. Misahualli, 450 m). The Volcán Antisana (5758 m) is located in this province but also other volcanoes (e. g. Sumaco, Reventador) are found in the same province. General information on the ecological, geobotanical and geographical features of Ecuador, and also for Napo province, can be found in ACOSTA SOLÍS (1966, 1977), GRUBB *et al.*, (1963), HARLING (1979), CAÑADAS CRUZ (1983), DESCIMON (1985), BALSLEV (1988), GOMÉZ (1989), RENNER *et al.* (1990), among others. Unfourtunately, vast areas in the province of Napo have been deforested in particular near towns, and along roads and rivers. In any case, it is possible to find examples of sites characterized by typical lowland rain forest, by lower montane rain forest, by montane forest and by Paramo-like vegetation in a trip of only four hours travelling by car through this province. A most detailed description of the five sites of the altitudinal transect will be discussed below.

A major road crosses this province from Quito (the capital of Ecuador, Pichincha province) to the cross-road near Baeza (2000 m), where this road is divided into two further main roads. One leading to Tena (capital of Napo province) and the other one to Nueva Loja (capital of Sucumbíos province). These roads from Quito to Tena and to Nueva Loja form the two main ways crossing this province. A secondary, but not less important road (i. e. Loreto road), is located along the road Baeza-Tena and it goes to Puerto Francisco de Orellana (= Coca), capital of Orellana province. It is obvious that several minor roads and "senderos" are present everywhere in this province.

Two major rivers are found in this province namely Río Coca, and Río Napo, this latter being one of the major affluent of the Amazon river. Several other rivers (e. g. Río Quijos, Río Payamino, Río Antisana, Río Chalupas, Río Mulatos, Río Anzu) are present in this province.

### The province of Napo: a brief review of the collectors, collecting sites and source data

In their introduction, LEMAIRE & VENEDICTOFF (1989) gave a detailed historical review of the collectors of Saturniids in Ecuador. Unfortunately, they did not mention Walter Goodfellow who also contributed in collecting few Saturniids specimens at the beginning of the last century. Since the time of MAASSEN (1890, see also the general introduction by WEYMER & MAASSEN, 1890), some Saturniids have been collected in sites located in the province of Napo and for this reason their records are present through the major reference books. Although he was particularly interested in the ornithological fauna, GOODFELLOW (1900, 1901, 1902) travelled in Ecuador collecting also some Saturniid specimens. In the detailed account of his visit to Ecuador, he mentioned also sites located in the province of Napo because he visited Papallacta, Baeza, Archidona and collected material also along the Napo river in the period between January to August 1899. It is not by chance that in the description of

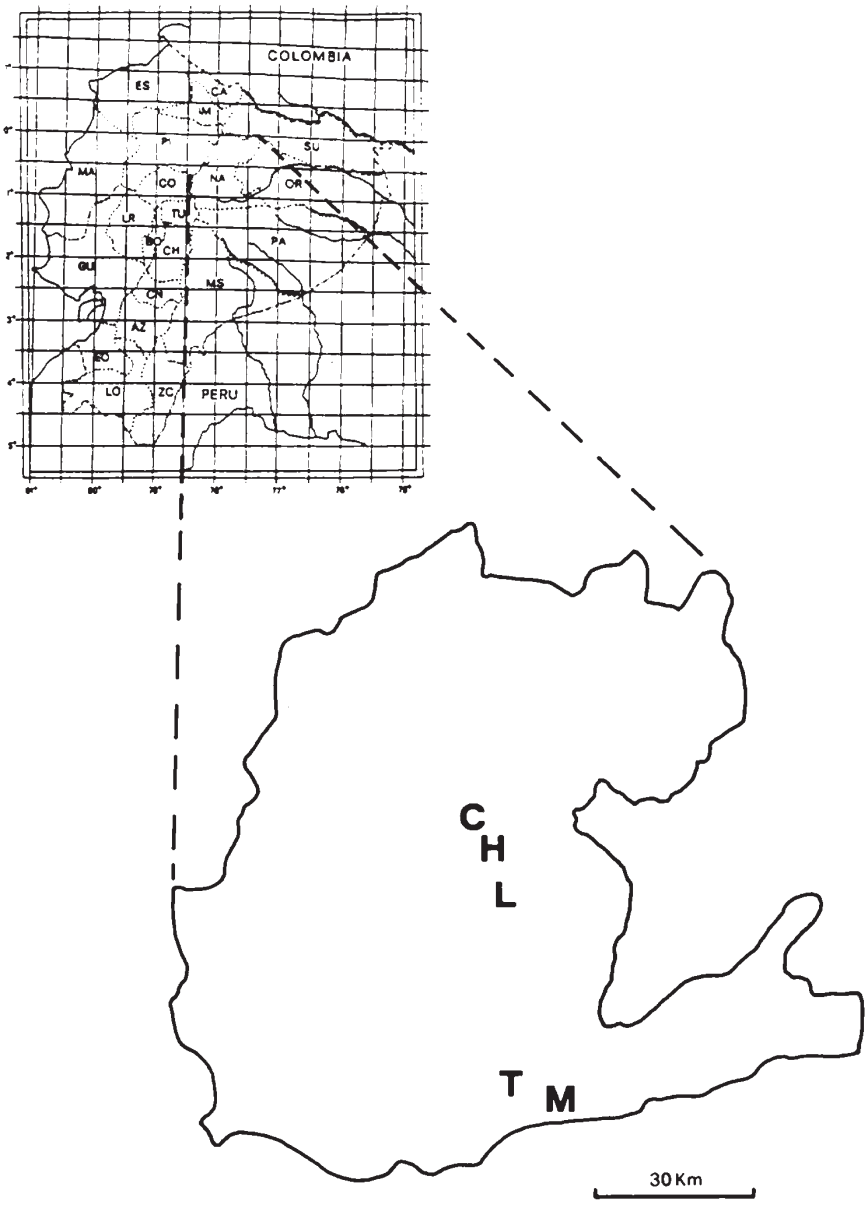


**Fig. 1.–** The map of Napo province. The following abbreviations have been used in the map: Misahualli = M; Tena = T; Loreto road = L; Cordillera de Huacamayos = H; Cosanga = C. In the inset, the map of Ecuador with the location of Napo province.

*Cerodirphia nadiana*, LEMAIRE (1975b) included in the paratypes series also a male specimen collected by Goodfellow.

According to the list of approximately 50 collecting sites (Tab. 1), it seems obvious that some improvements in the entomological investigations with particular reference to the Saturniidae has been made in the last 115 years. In that list, most of the collecting sites are those listed by LEMAIRE & VENEDICTOFF (1989) with some additions and excluding localities located in the recently constituted Sucumbíos and Orellana political provinces. Although the most efficent collections of Saturniids of Napo province have been done by Claude Lemaire and Nadia Venedictoff, many other collectors visited this province in recent times but they did not publish their reports, unfortunately.

