





Seventeen new dragonfly records from Colombia and the confirmation of the synonymy of *Philogenia monotis* and *P. tinalandia* (Insecta: Odonata)

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During 2.5 months of intensive fieldwork in Colombia (departments of Cauca, Nariño, and Putumayo, South America) from January to March 2017, we visited 13 localities and collected 291 specimens of 68 species of Odonata, including 17 new records for the country. We report range expansions for several species assessed as data deficient or under some degree of threat by the IUCN Red List. Furthermore, we confirmed that *Philogenia tinalandia* is a junior synonym of *P. monotis*, thus solving a longstanding enigma. We also report the rediscovery, after many decades, of *Philogenia raphaella*, *P. sucra* and *Stenocora percornuta*. The data we collected are an important contribution to the knowledge of the dragonfly diversity of the Colombian Andean region and its surroundings, including the nearby areas in Ecuador and Peru, countries with which the departments visited share boundaries.

Keywords: Cauca; diversity; damselfly; Nariño; Putumayo

Introduction

Colombia is a tropical country and one of the most biodiverse nations in the world thanks to its geography and geological history. It is located at the confluence of the Amazon and Central American biotas, while the three Andean Cordilleras that cross the country from southwest to northeast result in a wide range of habitats: from hot tropical forest in the lowlands to cold glaciers at the top of the highest mountains (Rangel-ch, 2005). In spite of this, Colombia remains one of the least biologically explored countries in the world (Paulson, 2004). Even in charismatic groups such as birds, new species for science and new country records continue to be regularly discovered (Avenidaño et al., 2015; Lara, Cuervo, Valderrama, Calderón-f, & Cadena, 2012; Stiles, Laverde-R, & Cadena, 2017). Dragonflies (Odonata) are no exception: its country list of 406 species (Bota-Sierra, 2017; Bota-Sierra, Moreno-Arias, & Faasen, 2015; Bota-Sierra & Novelo-Gutiérrez, 2017; Garrison & von Ellenrieder, 2015, 2017; Rache, 2015) clearly lags behind its neighbors Peru, with 553 species (Bota-Sierra, Maufray, et al., 2016; Hoffmann, 2009), and Venezuela, with 525 (Vivas-Santeliz & De Marmels, 2017).

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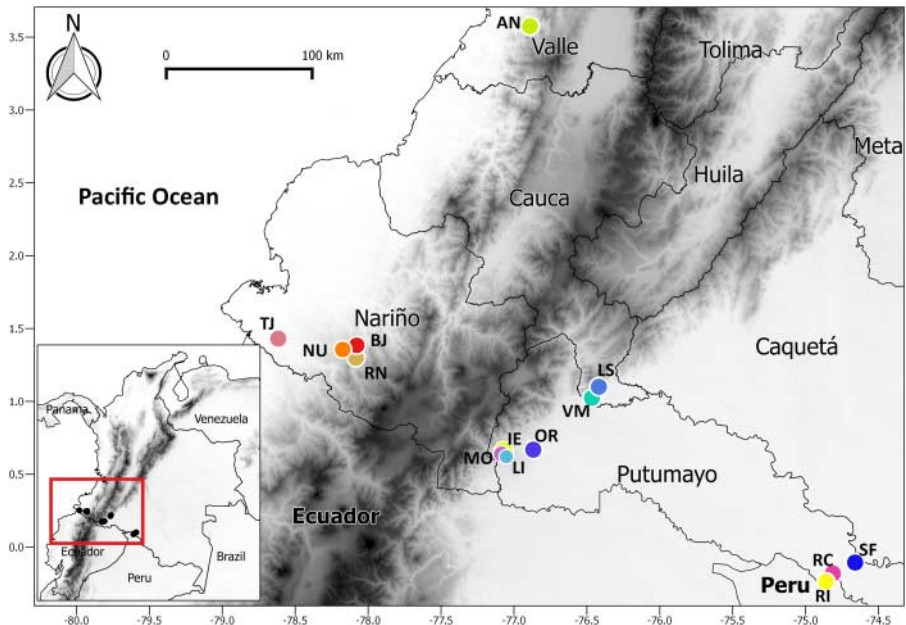


