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ARGIA

The quarterly news journal of the Dragonfly Society of America is currently edited by T. Donnelly, who welcomes news items, including accounts of meetings and collecting trips, noteworthy Odonata occurrences, personal notes, news of studies in progress, and reviews of technical and non-technical publications.

A CHECKLIST OF THE ODONATA OF THE DOMINICAN REPUBLIC BY PROVINCE

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The Dominican Republic has been visited by several odonatologists in recent years, including Thomas Donnelly, Sidney Dunkle, Oliver Flint, Rosser Garrison, and Jerrell James Daigle. Most collecting has occurred in the Distrito Nacional (Santo Domingo), La Vega (Jarabacoa), and Monseñor Nouel (Bonao) provinces. There are 30 provinces total including four new provinces added since 1984. Nine provinces have no records of any collections of odonates. The 8 species marked with an asterisk (*) were recorded in Paulson (1982) for Hispaniola. References from Calvert (1901-1908) are indicated with the designation "B.C.A."

Sid Dunkle and I collected (Daigle and Dunkle, 1991) and verified the presence of adults of all the species listed here except these 8 designated species, *Anax amazili*, *Erythemis simplicicollis*, *Miathyria simplex*, and *Ischnura capreola*.

I wish to thank the previously mentioned scientists for their collection data; also, Susan Sullivan Borkin of the Milwaukee County Museum and Dr. Gert V. Rosen of Munich, Germany for their important records.

It is hoped that this preliminary checklist of 63 species will serve as a starting point towards a comprehensive distribution list of the Odonata of the Dominican Republic and Haiti.

ZYGOPTERA

SYNLESTIDAE

(1) PHYLOLESTES ETHELAE Christiansen

La Vega, Monseñor Nouel

We found these spectacular, giant, endemic damselflies on mountain jungle streams west of Bonao on the road to Constanza. Colorful flowers and orchids swayed from branches over narrow streams which were filled with verdant mossy rocks and boulders.

The larvae could easily be seen feebly swimming in the clear, cold water of quiet backwater pools. The adults would perch at the tip of a branch jutting over a small pool or cling to the end of a trailing liana vine over a foaming waterfall. They seldom flew about, probably because the cool, dense shade and sparse, jungle sunlight rendered them inactive. *Phylolestes ethelae* was the only odonate encountered on these streams, save for a solitary *Scapanea frontalis*. They had this sylvan paradise all to themselves.

LESTIDAE

(2) LESTES FORFICULA Rambur

Barahona, Distrito Nacional, Duarte, La Vega, Monseñor Nouel, Puerto Plata

(3) LESTES SCALARIS Gundlach

* Hispaniola (Paulson, 1982)

(4) LESTES SPUMARIUS Hagen

Distrito Nacional, La Vega, Santiago

MEGAPODAGRIONIDAE

(5) HYPOLESTES TRINITATIS (Gundlach)

Barahona, Distrito Nacional, La Vega, Monseñor Nouel, Samaná, San Cristobal

Hypolestes trinitatis was found on small, forested, headwater streams, such as the Arroyo Bermejo near Hatillo and the Arroyo Marie north of Jarabacoa. Flying overhead were emerald green Todies, Hispaniolan Lizard Cuckoos, and golden swallowtail butterflies.

The unwary, pruinose males were conspicuous among the sun-dappled rocks and the streamside shrubs. Other odonates seen were red *Telebasis vulnerata*, black and green *Protoneura viridis*, and an occasional beautiful *Aeschna psilus* or a rock-perching *Progomphus zephyrus*.

COENAGRIONIDAE

(6) DICERATOBASIS MELANOGASTER Garrison

La Vega, Monseñor Nouel

Collected along all three roads leading to Constanza. Adults would perch on the spiked tips of large bromeliads, growing high on the steep, scarred cliffs. We needed a very long handled net to reach the bromeliad patches. The larvae were found in the water collecting at the base of the leaves along with various water beetles, flat green cockroaches, and huge blue worms!