As introduced above, this inventory is based on a review of literature and on material collected by the present authors. Then, most distributional data from the Napo province are gathered from the study by LEMAIRE & VENEDICTOFF (1989) excluding some of their records from other provinces (e. g. Sucumbíos and Orellana). Without a clear explanation, further records of Hemileucinae taxa from this province reported by LEMAIRE & VENEDICTOFF (1989) were not confirmed by LEMAIRE (2002). According to the critical review by RACHELI (2004), some of the records given by PIÑAS & MANZANO (2003) have been used in arranging the present inventory. In any case, many records are based on our field expeditions in this province carried out during 1993-2001. Most of these data have already been summarized by RACHELI & RACHELI (1998a, 1998b, 1999, 2005c) but additions are also included in the present study.

**Tab. 1.–** List of collecting sites of Napo province where Saturniid specimens have been collected.

| |
|---|
| The localities reported by LEMAIRE & VENEDICTOFF (1989), including those visited by WEYMER (1890): Antisana, Anzú, Apuya, Arajuno, Archidona, Azuela (Puente), Baeza, Chalupas (Río), Chaula yacu (600 m, Río Anzu), Cosanga, El Ahuano, El Chaco, El Jaguar, Guamaní (Puerta), Huacamayos (Cordillera de), Jondachi (Puente), Jondachi (Río), Latas (Río), Loreto road, Misahualli (Puerto), Napo (Puerto), Napo (Rio), Puni Yacu, Pununo, Reventador, Salado, Salcedo road (Cotopaxi-Napo border), Satza Yacu, Tena. Additional sites visited during the last years: Chalua Yacu (Loreto road), Galera (Cordillera de, Loreto road), Hollín (Río), Las Minas, Narupa, Palmeras, Pangayacu, Papallacta, Paquisha Loma, Río Pimpilala, Río Quijos, S. Pedro (Río Arajuno), Santa Rosa (road Tena-Puyo), Sumaco, Talag. |

**Inventory of the Saturniidae of Napo province**

A total of 196 Saturniid taxa are known to occur in the province of Napo (Tab. 2). This total compared with the total number of 321 Saturniid taxa recorded for Ecuador gives an idea about the Saturniid diversity of this province.

**Tab. 2.–** Total number of the Saturniid taxa recorded in Ecuador compared with those for the province of Napo excluding Cercophaninae and Oxyteninae. The totals for the Ecuadorian fauna are based on the studies by RACHELI (2005), RACHELI & RACHELI (2005b) and on unpublished observation

| Subfamilies | Total number of taxa for each subfamily recorded in the Napo Province | Total number of taxa for each subfamily recorded in Ecuador |
|---|---|---|
| Arsenurinae | 19 | 35 |
| Ceratocampinae | 35 | 60 |
| Hemileucinae | 128 | 200 |
| Saturniinae | 14 | 26 |
| **Totals** | **196** | **321** |

A total of 19 Arsenurinae taxa have been recorded for this province. Some Arsenurinae such as *Arsenura sylla*, *A. thomsoni* or *A. ponderosa* have not been recorded yet for the province of Napo. Al-

though these species were found also in localities up to 800-900 meters in eastern Ecuador, they seem to be more common at low elevations. During our field expeditions to sites located below 450 meters in this province, these species have never been collected. The presence of these three species in Napo is expected as well as those of further species belonging to the genus *Paradaemonia* Bouvier, 1925.

The Ceratocampinae counts 35 taxa in the province of Napo but the presence of additional species belonging to the genera *Schausiella* Bouvier, 1930 and *Adelowalkeria* Travassos, 1941 is expected. In contrast, all the species of the genus *Rachesa* Michener, 1949 have been recorded for this province.

It is possible that the number of the Hemileucinae, with its 128 recorded taxa for this province, will increase through more accurate investigations in this province. The recent descriptions of new species from this province are an example supporting this prediction (RACHELI, 2005; RACHELI & RACHELI, 2005a). Furthermore some typical Amazonian species will be added to the present list according to further field expeditions below 450 m of altitude. Lastly, some *Hylesia* specimens have not been identified yet and they are not included in the present list.

Finally, the Saturniinae fauna of this province is the most complete if compared with those of other subfamilies. Furthermore, two additional species of *Copaxa* Walker, 1855 might be recorded for this province.

**Brief notes on the Saturniids of Napo province**

The complete list of the species recorded for Napo province is given in the appendix. In brief, additional information regarding the geographical and altitudinal distribution, and relative abundance for the majority of the recorded species are summarized below. The use of the altitudinal zones namely high, moderate and low elevations correspond to those described by LEMAIRE & VENEDICTOFF (1989).

Arsenurinae Jordan, 1922

*Arsenura* [Duncan & Westwood], 1841

Seven species belonging to this genus have been recorded for Napo province. Excluding *A. cymonia*, the remaining six species have been found sympatric at Misahualli (450 m) and along the Loreto road (1000-1200 m). Some species are very abundant and common (e. g. *A. armida, A. ciocolatina*, *A. albopicta*, *A. rebeli*), other are more occasional (e. g. *A. batesii*) or uncommon to rare species (e. g. *Arsenura mossi*). *Arsenura cymonia* is a typical Andean species distributed in the altitudinal belt 1500-2000 m.

*Dysdaemonia* Hübner, [1819] and *Titaea* Hübner, [1823]

*Dysdaemonia boreas* is a fairly common but never abundant species. It seems more common between 450 m to 700 m. *Titaea tamerlan amazonensis* is a common species found everywhere from 450 m to 1200 m. *Titaea lemoulti* is an occasional species and it seems more abundant from June to August. *Titaea timur* is a scarce species and it has been collected only at Misahualli. The additional record from Río Ansú (= Anzú), Archidona, 500 m given by LEMAIRE (1980) is doubtful. Indeed Río Ansú and Archidona are two different sites separated from approximately 30 km. Subsequently, LEMAIRE & VENEDICTOFF (1989) reported this species only for Archidona.

*Rhescyntis* Hübner, [1819]

*Rhescyntis hippodamia* is a very common species. It is possible to find this species everywhere from 450 m to 1200 m. Although both species have been found along the Loreto road, *Rhescyntis hermes* is an uncommon species while *Rhescyntis descimoni* is a rare species. Recent distributional data for these latter species have been summarized by RACHELI (1998).

*Paradaemonia* Bouvier, 1925, *Copiopteryx* [Duncan & Westwood], 1841 and *Grammopelta* Rothschild, 1907

*Paradaemonia platydesmia* is a fairly common species at low elevations in this province while *P.*

*samba* has been recorded only for Tena. The two *Copiopteryx* species seem to be uncommon in this province. Occasional records from Apuya and Loreto road have been reported. The presence of both *Copiopteryx* species at Misahualli and at Tena has been reported by local collectors but their identification was never confirmed. The single record for *Grammopelta lineata* in this province is from Tena.

Ceratocampinae Harris, 1841

*Eacles* Hübner, [1819]

Seven taxa belonging to the genus *Eacles* have been recorded for Napo province. *Eacles imperialis cacicus*, *Eacles penelope* and *Eacles masoni fulvaster* are common species at low elevations while *Eacles ormondei peruviana* seems to be an occasional species. *Eacles ormondei violacea* is fairly common from 1200 m to 1800 m. *Eacles callopteris* is a rare species found only along the Loreto road.

*Bathyphlebia* Felder, 1874

*Bathyphlebia flavior* and *Bathyphlebia eminens* are two typical Andean species found in the altitudinal belt from 1700 to 2250 m. They are never common but single specimens may be collected everywhere at these altitudes.