Figure 1. Map showing the localities where the specimens were collected: OR, Orito town; IE, La Isla Escondida Natural Reserve; MO, trail Orito-Monopamba; LI, El Libano township; RC, Río Cauca; SF, San Francisco township; RI, Putumayo River (river island); VM, Miraflores township; LS, La Sevilla township; RN, Nambi Natural Reserve; BJ, Road Barbacoas-Junin; NU, Road Tumaco- Junin (close to La Nutria Natural Reserve); TJ, Km 42 Road Tumaco-Junin.

Southwestern Colombia, near the border with Ecuador, is one of the least explored areas in the country. It comprises the departments of Cauca, Nariño, and Putumayo, with elevations ranging from sea level along the Pacific Ocean to 4764 m at Cumbal Volcano in the Andes. The region harbors a great variety of habitats from lowland and foothill rainforest in the Amazonian (east of the Andes) and Chocó biomes (west of the Andes), cloud forests, dry forests in the Patía Valley, and several páramos, high-mountain ecosystems unique to the tropical Andes (see Figure 1). The odonate fauna of the departments of Cauca, Nariño and Putumayo is nearly unknown, as attested by their respective species totals of six, 17 and 35 (Bota-Sierra, 2014; Bota-Sierra et al., 2015; Bota-Sierra, Rache, & Palacino, 2016; Pérez-Gutiérrez & Palacino-Rodríguez, 2011), certainly a tiny fraction of the true diversity of such an ecologically rich area. These departments had been poorly explored, in part because of political unrest, but in light of recent drastic improvements in the security situation, we decided to target them for fieldwork in order to uncover some of the diversity harbored by the region and shed light on the great richness of species that has been previously disregarded in the area. Here we present the results of our expedition, including 17 species new to Colombia, the confirmation of a previously suggested synonymy and the rediscovery of three species many decades after the last known records. Additionally, we present a map with the sampled localities, photographs and natural history notes for the species recorded during the study.

Methods

Study area

During 2.5 months of travel, from 4 January to 25 March 2017, we visited 13 localities that ranged from 50 to 1350 m in elevation and from 2929 to 6923 mm of rainfall (Hijmans, Cameron,

Table 1. Localities visited during the trip. For any visited site we report department, locality name, locality code, habitat studied, coordinates, altitude, annual average precipitation and date of field activities.

Department	Locality	Locality code	Habitats for Odonata	Coordinates, altitude, and annual average precipitation	Date of field activities (in 2017)
Putumayo	Municipality of Orito, Orito town outskirts	OR	Wet pastures	0.66792°N 76.86758°W 350 m 3341 mm	14 Jan
Putumayo	Municipality of Orito, Reserva Natural La Isla Escondida	IE	Medium to fast-flowing streams and rivulets in foothill forest	0.65775°N 77.07216°W 650–950m 3351 mm	15–20 Jan; 3–23 Mar
Putumayo	Municipality of Orito, trail to Monopamba	MO	Fast-flowing streams and rivulets in patchy foothill forest and pastures	0.63825°N 77.08447°W 700 m 3241 mm	21 Jan
Putumayo	Municipality of Orito, Vereda El Libano	LI	Streams and seeps in foothill forest	0.62038°N 77.05247°W 600–700 m 3389 mm	22 Jan
Putumayo	Municipality of Puerto Leguizamo, mouth of Rio Caucaýá	RC	Varzea forest and small marshes bordered by pastures	0.18128°S 74.81289°W 190 m 2981 mm	29 Jan
Putumayo	Municipality of Puerto Leguizamo, Vereda San Francisco	SF	Streams and small ponds in lowland Amazonian <i>terra firma</i> rainforest and cattle pastures	0.10647°S 74.65983°W 190 m 3062 mm	30 Jan
Putumayo	Putumayo River, Municipality of Puerto Leguizamo, river island 9 km upstream from Puerto Leguizamo	RI	Sandbar on the river with early successional vegetation, some of it flooded	0.23634°S 74.85961°W 180 m 2929 mm	29 and 31 Jan
Cauca	Municipality of Piamonte, Finca Mirasol, Vereda Miraflores, foot of the Serranía de los Churumbelos	VM	Streams and ponds fringed by strips of forest in largely deforested Amazonian lowlands	1.02422°N 76.46517°W 300 m 4141 mm	23–24 Jan
Cauca	Municipality of Piamonte, Vereda La Sevilla, foothills in the Serranía de los Churumbelos	LS	Streams in foothill forest	1.10000°N 76.41750°W 450 m 4256 mm	25–26 Jan