(7) ENALLAGMA CIVILE (Hagen)

Distrito Nacional, La Vega

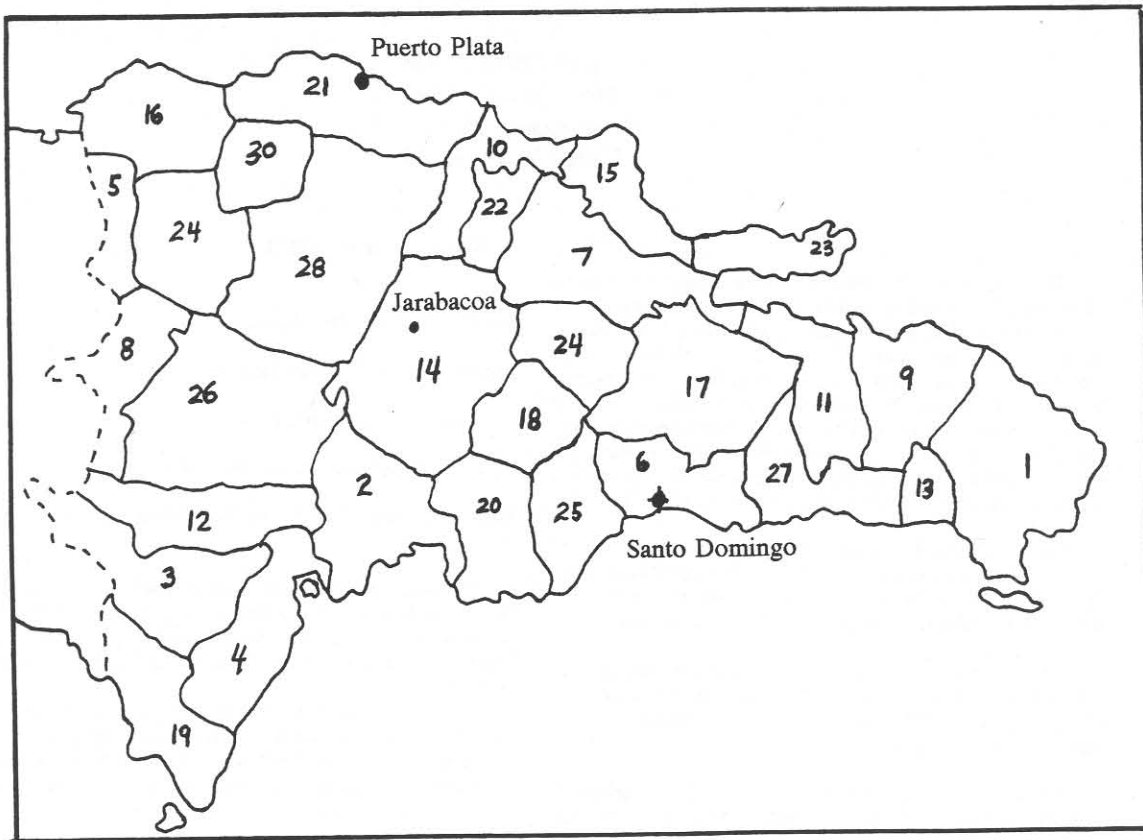
(8) ENALLAGMA COECUM (Hagen)

Azua, Barahona, Dajabón, Distrito Nacional, La Vega, Monseñor Nouel, Monte Cristi, Sánchez Ramírez, San Cristobal, Santiago

Very common on all streams and rocky, scoured cobblestone rivers. In many instances, it was the damselfly present. There are no *Argias* or *Hetaerinas* in Hispaniola! Very strange! In fact, *E. coecum*, *Macrothemis celeno*, and *Scapanea frontalis* comprised the entire odonate assemblage encountered on many of these local streams and rivers.

(9) ISCHNURA CAPREOLA (Hagen)

San Cristobal (Garrison, 1986)



1	Altagracia	5	16	Monte Cristi	5
2	Azua	4	17	Monte Plata	0
3	Baoruco	1	18	Monseñor Nouel	17
4	Barahona	11	19	Pedernales	0
5	Dajabón	3	20	Peravia	1
6	Distrito Nacional	37	21	Puerto Plata	10
7	Duarte	1	22	Salcedo	0
8	Elías Piña	0	23	Samaná	21
9	El Seibo	4	24	Sánchez Ramírez	3
10	Españillat	0	25	San Cristobal	17
11	Hato Major	0	26	San Juan	2
12	Independencia	1	27	San Pedro de Macorís	2
13	La Romana	2	28	Santiago	22
14	La Vega	44	29	Santiago Rodríguez	0
15	Maria Trinidad Sánchez	0	30	Valverde	0

Provinces of the Dominican Republic, with number of species recorded from each province