*Citheronia* Hübner, [1819]

At low elevations, *Citheronia hamifera* is the more common species while *Citheronia aroa* and *Citheronia phoronea* seem to be more occasional species. In any case, all of them have been found sympatric at Misahualli. *Citheronia andina* is a common species along the Loreto road and at moderate elevations up to 1800 m.

*Procitheronia* Michener, 1949, *Schausiella* Bouvier, 1930, *Othorene* Boisduval, 1872 and *Cicia* Oiticica, 1964

*Procitheronia fenestrata* is an uncommon species and it has been collected only along the Loreto road. *Schausiella carabaya* is an Andean species of moderate elevations. It is never abundant but it has been collected regularly. *Othorene hodeva* is an uncommon species in this province although in other sites it seems to be very abundant. *Cicia pelota* is a rare species in this province and it has been recorded only in a few localities.

*Syssphinx* Hübner, [1819]

*Syssphinx molina* is one of the most common Saturniid species. Excluding high elevations, it can be found everywhere in this province. *Syssphinx amena* is a rare species with only a few records from Misahualli and El Jaguar but it has been reported also for moderate elevations by LEMAIRE & VENEDICTOFF (1989). *Syssphinx bidens* is not uncommon at moderate elevations. An undetermined species, *Syssphinx* sp. near *ocellata*, is here reported. It has been found sympatric with *Syssphinx bidens* along the Loreto road and at the Cordillera de Huacamayos.

*Adeloneivaia* Travassos, 1940

*Adeloneivaia subangulata*, *Adeloneivaia acuta* and *Adeloneivaia jason* are very common species and they have been found everywhere at low elevations. *Adeloneivaia catoxantha*, *Adeloneivaia boisduvalii* and *Adeloneivaia pelias* are less abundant than the previous species but they have been recorded for numerous sites in this province (LEMAIRE & VENEDICTOFF, 1989, RACHELI & RACHELI, 1998a, 1998b, 1999)

*Adelowalkeria* Travassos, 1941 and *Rachesa* Michener, 1948

*Adelowalkeria plateada* and *Adelowalkeria torresi* are two rare species in this province. It seems possible that they are more abundant below 450 m of altitude. As reported by RACHELI (1997), all the species belonging to the genus *Rachesa*, namely *adusta, breteuili*, *nisa*, *reventador*, have been recorded

for this province. Only *Rachesa breteuili* has been regularly collected while *Rachesa nisa* and *Rachesa reventador* are uncommon to rare species. *Rachesa adusta* is known only on a single record (RACHELI, 1997).

*Citioica* Travassos & Noronha, 1965 and *Ptiloscola* Michener, 1949

*Citioica anthonilis* is a common species from 450 m to 1200 m. *Citioica homoea* is not uncommon but it has been mostly collected between 1200 m to 1800 m (e. g. Loreto road, Cordillera de Huacamayos). *Ptiloscola photophila* is a common species everywhere at low elevations.

Hemileucinae Grote & Robinson, 1866

*Lonomia* Walker, 1855

*Lonomia descimoni* and *Lonomia achelous* have been found common at low elevations (e. g. Misahualli, Tena). In contrast, *Lonomia francescae* has been described on a single male from moderate elevations.

*Periga* Walker, 1855

Species belonging to this genus seem to be very rare in the altitudinal belt from 450 m to 900 m where no species have been recorded. In contrast, a total of six species (*herbini*, *extensiva*, *occidentalis*, *parvibulbacea*, *galbimaculata* and *lobulata*) have been recorded from moderate elevations (1200-1800 m). Three of them have been recently described by LEMAIRE (2002).

*Hirpida* Draudt, 1929 and *Catacantha* Bouvier, 1930

Both *Hirpida gaujoni* and *Hirpida nigrolinea* are Andean species of moderate elevations. The former is an occasional species while the latter has been recorded by LEMAIRE (2002). RACHELI & RACHELI (2005b) pointed out that this latter record is based on specimen/s collected in 1980. It seems obvious that *Hirpida nigrolinea* was misidentified among specimens of *Hirpida gaujoni* and for this reason was not listed in the catalogue by LEMAIRE & VENEDICTOFF (1989). *Catacantha stramentalis* is a common species between 500 m to 1000 m and it has been found abundant at Tena.

*Hylesia* Hübner, [1820]

Distributional data for the species belonging to the genus *Hylesia* have been recently summarized by LEMAIRE (2002). The present list is according to his revision of this genus. As reported above (see also RACHELI & RACHELI, 2005b), some specimens of *Hylesia* from the Napo province remain unidentified. In brief, some notes on a few species are here summarized. *Hylesia nanus* is an euryzonal but never abundant species. It has been collected from 450 m to 1800 m. *Hylesia canitia, Hylesia pauper* and *Hylesia umbrata* are fairly common at Misahualli. Few specimens of *Hylesia indurata* have been collected at Tena and Misahualli. Both *Hylesia praeda* and *Hylesia index* are uncommon at Misahualli and in some neighbouring sites. *Hylesia melanostigma* is a common species from 450 to 1200 while *Hylesia gyrex* is quite scarce. *Hylesia aeneides* is an uncommon species while only a single specimen of *Hylesia moronensis* has been collected at Tena.

*Hylesiopsis* Bouvier, 1929 and *Gamelia* Hübner, [1810]

*Hylesiopsis festiva* is a very occasional species found at low and moderate elevations. *Gamelia abasia* is a common species at 500-700 meters of altitude. *Gamelia rindgei* has been collected at Misahualli, at Tena and at other neighbouring sites where it does not seem uncommon. *Gamelia viettei* and *Gamelia neidhoeferi* are less common species but they have been recorded sympatric at Tena and along the Loreto road. The presence of *Gamelia rubriluna* in this province is based on the record given by LEMAIRE (2002).

*Hyperchiria* Hübner, [1819]*, Automerina* Michener, 1949, *Hypermerina* Lemaire, 1969 and *Gamelioides* Lemaire, 1988

*Hyperchiria nausica* is a common species mostly from 450 m to 1200 m but it has been collected up to 1800 m. Also *Hyperchiria acuta* is a common species but it has been recorded only from 1200 m to 1800 m. *Automerina cypria* is not uncommon but it was collected in particular during July and August. A single male of *Automerina vala* has been collected at San Pedro (Río Arajuno) as given by RACHELI & RACHELI (1997). *Automerina caudatula* seems to be uncommon and it has been collected only along the Loreto road. *Automerina auletes* is a common species from 450 m to 1300 m. A single record for *Hypermerina kasyi* has been reported by LEMAIRE (2002). The high Andean species, *Gamelioides elainae*, has been reported by LEMAIRE & VENEDICTOFF (1989) for the road Papallacta/Baeza km 10.