(Continued).

Table 1. Continued.

Department	Locality	Locality code	Habitats for Odonata	Coordinates, altitude, and annual average precipitation	Date of field activities (in 2017)
Nariño	Municipality of Barbacoas, Reserva Natural Río Nambí	RN	Streams and rivulets in cloud-forest	1.29853°N 78.08317°W 1350 m 3570 mm	17 Feb
Nariño	Municipality of Barbacoas, road Barbacoas-Junin	BJ	Road-side vegetation close to well preserved forests	1.38450°N 78.07783°W 1000 m 5026 mm	18 Feb
Nariño	Municipality of Barbacoas, road Tumaco-Junin, close to Reserva la Nutria	NU	Road-side vegetation close to well preserved forests	1.35558°N 78.17450°W 800m 6923 mm	18 Feb
Nariño	Municipality of Tumaco, km 42 on the Tumaco–Junín road	TJ	Road-side vegetation and channels in mixed forest and pastures	1.43022°N 78.61669°W 50 m 3132 mm	18 Feb

Parra, Jones, & Jarvis, 2005), in the departments of Cauca, Nariño and Putumayo (Table 1, Figure 1) to study and collect the local odonates.

Collection methods

We were in the field from dawn to dusk most days, although the bulk of our collecting activities took place after about 8 am, once odonates became more active. We walked existing forest trails and explored any suitable habitats – ponds, creeks, marshes, and swamps – we found. Odonates were spotted with the naked eye or with 7× and 10× binoculars, chiefly when up on trees or high vegetation. They were collected with green bag nets of 46 cm and 30 cm diameter, mounted on long (1.80 cm) and short (1.20 cm) aluminum telescopic handle poles. Field photographs were taken with a Canon 7d dsrl camera (Japan) and a Sigma 150 mm f 2.8 lens (Japan). For all specimens, detailed photos were taken, shortly after capture, against a standard white background from an X-Rite color checker that also features a 50 mm ruler on the left side (USA). The map was composed in QGIS v.2.8.3 (QGIS Development Team, 2018) using WorldClim elevation data (Hijmans et al., 2005) and the field coordinates were taken in degree format; also the annual average rainfall was obtained using the data provided by WorldClim for each locality. All the collected specimens are deposited at the Colección Entomológica de la Universidad de Antioquia (CEUA) in Medellín (Colombia). Here, they were identified by comparison with reference specimens and using specialized literature, mainly Garrison, von Ellenrieder, and Louton (2006, 2010) and Heckman (2006, 2008). Further, several generic revisions and species descriptions were consulted, including: Calvert (1909, 1924); Ris (1918); Kennedy (1938, 1941); Belle (1984); Dunkle (1986); Bick and Bick (1988); De Marmels (2001); Donnelly (1992); von Ellenrieder (2003, 2013); von Ellenrieder and Garrison (2003, 2017); Garrison (2004, 2006, 2009); Daigle (2005); Garrison and von Ellenrieder (2015, 2017); Tennessen (2015).