(10) *ISCHNURA HASTATA* (Say)

La Vega, Monseñor Nouel, Puerto Plata

(11) *ISCHNURA RAMBURII* (Selys)

Barahona, Monseñor Nouel, Samaná, Santiago

(12) *LEPTOBASIS VACILLANS* Hagen

Altagracia, La Vega, San Cristobal, Santiago

(13) *NEHALENNIA MINUTA* (Selys)

Distrito Nacional

(14) *NEOERYTHROMMA CULTELLATUM* (Hagen)

* Hispaniola (Paulson, 1982)

(15) *TELEBASIS DOMINICANA* (Selys)

Altagracia, Barahona, Distrito Nacional, El Seibo, La Vega, Puerto Plata, San Cristobal, San Juan, Santiago

(16) *TELEBASIS VULNERATA* Hagen

Distrito Nacional, La Vega, Puerto Plata, San Juan, Santiago

PROTONEURIDAE

(17) *PROTONEURA DUNKLEI* Daigle

Dajabón, La Vega

This new species and its habitat was described by Daigle, 1990. We saw several adults in 1991 at the Arroyo Marie type locality but we did not find any new collecting sites for this species. Both *P. dunklei* and *P. sanguinipes* are rare Dominican Republic endemics.

(18) *PROTONEURA SANGUINIPES* Westfall

Dajabón, Distrito Nacional

We saw many adults at the Arroyo Bermejo type locality in 1989 but we did not see a single individual in 1991! Unfortunately, this was the only place where we have collected this species.

(19) *PROTONEURA VIRIDIS* Westfall

Distrito Nacional, La Vega, San Cristobal

ANISOPTERA

AESCHNIDAE

(20) *AESHNA PSILUS* Calvert

La Vega, Santiago

(21) *ANAX AMAZILI* (Burmeister)

La Vega (Garrison, 1986)

(22) *ANAX CONCOLOR* Brauer

Distrito Nacional, La Vega, Monseñor Nouel

Several adults were seen flying at the Jayaco fishponds near Bonao and a borrow pit near Hatillo. They were very wary and very difficult to get close to chance even a wild swing! By comparison, the northern *Anax longipes* is much, much easier to catch.

(23) *ANAX JUNIUS* (Drury)

Distrito Nacional, Monseñor Nouel

(24) *CORYPHAESCHNA ADNEXA* (Hagen)

Distrito Nacional; La Vega, Santiago, "San Domingo" (B.C.A.)

(25) *CORYPHAESCHNA VIRIDITAS* Calvert

Distrito Nacional, La Vega, Puerto Plata, Santiago, Samaná (B.C.A.)

(26) *GYNACANTHA NERVOSA* Rambur

El Seibo, La Vega, Sánchez Ramírez (sight record), Samaná (B.C.A.)

The La Vega record includes one male and one female killed by a yellow branching fungus identified as *Hymenostilbe odonatae* Kobayasi (J. Kimbrough det.).

(27) *TRICANTHAGYNA TRIFIDA* (Rambur)

La Vega, Samaná (B.C.A.)

GOMPHIDAE

(28) *APHYLLA CARAIBA* Selys

Distrito Nacional, La Vega, Monseñor Nouel, Monte Cristi, Samaná, Sánchez Ramírez, San Cristobal

One male had several parasitic gnats, *Forcipomyia incubans* Macfisc det. by W. W. Wirth on its wings. Found on most rivers with muddy sandbars and on ponds. The species is spooky and wary, but slightly easier to catch than *Progomphus serenus*.

(29) *PROGOMPHUS SERENUS* Hagen

Distrito Nacional, La Vega, San Cristobal, Santiago

Haunts sunny streams and wide, shallow sand-gravel rivers. Males perch on gravel bars and rocks in or near riffles, where the larvae can be found burrowing in sandy gravel. Males are hard to approach and difficult to capture. The best place to collect *P. serenus* is at the Río Camú and Río Yami confluence south of La Vega town.