*Automeris* Hübner, [1819]

A total of 29 species belonging to the genus *Automeris* have been recorded for the province of Napo. *Automeris janus*, *Automeris egeus* and *Automeris boops* are fairly common species according to their different altitudinal distributions. *Automeris larra* seems to be an uncommon species distributed only at low elevations (e. g. Las Minas, Pununo). *Automeris moresca*, *Automeris jucunda* and *Automeris midea* are occasional species found only at low elevations (e. g. Tena, Misahualli) while species such as *Automeris cinctistriga*, *Automeris curvilinea*, *Automeris denticulata* and *Automeris orestes* seem to be scarce species. *Automeris hamata*, *Automeris duchartrei* and *Automeris liberia* are very common species at low and moderate elevations. *Automeris amanda subobscura* and *Automeris abdominalis* are fairly common at moderate elevations (e. g. Cordillera de Huacamayos, Loreto road). *Automeris vomona pichichensis* is a scarce species at moderate elevations while *Automeris annulata*, *Automeris atrolimbata* and *Automeris innoxia* are never abundant but thay have been collected at different sites at low elevations. *Automeris harrisorum* is a scarce species and *Automeris pomifera* is an occasional species found only at moderate elevations (see RACHELI & RACHELI, 2005b). *Automeris grammodes* is a common species at moderate elevations. *Automeris alticola* seems to be an uncommon species distributed only around 2000 m of altitude. *Automeris gabriellae*, *Automeris styx*, *Automeris heppneri* and *Automeris schwartzi* are probably the most rare *Automeris* species in this province. According to LEMAIRE (2002), it seems that also *Automeris napoensis* is an uncommon species.

*Leucanella* Lemaire, 1969

*Leucanella contempta* and *Leucanella contei* are the most abundant species of this genus. Both are distributed at moderate elevations but the former has been found also at low elevations. *Leucanella lynx* seems to be an uncommon species found sympatric with the previous species at moderate elevations. *Leucanella apollinairei* and *Leucanella maasseni* are both rare species recorded only for lowland sites.

*Pseudautomeris* Lemaire, 1967

*Pseudautomeris yourii* is a species found only at sites around 2000 m. *Pseudautomeris pohli* seems to be an uncommon species at low and at moderate elevations. Although the status of some supposed forms remain unclear (LEMAIRE, 2002; RACHELI & RACHELI, 2005b), *Pseudautomeris "irene" armirene* has been recorded from sites at low and moderate elevations (e. g. Misahualli, Loreto road, Cordillera de Huacamayo). *Pseudautomeris lata* has been found in several localities at different altitudes (e. g. Tena, Río Pimpilala, El Chaco) but it is never an abundant species. In any case, it is possible to find it everywhere in this province from 450 m to 1800 m.

*Molippa* Walker, 1865 and *Paradirphia* Michener, 1949

Problems regarding the identification and assignment of specimens to *Molippa simillima* or to other related species have been outlined by LEMAIRE (2002). All the specimens examined from sites located in Napo province (Misahualli, Tena, Narupa, Loreto road) are here assigned to *M. simillima*. This is a common species from 450 m to 1700 m. *Molippa azuelensis* is an endemism of this province and it has been recorded only for sites between 1500 m to 2250 m. *Molippa latemedia* is a fairly common

species at low elevations. *Paradirphia andicola* is a common species at moderate elevations as well as *Paradirphia oblita* at low elevations.

*Meroleucoides* Michener, 1949

The species belonging to this genus are all distributed at moderate or high elevations. Four species, namely *M. penai, M. rectilineata, M. famula* and *M. nata*, are known to occur in this province. Excluding *M. rectilineata*, all the remaining species seem to be uncommon or rare species.

*Cerodirphia* Michener, 1949

Both *C. speciosa* and *C. brunnea* are not uncommon lowland species. They have been recorded for several sites mostly at low elevations. Three species (*C. roseissima*, *C. mota napoensis* and *C. nadiana*) are all distributed at moderate elevations (1700-2250 m). All of them have been found sympatric in the Cordillera de Huacamayos. Among them, the most abundant species was *C. mota napoensis*.

*Dirphia* Hübner, [1819]

A total of eight species belonging to this genus have been recorded for Napo province (see also Tab. 4). Among them, *Dirphia aculea* is a lowland species and it has been found at Tena during July and August only. *Dirphia horca* is not uncommon in October and November at moderate elevations while the recent described *Dirphia napoensis* seems to be a rare species (see RACHELI & RACHELI, 2005a for further details). *Dirphia radiata* has been recorded on a single male from Tena. *Dirphia avia* is a very common species found everywhere from 450 m to 2250 m. *Dirphia panamensis fassli* is a common species at lowland sites (e. g. Misahualli, Tena, Puerto Napo) while *Dirphia somniculosa confluens* is not uncommon at moderate elevations above 1500-1800 m. *Dirphia fraterna* seems to be the most abundant species in eastern Ecuador. Once, more than 100 specimens have been found during April-May. It becomes more scarce at moderate elevations (1000-1800 m).

*Periphoba* Hübner, [1820] and *Dirphiopsis* Bouvier, 1928

*Periphoba hircia* is an occasional species but it is possible to find it everywhere at low elevations. *Periphoba porioni* is a scarce species recorded only for few localities at moderate elevations. *Dirphiopsis flora* is a fairly common species at low elevations up to 1200 m of altitude.

*Pseudodirphia* Bouvier, 1928

*Pseudodirphia agis* and *P. eumedidoides* are fairly common at low elevations but the identification of some specimens ascribed to these species need confirmation. Both *P. obliqua* and *P. uniformis* are uncommon species found at moderate elevations. *P. thiaucourti* and *P. andicola* seem to be not uncommon at moderate elevations while *P. peruviana* is a scarce species at the same altitude. *P. infuscata* is fairly common above 2000 m of altitude.

Saturniinae Boisduval, [1837]

*Copaxa* Walker, 1855

*Copaxa decrescens* is a common species while *Copaxa satellita* results to be uncommon. *Copaxa cineracea* is an occasional species but it has been recorded for various sites from 450 m to 1200 m (Misahualli, Puerto Napo, Loreto road). *Copaxa expandens* is an uncommon species of moderate elevations whereas *Copaxa andensis* is an occasional species at moderate elevations. Both *Copaxa semiocculata* and *Copaxa orientalis* are scarce species recorded only for high altitudes.

*Rothschildia* Grote, 1897

All the *Rothschildia* species recorded for eastern Ecuador are present in Napo province. Among them, *Rothschildia erycina*, *Rothschildia hesperus* and *Rothschildia aurota* are common species at low elevations whereas *Rothschildia lebeau inca* and *Rothschildia "orizaba" peruviana* are common at moderate elevations. *Rothschildia arethusa rhodina* is a lowland species recorded up to 1200 m along

the Loreto road. It seems the most occasional species of this genus. *Rothschildia aricia xanthina* is distributed at moderate elevations up to 2250 m.

**An introduction to the study of the Saturniid diversity along an altitudinal transect**

The Saturniid faunas of five sites and areas along an altitudinal transect in this province have been investigated by RACHELI & RACHELI (1998a, 1998b, 1999, 2005c). According to the results obtained in those studies with further improvements presented here, it is possible to give some preliminary considerations. Detailed descriptions of the sites and areas of the altitudinal transect are given in the studies cited above. In any case, a brief review is summarized here: the lowest site is Misahualli, 450 m, which is a typical lowland rain forest. The second site, Tena, is the capital of Napo province and it is at an altitude of 550 m. Also this site has been described as lowland rain forest but it is at the edge of the ecotonal area with the lower montane rain forest. The third selected area is the Loreto road which is located along the road Cosanga-Tena. Different stations along this road from km. 5 to km. 30 (from 1100 m to 1300 m) have been investigated. This area has been described as a sub-tropical rain region or as a lower montane rain forest. The fourth area is the Cordillera de Huacamayos (= Guacamayos) at 1700-1800 m, which is located along the road Baeza-Tena, properly between Cosanga and Narupa. The vegetation of the altitudinal belt was described as a typical montane forest. The fifth and last area is Cosanga which includes different stations, i. e. the small town of Cosanga and further sites along the road Cosanga-Tena, at km 5.5-6 (2150 m), at km 7 (2250 m) and at km 10.2 (2230 m). The type of vegetation is similar to that described for the Cordillera de Huacamayos.