Results

A total of 291 specimens of 68 species were collected (Table 2). We confirmed *Philogenia tinalandia* Bick and Bick, 1988 as a junior synonym of *Philogenia monotis* (Kennedy, 1941). Further, we report the rediscovery of *Philogenia raphaella* Selys, 1886, *Philogenia sucra*

Table 2. List of species found during the trip – locality code, department and IUCN Category are reported.

	Species	Locality code	Department	IUCN Category	Figure
Perilestidae	<i>Perissolestes cornutus</i> (Selys, 1886)	SF,LI	Pu	LC	
	<i>Perissolestes remotus</i> (Williamson & Williamson, 1924)	RN	Na	LC	
Platystictidae	<i>Palaemnema picicaudata</i> Kennedy, 1938*	LI	Pu	LC	2c
Calopterygidae	<i>Hetaerina aurora</i> Ris, 1918	RN	Na	LC	
	<i>Hetaerina caja caja</i> (Drury, 1773)	JT	Na	NA	
	<i>Hetaerina occisa</i> Hagen, 1853	LS	Ca	NA	
	<i>Mnesarete fulgida</i> (Selys, 1879)	IE	Pu	NA	
	<i>Mnesarete hauxwelli</i> (Selys, 1869)*	IE,LI	Pu	NA	2b
Dicteriadidae	<i>Helioclaris amazona</i> Selys, 1853	VM	Ca	NA	
Heteragrionidae	<i>Heteragrion aequatoriale</i> Selys, 1886	RN	Na	LC	
	<i>Heteragrion bickorum</i> (Daigle, 2005)*	IE	Pu	LC	2a
	<i>Heteragrion inca</i> Calvert, 1909	IE,SF,LI	Pu	NA	
Megapodagrionidae	<i>Teinopodagrion curtum</i> (Selys, 1886)	IE	Pu	LC	
Philogenidae	<i>Philogenia minteri</i> Dunkle, 1986*	LI	Pu	LC	2f
	<i>Philogenia monotis</i> (Kennedy, 1941)*	RN	Na	EN	2d, e

(Continued).

Table 2. Continued.