(30) *PROGOMPHUS ZEPHYRUS* Needham

Distrito Nacional, La Vega, San Cristobal, Santiago

P. zephyrus is now known from 6 adult males. Three of the males were collected from the Arroyo Bermejo. I caught two in 1989 and Sid caught his first there on our return trip in 1991! It prefers small, montane headwater streams. It usually flies in the company of *Hypolestes trinitatis* and *Telebasis vulnerata*. In the field, *P. zephyrus* can be separated from *P. integer* and *P. serenus* by the thin black fronto-clypeal suture on the face; the latter two species have two large black spots, creating the appearance of "goggles or sunglasses". *P. integer* and *P. zephyrus* both have a black and white striped thoracic pattern while *P. serenus* has a

brown and greenish-yellow striped thoracic pattern.

A suppositional description of *P. zephyrus* may be written for later publication.

LIBELLULIDAE

(31) *BRACHYMESIA FURCATA* (Hagen)

Monseñor Nouel

(32) *BRACHYMESIA HERBIDA* (Gundlach)

Barahona, Distrito Nacional, La Vega, Monseñor Nouel, Samaná (B.C.A.)

(33) *CANNAPHILA INSULARIS* Kirby

La Vega, Monseñor Nouel, San Cristobal, Santiago, Samaná (B.C.A.)

(34) *DYTHEMIS RUFINERVIS* (Burmeister)

El Seibo, Distrito Nacional, La Vega, Santiago

A brilliant, red libellulid found on streams and rivers which are not subject to scouring under flash-flooding conditions.

(35) *ERYTHEMIS ATTALA* (Selys)

* Hispaniola (Paulson, 1982)

(36) *ERYTHEMIS PLEBEJA* (Burmeister)

Barahona, Distrito Nacional, La Vega

(37) *ERYTHEMIS SIMPLICICOLLIS* (Say)

Baoruco (Borkin), Samaná (B.C.A.)

(38) *ERYTHEMIS VESICULOSA* (Fabricius) (*LEPTHEMIS* auct.)

Altigracia, Distrito Nacional, La Vega, Monti Cristi, Santiago

(39) *ERYTHRODIPLAX BERENICE* (Drury)

* Hispaniola (Paulson, 1982). Most likely the subspecies *naeva* (Hagen).

(40) *ERYTHRODIPLAX FERVIDA* (Erichson)

Distrito Nacional, La Vega Monseñor Nouel, Puerto Plata, San Cristobal, Samaná (B.C.A.; Borrer, 1944)

(41) *ERYTHRODIPLAX JUSTINIANA* (Selys)

Distrito Nacional, La Vega, San Cristobal, Santiago (also Borrer, 1944), Samaná (B.C.A.)

(42) *ERYTHRODIPLAX UMBRATA* (Linnaeus)

Azua, Barahona, Distrito Nacional, La Romana, La Vega, Monseñor Nouel, San Pedro de Macoris, Samaná (B.C.A.)

(43) *MACRODIPLAX BALTEATA* (Hagen)

* Hispaniola (Paulson, 1982)

(44) *MACROTREMIS CELENO* (Selys)

Azua, Barahona, Distrito Nacional, La Vega, Monti Cristi, San Cristobal, Santiago

Very common on every stream and river in Hispaniola. Hovering males drop down and lazily perch on rocks in the stream or river, presumably to bask in the warm tropical sun.

(45) *MIATHYRIA MARCELLA* (Selys)

Distrito Nacional, La Vega, Monseñor Nouel

First records for the Dominican Republic.

(46) *MIATHYRIA SIMPLEX* (Rambur)

Distrito Nacional, Puerto Plata (Garrison, 1986)

(47) *MICRATHYRIA AEQUALIS* (Hagen)

Barahona, Distrito Nacional, Monseñor Nouel, Peravia, Samaná (B.C.A.)

(48) *MICRATHYRIA DIDYMA* (Selys)

La Vega, San Cristobal, Samaná (B.C.A.)

(49) *MICRATHYRIA DISSOCIANS* Calvert

Distrito Nacional, La Vega, San Cristobal

(50) *MICRATHYRIA HAGENI* Kirby

Distrito Nacional, El Seibo, Samaná (B.C.A.)

(51) *ORTHEMIS FERRUGINEA* (Fabricius)

Altigracia, Azua, Distrito Nacional, Independencia, La Romana, La Vega, Monseñor Nouel, Monti Cristi, Puerto Plata, Samaná, Sánchez Ramírez, San Pedro de Macoris, Santiago, "San Domingo" (B.C.A.)

The all-red form was collected at the Jayaco fishponds in the province of Monseñor Nouel.