A preliminary synthesis regarding the faunal composition and diversity along the altitudinal transect is presented here (Tab. 3). A total of 177 Saturniid taxa (Arsenurinae, 18 taxa; Ceratocampinae, 35 taxa; Hemileucinae, 112 taxa; Saturniinae, 12 taxa) have been recorded along the altitudinal transect. According to the total number of species recorded in this province, it is possible to recognize that only 19 taxa have not been found along the altitudinal transect. It can be pointed out then that the present survey covers most if not all the habitats of the region.

| | M | T | L | H | C |
|---|---|---|---|---|---|
| ARSENURINAE | | | | | |
| *Arsenura* [Duncan & Westwood], 1841 | 6 | 4 | 6 | 1 | 1 |
| *Dysdaemonia* Hübner, [1819] | 1 | 1 | 0 | 0 | 0 |
| *Titaea* Hübner, [1823] | 3 | 1 | 1 | 0 | 0 |
| *Rhescyntis* Hübner, [1819] | 1 | 1 | 3 | 1 | 0 |
| *Paradaemonia* Bouvier, 1925 | 1 | 2 | 0 | 1 | 0 |
| *Copiopteryx* [Duncan & Westwood], 1841 | 0 | 0 | 1 | 0 | 0 |
| *Grammopelta* Rothschild, 1907 | 0 | 1 | 0 | 0 | 0 |
| CERATOCAMPINAE | | | | | |
| *Eacles* Hübner, [1819] | 4 | 4 | 5+ | 1 | 1 |
| *Bathyphlebia* Felder, 1874 | 0 | 0 | 0 | 1 | 2 |
| *Citheronia* Hübner, [1819] | 3 | 1 | 1 | 1 | 0 |
| *Procitheronia* Michener, 1949 | 0 | 0 | 1 | 0 | 0 |
| *Schausiella* Bouvier, 1930 | 0 | 0 | 1 | 1 | 0 |
| *Othorene* Boisduval, 1872 | 1 | 0 | 1 | 0 | 0 |
| *Cicia* Oiticica, 1964 | 1 | 0 | 0 | 0 | 0 |
| *Syssphinx* Hübner, [1819] | 2 | 1 | 3 | 2 | 0 |
| *Adeloneivaia* Travassos, 1940 | 5 | 4 | 3 | 2 | 0 |
| *Adelowalkeria* Travassos, 1941 | 2 | 0 | 0 | 0 | 0 |
| *Rachesa* Michener, 1948 | 0 | 0 | 1 | 2 | 1 |
| *Citioica* Travassos & Noronha, 1965 | 1 | 1 | 2 | 1 | 1 |
| *Ptiloscola* Michener, 1949 | 1 | 1 | 1 | 0 | 0 |
| HEMILEUCINAE | | | | | |
| *Lonomia* Walker, 1855 | 2 | 2 | 2 | 1 | 0 |
| *Periga* Walker, 1855 | 0 | 0 | 5 | 4 | 1 |

| | | | | | |
|---|---|---|---|---|---|
| *Hirpida* Draudt, 1929 | 0 | 0 | 0 | 2 | 1 |
| *Catacantha* Bouvier, 1930 | 1 | 1 | 1 | 1 | 0 |
| *Hylesia* Hübner, [1820] | 15 | 6 | 8 | 8 | 4 |
| *Hylesiopsis* Bouvier, 1929 | 0 | 0 | 1 | 1 | 0 |
| *Gamelia* Hübner, [1810] | 2 | 3 | 3 | 1 | 1 |
| *Hyperchiria* Hüner, [1819] | 1 | 1 | 2 | 2 | 0 |
| *Automerina* Michener, 1949 | 2 | 2 | 2 | 1 | 0 |
| *Hypermerina* Lemaire, 1969 | 0 | 0 | 1 | 0 | 0 |
| *Automeris* Hübner, [1819] | 16+ | 13 | 6 | 7 | 4 |
| *Leucanella* Lemaire, 1969 | 2 | 1 | 2 | 3 | 2 |
| *Pseudautomeris* Lemaire, 1967 | 2 | 2 | 1 | 3 | 1 |
| *Molippa* Walker, 1865 | 2 | 2 | 1 | 1 | 1 |
| *Paradirphia* Michener, 1949 | 1 | 1 | 1 | 1 | 1 |
| *Meroleucoides* Michener, 1949 | 0 | 0 | 0 | 1 | 1 |
| *Cerodirphia* Michener, 1949 | 2 | 1 | 0 | 3 | 2 |
| *Dirphia* Hübner, [1819] | 4 | 5 | 3 | 5 | 3 |
| *Periphoba* Hübner, [1820] | 1 | 1 | 0 | 1 | 1 |
| *Dirphiopsis* Bouvier, 1928 | 0 | 0 | 1 | 1 | 0 |
| *Pseudodirphia* Bouvier, 1928 | 2 | 1 | 6 | 3 | 3 |
| SATURNIINAE | | | | | |
| *Copaxa* Walker, 1855 | 2 | 1 | 2 | 2 | 2 |
| *Rothschildia* Grote, 1897 | 4 | 2 | 4 | 3 | 1 |

**Tab. 3.–** Number of species for each genus recorded in each sites and areas along the altitudinal transect. Abbreviations as in Fig. 1. The symbol "+" indicates the presence of a single unidentified species or a doubtful record. The taxon *auletes* has been listed under the genus *Automerina* (but see RACHELI & RACHELI, 2005b).

### Variations in the number of species along the altitudinal transect: an example using the species belonging to the genus *Dirphia* Hübner, [1819]

Although a decrease in the number of the species according to the altitudinal elevations is common in most genera (e. g. *Titaea*, *Citheronia*, *Adeloneivaia*, *Automeris*), the total number of species for some genera show a contradictory result (e. g. *Dirphia*, *Pseudodirphia*). A single example using the species of the genus *Dirphia* found along the altitudinal transect is analyzed in detail (see Tab. 4). The total number of the *Dirphia* species is constant through the sites and areas investigated. On a total of eight species known to occur in Napo province, all of them have been recorded along this transect, from 450 to 2250 meters.

According to the distributional data summarized in Tab. 4, it is possible to obtain the total number of shared species among the sites and areas investigated. With four species, Misahualli-Tena have the highest number of shared species followed by the Loreto road-Cordillera de Huacamayos, and the Cordillera de Huacamayos-Cosanga showing three shared species, respectively. In contrast, the total number of shared species found at Misahualli-Cosanga and Tena-Cosanga show the presence of a single species only. *Dirphia avia* is the single species recorded in all the five sites and areas of the altitudinal transect.