(52) *PANTALA FLAVESCENS* (Fabricius)

Distrito Nacional, La Vega, Puerto Plata, Sánchez Ramírez, Santiago

(53) *PANTALA HYMENAEA* (Say)

* Hispaniola (Paulson, 1982)

(54) *PERITHEMIS DOMITIA* (Drury)

Distrito Nacional, La Vega, San Cristobal, Santiago, Samaná (B.C.A.), "San Domingo" (B.C.A.)

(55) SCAPANEA FRONTALIS (Burmeister)

Barahona, Distrito Nacional, La Vega, Monseñor Nouel, San Cristobal, Santiago

Common on every rocky stream and cobblestone river, along with *Enallagma coecum* and *Macrothemis celeno*. Older males develop a whitish pruinosity, creating a false impression of a new species, as I found out!

(56) SYMPETRUM ILLOTUM (Hagen)

La Vega

Very rare (Daigle, 1991). We collected only one male at a roadside puddle on mountain road to Constanza.

(57) TAURIPHILA AUSTRALIS (Hagen)

* Hispaniola (Paulson, 1982)

(58) THOLYMIS CITRINA Hagen

Distrito Nacional, La Vega, Santiago

(59) TRAMEA ABDOMINALIS (Rambur)

Altagracia, Azua, Distrito Nacional, La Vega, Monseñor Nouel, Puerto Plata, Samaná (also B.C.A.)

(60) TRAMEA BINOTATA (Rambur)

Distrito Nacional, Monseñor Nouel, Samaná

(61) TRAMEA CALVERTI Muttkowski

La Vega, Samaná (B.C.A.)

(62) TRAMEA INSULARIS Hagen

Distrito Nacional, Monseñor Nouel, Samaná (B.C.A.)

(63) TRAMEA ONUSTA Hagen

* Hispaniola (Paulson, 1982)

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ODONATA DE LA SIERRA DE HUAUCHINANGO, PUEBLA, MEXICO.

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ABSTRACT

A regional study on Odonata from the Mountain Range of Huauchinango, Puebla, México is reported. This zone is located between 20° 7' to 20° 28' N and 97° 46' to 98° 7' W. It exhibits varied conditions of altitude (130-1760 m), climate (warm to temperate), and vegetation (tropical rain forest to coniferous forest).

Collections were made every month from February 1987 to February 1988, covering 10 localities. A total of 584 specimens belonging to 59 species, 28 genera and 8 families were captured. This is the first record for each of the 59 species with precise locality for the zone. Only one species had previously been cited from the Mountain Range of Huauchinango: *Palaemnema paulicaxa* Calvert (Calvert, 1931), from the surroundings of Necaxa Village.

Unfortunately, we were unable to find this species (Although the junior author has been searching for it each year to date). This is probably due to the great extent of pollution of streams around Necaxa, where only *Hetaerina cruentata* and *Argia extranea* survive.

The genus *Argia* was the most diversified with 15 species in this zone; occurrences of *A. calida* and *A. percellulata* are discussed in greater detail.

INTRODUCCION

En México, los estudios regionales de la fauna de odonatos basados en colectas sistematizadas y a largo plazo son aún bastante escasos (cf. Novelo *et al.*, 1988; Novelo & Peña, en prensa).

Para el estado de Puebla los únicos registros de odonatos son aquellos citados por Calvert (1901-1908) en la Biología Centrali-Americana; para la Sierra de Huauchinango sólo existe un registro previo: *Palaemnema paulicaxa* Calvert (Calvert, 1931), procedente de las cercanías del pueblo de Necaxa.

AREA DE ESTUDIO

La Sierra de Huauchinango queda ubicada dentro de la Sierra Norte de Puebla (20° 7' - 20° 28' N, 97° 46' - 98° 7' O); a pesar de su pequeña extensión territorial presenta una notable variación altitudinal, climática y florística. El gradiente altitudinal va de los 130-1760 m snm. La variación climática, de acuerdo con García (1988) y la florística según Wilhelm (1973) es la siguiente: Templado con verano fresco {Cb (fm)(e)g} (1800 m o más), donde predomina el Bosque Nublado de Coníferas de Montaña, cambiando a semicálido {(A)Cb} donde el tipo vegetacional es el Bosque Mixto Subhúmedo de Montaña (800-1800 m); en las partes bajas, hacia el Noreste, el clima es cálido {Ax'(w)(e)w''}

donde predomina la Selva Tropical de Tierra Caliente (0-800 m). La temperatura media anual es de 16-18°C (7°-22°) y la precipitación media anual va de 1600 a 2000 mm.