**Tab. 4.–** Distribution of the genus *Dirphia* along the altitudinal transect.

| | **M** | **T** | **L** | **H** | **C** |
|---|---|---|---|---|---|
| *Dirphia aculea* | X | X | | | |
| *Dirphia horca* | | | X | X | X |
| *Dirphia napoensis* | | | | X | |
| *Dirphia radiata* | | X | | | |
| *Dirphia avia* | X | X | X | X | X |
| *Dirphia panamensis fassli* | X | X | | | |
| *Dirphia somniculosa confluens* | | | | X | X |
| *Dirphia fraterna* | X | X | X | X | |
| **Total number of species** | 4 | 5 | 3 | 5 | 3 |

**Conclusion and the future investigations**

This provisional list of Saturniid moths for Napo province must be viewed only as the frame for future investigations. The presence of additional species in Napo province is expected giving that various species have been found in the neighbouring provinces (i. e., Sucumbíos and Orellana) but not yet in Napo province. This can be explained given that only a few field expeditions below 450 m of altitude in Napo province have been carried out. Some of the species currently recorded only for the neighbouring provinces are typical Amazonian species. Future researches must be planned for lowland sites in order to have a most complete picture of the Saturniid fauna of this province. Moreover, the recent new Ecuadorian record of *Rothschildia jacobaeae* (Walker, 1855) reported by WENCZEL & NAUMANN (2005) needs further investigations. For this reason, it has been not included in this study and it will be treated in the second part of our checklist of Ecuadorian Saturniidae which is in preparation. Only some preliminary results for the species found along the altitudinal transect have been summarized in the present paper. A detailed analysis of the species communities of the altitudinal transect will be given soon.

A part of the results of this study has been presented as the poster "*The Saturniidae (Lepidoptera) of Napo Province (Ecuador) with an analysis of the species found along an altitudinal transect*" at the XIV$^{th}$ European Congress of Lepidopterology held in Rome, 12-17 September 2005.

## BIBLIOGRAPHY


ACOSTA SOLÍS, M., 1966.– Las divisiones fitogeográficas y las formaciones geobotánicas del Ecuador.– *Rev. Acad. Colomb. Ciencias*, **12**(48): 401-447.

ACOSTA SOLÍS, M., 1977.– *Conferencias Fitogeográfica:* 295 pp.– I.P.G.H. Sección Nacional Ecuador, Quito.

BALSLEV, H., 1988.– Distribution patterns of ecuadorean plant species.– *Taxon*, **37**(7): 567-577.

CAÑADAS, C. L., 1983.– *El mapa bioclimático y ecológico del Ecuador*: 210 pp.– Banco Central del Ecuador, Quito.

DESCIMON, H., 1985.– Observations botaniques en Amérique tropicale.– *Bull. Ass. Parcs Bot. France*, **8**: 11-22.

GOMÉZ, E. N., 1989.– *Elementos de geografía del Ecuador: el hombre y el medio*: 130 pp.– Ediguias C.L.T.D.A., Quito.

GOODFELLOW, W., 1900 - A naturalist's notes in Ecuador.– *Avicultural Magazine*, **6**(64): 65-72; **6**(65): 89-99; 120-128; 169-177; 221-228; 262-270.

GOODFELLOW, W., 1901.– Results of an ornithological journey through Colombia and Ecuador.– *Avicultural Magazine*, **1901**: 300-319; 458-480; 699-715.

GOODFELLOW, W., 1902 - Results of an ornithological journey through Colombia and Ecuador.– *Avicultural Magazine*, **1902**: 207-233.

GRUBB, P. J., LLOYD, J. R., PENNINGTON, T. D. & T. C. WHITMORE. 1963.– A comparison of montane and lowland rain forest in Ecuador I. The forest structure, physiognomy, and floristics.– *J. Ecol*., **51**: 567-601.

HARLING, G., 1979.– The Vegetation Types of Ecuador. A Brief Survey. *In* K. LARSEN K. & B. HOLM-NIELSEN L (Eds.).– *Tropical Botany*: 165-174. Academic Press, London.

JORDAN, K., 1924.– On the Saturnoidean families Oxytenidae and Cercophanidae.– *Nov. Zool*., **31**: 135-193.

LEMAIRE, C., 1975a.– Description de neuf Attacidae sud-Americains (Lep.) (suite et fin).– *Lambillionea*, **75** (9-10): 72-80.

LEMAIRE, C., 1975b.– Description de six Attacidae nouveaux de l' Equateur (Lep.).– *Lambillionea*, **75** (Bis): 52-68.

LEMAIRE, C., 1980.– *Les Attacidae americains. The Attacidae of America (= Saturniidae). Arsenurinae*: 199 pp., 76 pls.– Lemaire ed., Neuilly-sur-Seine.

LEMAIRE, C., 1988.– *Les Saturniidae americains. The Saturniidae of America. Los Saturniidae Americanos (= Attacidae). Ceratocampinae*: 480 pp., 64 pls.– Museo Nacional de Costa Rica, San José.

LEMAIRE, C., 2002.– *The Saturniidae of America. Les Saturniidae americains (=Attacidae). Hemileucinae*: 1388 pp., 140 pls. Goecke & Evers, Keltern.

LEMAIRE, C. & VENEDICTOFF, N., 1989.– Catalogue and biogeography of the Lepidoptera of Ecuador. I Saturniidae. With a description of a new species of *Meroleuca* Packard.– *Bull. Allyn Mus*., **129**: 1-60.

MAASSEN, P., 1890.– B. Heterocera, pp. 129-172, 179-182, pls. IV-IX. Lepidoptera gesammelt auf einer Reise durch Colombia, Ecuador, Perú, Brasilien, Argentinien und Bolivien in den Jahren 1868-1877 von Alphons Stübel. *In* W. REISS & A. STÜBEL.– *Reisen in Süd-Amerika*: XI + 182 pp., 9 pls. A. Asher & Co., Berlin.

PIÑAS RUBIO, F. & MANZANO, I., 2003.– *Mariposas del Ecuador. Saturniidae*, **16a**: V + 79 pp. + CD rom (475 col. pls). Compañía de Jesús, Quito.

RACHELI, L., 1997.– On the second known specimen of *Rachesa adusta* (Rothschild, 1907) from Ecuador (Lepidoptera: Saturniidae, Ceratocampinae).– *Atalanta*, **28** (1-2): 147-148.

RACHELI, L., 1998.– Additions and corrections to the lists of Ecuadorian Saturniidae (Lepidoptera: Saturniidae).– *Neue Ent. Nachr*., **41**: 149-155.

RACHELI, L., 2004.– A critical review of the booklet by Piñas & Manzano (2003) on the Ecuadorian Saturniidae (Lepidoptera). *In* S. NAUMANN & U. BROSCH (Eds.).– Contributions to the knowledge of Saturniidae (Lepidoptera) & entomohistory, Part I of III.– *Galathea, Ber. Kreises Nürnberger entomol., e. V., Suppl.*, **15**: 55-68.

RACHELI, L., 2005.– Description of a new species of *Lonomia* Walker, 1855 from eastern Ecuador (Lepidoptera: Saturniidae, Hemileucinae). *In* S. NAUMANN & U. BROSCH (Eds.).– Contributions to the knowledge of Saturniidae (Lepidoptera) & entomohistory, Part II of III.– G*alathea, Ber. Kreises Nürnberger entomol., e. V., Suppl.,* **16**: 203-208.