La Sierra de Huauchinango es cruzada por varios arroyos, dos presas y numerosos escurrideros, siendo el coeficiente de escurrimiento mayor del 30%.

METODOS

Se realizaron recolectas mensuales durante el período comprendido entre febrero de 1987 a febrero de 1988, abarcando un total de 10 localidades. Los ejemplares se inyectaron con acetona al 100%.

Localidades

Las localidades se enlistan en dirección suroeste-noreste; los números en la Tabla 1 corresponden con las localidades numeradas a continuación. Las altitudes (m) se anotan después de cada localidad:

(1) Presa Omitepec (1760); (2) Huauchinango (1575); (3) Río Texcapa, km 196 carr. México-Tuxpan (1200); (4) Nuevo Necaxa (1180); (5) Xicotepec de Juárez (1155); (6) Desviación al Pozo, km 12 carr. Los Caminos-La Unión (580); (7) La Unión (580); (8) Km 3 carr. La Unión-Zona Cafetalera (570); (9) Río San Marcos, km 1 carr. 130 tramo A. Camacho-Petlacotla (180); (10) Piedras Negras (130).

RESULTADOS

Se recolectaron 584 ejemplares de 59 especies pertenecientes a 28 géneros incluidos en 8 familias (Tabla 1).

DISCUSION

Las 59 especies tratadas en este estudio constituyen el primer registro con localidad específica para la Sierra de Huauchinango, Puebla. Previo a este estudio, sólo se tenía el registro de *Palaemnema paulicaxa* Calvert para dicha zona (Calvert, 1931). Durante el año de colectas continuas, de febrero de 1987 a febrero de 1988, y en colectas esporádicas en los tres años subsiguientes, no se encontró ningún ejemplar de *P. paulicaxa*. Suponemos que, debido a la gran contaminación que sufren los arroyos aledaños al pueblo de Necaxa, esta especie ha desaparecido de esta localidad, la cual, desafortunadamente es la localidad tipo y la única donde se ha registrado desde su descripción original. En Necaxa únicamente se encontró a *Hetaerina cruentata* y *Argia extranea* en las zonas menos contaminadas.

La Sierra de Huauchinango contiene una interesante fauna de odonatos ya que exhibe una mezcla de elementos con afinidades tropicales y templadas. *Ischnura denticollis* y *Sympetrum illotum* se localizaron únicamente en las partes altas de la Sierra por arriba de los 1500 m snm. Por otro lado, *Palaemnema*

Tabla 1 -- Lista de odonatos registrados en la Sierra de Huauchinango, Puebla, México.
 Table 1 -- List of Odonata recorded from the Sierra de Huauchinango, Puebla, Mexico

CALOPTERYGIDAE		AESHNIDAE	
<i>Hetaerina americana</i> (Fabricius)	9,10	<i>Aeshna jalapensis</i> Williamson	3,
<i>H. cruentata</i> (Rambur)	2,3,4,5,10	<i>Aeshna psilus</i> Calvert	5,
<i>H. occisa</i> Selys	9,10	GOMPHIDAE	
<i>H. vulnerata</i> Selys	2,3,9	<i>Erpetogomphus eutainia</i> Calvert	9
LESTIDAE		<i>E. viperinus</i> Selys	8,
<i>Archilestes grandis</i> (Rambur)	2,7	<i>Phyllogomphoides duodentatus</i> Donnelly	10
MEGAPODAGRIONIDAE		<i>P. suasus</i> (Selys)	10
<i>Paraphlebia zoe</i> Selys	7,8	LIBELLULIDAE	
PLATYSTICTIDAE		<i>Brechmorhoga vivax</i> Calvert	6,
<i>Palaemnema paucicaxa</i> Calvert	L	<i>Dythemis multipunctata</i> Kirby	9
<i>P. paucicoba</i> Calvert	9	<i>D. nigrescens</i> Calvert	9,
COENAGRIONIDAE		<i>D. sterilis</i> Hagen	9
<i>Acanthagrion quadratum</i> Selys	5,7,9,10	<i>Erythrodiplax connata</i> (Burmeister)	9
<i>Apanisagrion lais</i> (Selys)	9,10	<i>E. funerea</i> (Hagen)	9
<i>Argia extranea</i> (Hagen)	2,5,7,8,10	<i>E. umbrata</i> (Linnaeus)	9
<i>A. frequentula</i> Calvert	5,10	<i>E. fusca</i> (Rambur) ¹	5,
<i>A. fissa</i> Selys	5,7,9,10	<i>Erythemis plebeja</i> (Burmeister)	9
<i>A. immunda</i> (Hagen)	7,9,10	<i>Libellula croceipennis</i> Selys	9
<i>A. oenea</i> Hagen in Selys	7,9,10	<i>Macrothemis hemichlora</i> (Burmeister)	9
<i>A. percellulata</i> Calvert	9,10	<i>M. inacuta</i> Calvert	9
<i>A. pulla</i> Hagen in Selys	5	<i>M. pseudimitans</i> Calvert	8,
<i>A. rhoadsi</i> Calvert	9,10	<i>Micrathyria aequalis</i> (Hagen)	7,
<i>A. sedula</i> (Hagen)	9,10	<i>M. hageni</i> (Kirby)	7
<i>A. translata</i> Hagen in Selys	2,7,9,10	<i>Orthemis ferruginea</i> (Fabricius)	7,
<i>A. ulmea</i> Calvert	5,8,10	<i>Pantala flavescens</i> (Fabricius)	2
<i>A. sp. nov. 1</i>	8	<i>Perithemis domitia</i> (Drury)	5,
<i>A. sp. nov. 2</i>	8	<i>P. mooma</i> Kirby	10
<i>Enallagma novaehispaniae</i> Calvert	7,9,10	<i>Pseudoleon superbus</i> (Hagen)	7,
<i>E. praevarum</i> (Hagen)	2,4,5	<i>Sympetrum illotum</i> (Hagen)	1
<i>E. semicirculare</i> Selys	7	<i>Tramea onusta</i> Hagen	10
<i>Hesperagrion heterodoxum</i> (Selys)	2,3		
<i>Ischnura denticollis</i> (Burmeister)	1		
<i>Leptobasis vacillans</i> Hagen in Selys	9		
<i>Telebasis salva</i> (Hagen)	7,9,10		

L = Registro en literatura

¹ also called *Erythrodiplax connata fusca* (Rambur)

paulicoba, *Argia barretti*, *A. calida*, *A. percellulata*, *Leptobasis vacillans*, *Erpetogomphus eutainia*, *Phyllogomphoides duodentatus* y *P. suasus* se encontraron exclusivamente en las partes más bajas y cálidas por debajo de los 500 m snm, aunque Donnelly (com. pers.) colectó un solo ejemplar de *A. percellulata* a altitudes elevadas en Guatemala. Del mismo modo, *Hetaerina cruentata*, *Argia extranea* y *A. translata* son las especies con mayor rango de distribución altitudinal en la Sierra de Huauchinango, de 130 a 1575 m.

Como era de esperarse, el género más diverso en esta zona fue *Argia* con 15 especies, de las cuales *A. rhoadsi* parece ser endémica del noreste de México (Novelo & Peña, en prensa). *A. calida* es una especie rara; sólo se ha citado previamente de Tampico, Tamaulipas (Hagen, 1861) y de Calnali, Hidalgo (Novelo & Peña, en prensa), aunque Donnelly (com. pers.), afirma que *A. wilsoni* es sinónima de *A. calida* y, por lo tanto, su distribución va desde el sur de Tamaulipas hasta Guatemala. *A. percellulata* es la más grande del género en la Sierra de Huauchinango; se distingue por presentar 5 ó 6 celdas postcuadrangulares en las alas anteriores; machos y hembras exhiben una notable pruinosidad en la cabeza y tórax. Es una especie claramente estacional (mayo-julio); se observaron oviposiciones comunales en el mes de julio; las hembras insertan los huevecillos en arbustos de tallo leñoso que crecen en la orilla del río en zonas de corriente rápida. Esta especie sólo se había citado de Atoyac, Veracruz (Calvert, 1902). Por otra parte, se registraron dos nuevas especies de *Argia*, las cuales se han encontrado con anterioridad en Veracruz (González, com. pers.) y en Hidalgo (Novelo & Peña, en prensa); ambas pertenecen al grupo *extranea-vivida* (Garrison, com. pers.) y habitan en escurrideros, compartiendo dicho hábitat con *Paraphlebia zoe*.

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