RACHELI, L. & RACHELI, T., 1997.– Further notes on the Saturniidae of Ecuador (Lepidoptera, Saturniidae).– *Nachr. Entomol. Ver. Apollo, (N. F.),* **18**(2-3): 173-180.

RACHELI, T. & RACHELI, L., 1998.– Lepidoptera diversity of an Ecuadorian lowland rain forest (Lepidoptera: Papilionidae, Pieridae, Nymphalidae, Saturniidae, Sphingidae).– *Neue Ent. Nachr*., **41**: 95-117.

RACHELI, L. &. RACHELI, T., 1998.– The Saturniidae of the Loreto Road, Napo Province, Ecuador (Lepidoptera).– *Neue Ent. Nachr.,* **41**: 163-172.

RACHELI, L. & RACHELI, T., 1999.– The Saturniidae of Tena, Napo Province, Ecuador (Lepidoptera: Saturniidae).– *Entomol. Z*., **109**(11): 460-466.

RACHELI, L. & RACHELI, T., 2005a.– Description of two new species of *Dirphia* Hübner, [1819] with notes on *Dirphia crassifurca* Lemaire, 1971 and *Dirphia horca* Dognin, 1894 (Lepidoptera: Saturniidae).– *SHILAP Revta. lepid*., **33**(129): 39-44.

RACHELI, L. & RACHELI T., 2005b.– An update checklist of the Saturniidae of Ecuador. Part I: Hemileucinae (Lepidoptera: Saturniidae).– *SHILAP Revta. lepid*., **33**(130): 203-223.

RACHELI, L. & RACHELI, T., 2005c.– The Saturniidae recorded in two montane forest areas in the Napo province, eastern Ecuador (Lepidoptera: Saturniidae).– *SHILAP Revta. lepid.*, **33**(131): 375-381.

RENNER, S. S., BALSLEV, H. & HOLM-NIELSEN, L. B., 1990.– *Flowering Plants of amazonian Ecuador.– a checklist:* 241 pp. AAU Reports 24. Botanical Institute Aarhus University & Pontificia Universitad Catolica del Ecuador, Quito.

WENCZEL, B., & NAUMANN, S., 2005.– New records for the genus *Rothschildia* Grote from Peru and surrounding countries (Lepidoptera: Saturniidae). *In* S. NAUMANN & U. BROSCH (Eds.), Contributions to the knowledge of Saturniidae (Lepidoptera) & entomohistory, Part II of III.– G*alathea, Ber. des Kreises Nürnberger Entomol., e. V., Suppl.,* **16**: 189-201.

WEYMER, G. & MAASSEN, P., 1890.– Lepidoptera gesammelt auf einer Reise durch Colombia, Ecuador, Perú, Brasilien, Argentinien und Bolivien in den Jahren 1868-1877 von Alphons Stübel. *In* W. REISS & A. STÜBEL.– *Reisen in Süd-Amerika*: XI + 182 pp., 9 pls. A. Asher & Co., Berlin.

L. R.
Research Associate,
Staatliches Museum für Naturkunde, Rosenstein 1,
D-70191 Stuttgart
ALEMANIA / GERMANY

T. R.
Dipartimento di Biologia Animale e dell'Uomo
Università di Roma "La Sapienza"
Viale dell' Università, 32
I-00185 Rome
ITALIA / *ITALY*

To whom correspondence should be addressed:
Via G. Valmarana, 66
I-00139 Rome
ITALIA / *ITALY*
E-mail: racheli@tiscalinet.it

(Recibido para publicación / *Received for publication* 14-XI-2005)
(Revisado y aceptado / *Revised and accepted* 14-XII-2005)

**Appendix.–** The complete list of Saturniids of Napo province, Ecuador.

ARSENURINAE

*Arsenura armida* (Cramer, 1779), *Arsenura mossi* Jordan, 1922, *Arsenura ciocolatina* Draudt, 1930, *Arsenura albopicta* Jordan, 1922, *Arsenura rebeli* Gschwandner, 1920, *Arsenura batesii* (Felder & Rogenhofer, 1874), *Arsenura cymonia* (Rothschild, 1907), *Dysdaemonia boreas* (Cramer, 1775), *Titaea tamerlan amazonensis* Lemaire, 1980, *Titaea lemoulti* (Schaus, 1905), *Titaea timur* (Fassl, 1915), *Rhescyntis hippodamia* (Cramer, 1777), *Rhescyntis hermes* (Rothschild, 1907), *Rhescyntis descimoni* Lemaire, 1975, *Paradaemonia platydesmia* (Rothschild, 1907), *Paradaemonia samba* (Schaus, 1906), *Copiopteryx semiramis* (Cramer, 1775), *Copiopteryx jehovah* (Strecker, 1874), *Grammopelta lineata* (Schaus, 1906).

CERATOCAMPINAE

*Eacles imperialis cacicus* (Drury, 1773), *Eacles penelope* (Cramer, 1775), *Eacles masoni fulvaster* Rothschild, 1907, *Eacles callopteris* Rothschild, 1907, *Eacles ormondei peruviana* Bouvier, 1927, *Eacles ormondei violacea* Lemaire, 1975, *Bathyphlebia flavior* Oiticica & Michener, 1950, *Bathyphlebia eminens* (Dognin, 1891), *Citheronia hamifera* Rothschild, 1907, *Citheronia andina* Lemaire, 1971, *Citheronia aroa* Schaus, 1896, *Citheronia phoronea* (Cramer, 1779), *Procitheronia fenestrata* (Rothschild, 1907), *Schausiella carabaya* (Rothschild, 1907), *Othorene hodeva* (Druce, 1904), *Cicia pelota* (Schaus, 1905), *Syssphinx molina* (Cramer, 1780), *Syssphinx amena* (Travassos, 1941), *Syssphinx bidens* (Rothschild, 1907), *Syssphinx* sp. near *ocellata* (Rothschild, 1907), *Adeloneivaia subangulata* (Herrich-Schäffer, [1855]), *Adeloneivaia acuta* (Schaus, 1896), *Adeloneivaia catoxantha* (Rothschild, 1907), *Adeloneivaia boisduvalii* (Doûmet, 1859), *Adeloneivaia pelias* (Rothschild, 1907), *Adeloneivaia j.jason* (Boisduval, 1872), *Adelowalkeria plateada* (Schaus, 1905), *Adelowalkeria torresi* Travassos & May, 1941, *Rachesa adusta* (Rothschild, 1907), *Rachesa breteuili* (Bouvier, 1927), *Rachesa nisa* (Druce, 1904), *Rachesa reventador* Lemaire, 1975, *Citioica anthonilis* (Herrich-Schäffer, [1854]), *Citioica homoea* (Rothschild, 1907), *Ptiloscola photophila* (Rothschild, 1907).

HEMILEUCINAE

*Lonomia descimoni* (Lemaire, 1972), *Lonomia achelous* (Cramer, 1777), *Lonomia francescae* Racheli, 2005, *Periga herbini* Lemaire, 2002**,** *Periga extensiva* Lemaire, 2002, *Periga occidentalis* (Lemaire, 1972), *Periga parvibulbacea* (Lemaire, 1972), *Periga galbimaculata* (Lemaire, 1972), *Periga lobulata* Lemaire, 2002, *Hirpida gaujoni* (Dognin, 1894), *Hirpida nigrolinea* (Druce, 1904), *Catacantha stramentalis* (Draudt, 1929), *Hylesia nanus* (Walker, 1855), *Hylesia rex* Dyar, 1913, *Hylesia andensis* Lemaire, 1988, *Hylesia canitia* (Cramer, 1780), *Hylesia leilex* Dyar, 1913, *Hylesia metabus* (Cramer, 1775), *Hylesia athlia* Dyar, 1913, *Hylesia melanops* Lemaire, 2002, *Hylesia bouvereti* Dognin, 1899, *Hylesia olivenca* Schaus, 1927, *Hylesia pauper* Dyar, 1913, *Hylesia angulex* Draudt, 1929, *Hylesia roseata* Dognin, 1914, *Hylesia umbrata* Schaus, 1911, *Hylesia terrosex* Dognin, 1916, *Hylesia rosacea thaumex* Draudt, 1929, *Hylesia teratex* Draudt, 1929, *Hylesia mymex* Dyar, 1913, *Hylesia subfasciata* Dognin, 1916, *Hylesia tapareba* Dyar, 1913, *Hylesia indurata* Dyar, 1910, *Hylesia gigantex orbana* Schaus, 1932, *Hylesia annulata* Schaus, 1911, *Hylesia praeda praeda* Dognin, 1901, *Hylesia index* Dyar, 1913, *Hylesia melanostigma* (Herrich-Schäffer, [1855]), *Hylesia gyrex* Dyar, 1913, *Hylesia aeneides* (Druce, 1897), *Hylesia moronensis* Lemaire, 1976, *Hylesia cottica* Schaus, 1932, *Hylesia subcottica* Lemaire, 2002, *Hylesiopsis festiva* (Bouvier, 1929), *Gamelia abasia* (Stoll, 1781), *Gamelia neidhoeferi* Lemaire, 1967, *Gamelia rindgei* Lemaire, 1967, *Gamelia viettei* Lemaire, 1967, *Gamelia rubriluna* (Walker, 1862), *Hyperchiria nausica* (Cramer, 1779), *Hyperchiria acuta* (Conte, 1906), *Automerina cypria* (Gmelin, 1790), *Automerina vala* (Kirby, 1871), *Automerina caudatula* (Felder & Rogenhofer, 1874), *Automerina auletes* (Herrich-Schäffer, [1854]), *Hypermerina kasyi* Lemaire, 1969, *Gamelioides elainae* (Lemaire, 1967), *Automeris janus* (Cramer, 1775), *Automeris egeus* (Cramer, 1775), *Automeris larra* (Walker, 1855), *Automeris boops* (Felder & Rogenhofer, 1874), *Automeris moresca* Schaus, 1906, *Automeris hamata* Schaus, 1906, *Automeris duchartrei* Bouvier, 1936, *Automeris jucunda* (Cramer, 1779), *Automeris cinctistriga* (Felder & Rogenhofer, 1874), *Automeris midea* (Maassen, 1885), *Automeris gabriellae* Lemaire, 1966, *Automeris liberia* (Cramer, 1780), *Automeris amanda subobscura* Weymer, 1909, *Automeris abdominalis* (Felder & Rogenhofer, 1874), *Automeris curvilinea* Schaus, 1906, *Automeris denticulata* Conte, 1906, *Automeris vomona pichichensis* Lemaire, 1976, *Automeris annulata* Schaus, 1906, *Automeris atrolimbata* Lemaire, 1973, *Automeris harrisorum* Lemaire, 1967, *Automeris styx* Lemaire, 1982, *Automeris innoxia* (Schaus, 1906), *Automeris pomifera* Schaus, 1906,

*Automeris schwartzi* Lemaire, 1967, *Automeris grammodes* Jordan, 1912, *Automeris heppneri* Lemaire, 1982, *Automeris orestes* (Boisduval, 1875), *Automeris alticola* Lemaire, 1975, *Automeris napoensis* Lemaire, 2002, *Leucanella lynx* (Bouvier, 1930), *Leucanella contempta* (Lemaire, 1967), *Leucanella contei* (Lemaire, 1967), *Leucanella apollinairei* (Dognin, 1923), *Leucanella maasseni* (Moschler, 1872), *Pseudautomeris yourii* Lemaire, 1985, *Pseudautomeris pohli* Lemaire, 1967, *Pseudautomeris irene armirene* (Strand, 1920), *Pseudautomeris lata* (Conte, 1906), *Molippa simillima* Jones, 1907, *Molippa azuelensis* Lemaire, 1976, *Molippa latemedia* (Druce, 1890), *Paradirphia andicola* Lemaire, 2002, *Paradirphia oblita* (Lemaire, 1976), *Meroleucoides penai* Lemaire, 1982, *Meroleucoides rectilineata* Lemaire & Venedictoff, 1989, *Meroleucoides famula* (Maassen, 1890), *Meroleucoides nata* (Maassen, 1890), *Cerodirphia speciosa* (Cramer, 1777), *Cerodirphia wellingi roseissima* Lemaire, 2002, *Cerodirphia brunnea* (Draudt, 1930), *Cerodirphia mota napoensis* Lemaire, 1982, *Cerodirphia nadiana* Lemaire, 1975, *Dirphia aculea* Vuillot, 1892, *Dirphia horca* Dognin, 1894, *Dirphia napoensis* Racheli & Racheli, 2005, *Dirphia radiata* Dognin, 1916, *Dirphia avia* (Stoll, 1780), *Dirphia panamensis fassli* (Dognin, 1923), *Dirphia somniculosa confluens* Bouvier, 1930, *Dirphia f. fraterna* (Felder & Rogenhofer, 1874), *Periphoba hircia* (Cramer, 1775), *Periphoba porioni* Lemaire, 1982, *Dirphiopsis flora* (Schaus, 1911), *Pseudodirphia agis* (Cramer, 1775), *Pseudodirphia obliqua* (Bouvier, 1924), *Pseudodirphia uniformis* (Lemaire, 1975), *Pseudodirphia eumedidoides* (Vuillot, 1892), *Pseudodirphia thiaucourti* Lemaire, 1982, *Pseudodirphia andicola* Bouvier, 1930, *Pseudodirphia peruviana* (Bouvier, 1924), *Pseudodirphia infuscata* (Bouvier, 1924).

SATURNIINAE

*Copaxa decrescens* Walker, 1855, *Copaxa satellita* Walker, 1856, *Copaxa cineracea* Rothschild, 1895, *Copaxa expandens* Walker, 1855, *Copaxa andensis* Lemaire, 1971, *Copaxa semioculata* (Felder & Rogenhofer, 1874), *Copaxa orientalis* Lemaire, 1975, *Rothschildia erycina* (Shaw, 1769), *Rothschildia lebeau inca* Rothschild, 1907, *Rothschildia hesperus* (Linnaeus, 1758), *Rothschildia arethusa rhodina* Jordan, 1911, *Rothschildia orizaba peruviana* Rothschild, 1907, *Rothschildia aurota* (Cramer, 1775), *Rothschildia aricia xanthina* Rothschild, 1907.