	Species	Locality code	Department	IUCN Category	Figure
	<i>Philogenia raphaella</i> Selys, 1886	IE,LI	Pu	DD	2h, i
	<i>Philogenia sucra</i> Dunkle, 1986	LS	Ca	DD	2j
Polythoridae	<i>Polythore conccina</i> (McLachlan, 1881)	IE,LI	Pu	LC	
	<i>Polythore derivata</i> (McLachlan, 1881)	IE	Pu	LC	
	<i>Stenocora percornuta</i> Kennedy, 1940 [†]	IE	Pu	NT	3a
Coenagrionidae	<i>Acanthagrion obsoletum</i> (Förster, 1914)	VM	Ca, Pu	LC	
	<i>Acanthagrion peruvianum</i> Leonard, 1977	LS	Ca	LC	
	<i>Acanthagrion trilobatum</i> Leonard, 1977	JT	Na	NA	
	<i>Acanthallagma caeruleum</i> Williamson & Williamson, 1924	VM	Ca	NA	
	<i>Amazonaura westfalli</i> Machado, 2001 [†]	LI	Pu	LC	3b
	<i>Argia difficilis</i> Selys, 1865	LI	Pu	NA	
	<i>Argia dives</i> Förster, 1914	IE,LI	Pu	LC	
	<i>Argia oculata</i> Selys, 1865	LI	Pu	LC	
	<i>Argia pulla</i> Selys, 1865	VM,LS,MO	Ca, Pu	LC	
	<i>Argia schneideri</i> Garrison & von Ellenrieder, 2017*	IE	Pu	NA	3c
	<i>Calvertagrion mauffrayi</i> (Tennessee, 2015)*	RI	Pu	NA	3g, h
	<i>Drepanoneura laetitia</i> (Donnelly, 1992)*	JT	Na	NA	
	<i>Enallagma novahispaniae</i> Calvert, 1907	VM	Ca	NA	
	<i>Epiptoneura venezuelensis</i> Racenis, 1955	VM	Ca	NA	
	<i>Ischnura capreolus</i> (Hagen, 1861)	SF	Pu	NA	
	<i>Mecistogaster jocaste</i> Hagen, 1869	VM	Ca	NA	
	<i>Metaleptobasis gabriellae</i> von Ellenrieder, 2013*	VM	Ca	DD	3d
	<i>Metaleptobasis mauffrayi</i> Daigle, 2000	LI,SF	Pu	LC	
	<i>Microstigma anomalum</i> Rambur, 1842	IE	Pu	NA	
	<i>Microstigma rotundatum</i> Selys, 1860	IE	Pu	NA	
	<i>Protoneura woytkowskii</i> Gloyd, 1939*	IE	Pu	NA	3e
	<i>Psaironeura angeloi</i> Tennessee, 2016	JT	Na	NA	
	<i>Psaironeura bifurcata</i> (Sjöstedt, 1918)*	LI	Pu	NA	3f
	<i>Psaironeura tenuissima</i> (Selys, 1886)	IE,LI	Pu	NA	
	<i>Telebasis carota</i> Kennedy, 1936*	IE	Pu	NA	3k
	<i>Telebasis flammeola</i> Kennedy, 1936*	OR	Pu	EN	3j
	<i>Telebasis griffinii</i> (Martin, 1896)	VM	Ca	LC	
	<i>Telebasis versicolor</i> Fraser, 1946	VM	Ca	LC	
Aeshnidae	<i>Gynacantha litoralis</i> Williamson, 1923	OR	Pu	NA	
	<i>Gynacantha membranalis</i> Karsch, 1891	IE,SF	Pu	NA	
Libellulidae	<i>Triacanthagyna satyrus</i> (Martin, 1909)*	SF	Pu	NA	3i
	<i>Brechmorhoga vivax</i> Calvert, 1906	RN	Na	NA	
	<i>Erythemis vesiculosa</i> (Fabricius, 1775)	SF	Pu	LC	
	<i>Erythrodiplax abjecta</i> (Rambur, 1842)	JB	Na	NA	
	<i>Erythrodiplax attenuata</i> (Kirby, 1889)	RI	Pu	NA	
	<i>Erythrodiplax basalis</i> (Kirby, 1897)	LS,OR,MO,RC,SF	Ca, Pu	NA	
	<i>Erythrodiplax fusca</i> (Rambur, 1842)	LS,RC,SF	Ca, Pu	NA	
	<i>Erythrodiplax latimaculata</i> Ris, 1911	MO	Pu	NA	
	<i>Erythrodiplax umbrata</i> (Linnaeus, 1758)	LS,SF	Ca, Pu	NA	
	<i>Erythrodiplax unimaculata</i> (De Geer, 1773)	RC	Pu	NA	
	<i>Gynothemis pumila</i> (Karsch, 1889)	VM	Ca	LC	
	<i>Miathyria marcella</i> (Selys, 1857)	RC	Pu	LC	
	<i>Misagria parana</i> Kirby, 1889	VM	Ca	NA	
	<i>Nephelitia phryne</i> (Perty, 1834)	RC	Pu	LC	
	<i>Orthemis cultriformis</i> Calvert, 1899	JT,IE	Na, Pu	NA	
	<i>Uracis fastigiata</i> Burmeister, 1839	IE,LI	Pu	NA	
	<i>Uracis imbuta</i> Burmeister, 1839	OR	Pu	NA	
Gomphidae	<i>Phyllogomphoides brunneus</i> Belle, 1981*	IE	Pu	NA	2g

Note: The bold species are the new records for the country.

[†]First records of the genus in Colombia; *first records of the species in Colombia.

Abbreviations: Ca, Cauca department; Na, Nariño department; Pu, Putumayo department; NA, not assessed; LC, least concern; NT, near threatened; EN, endangered; DD, data deficient.

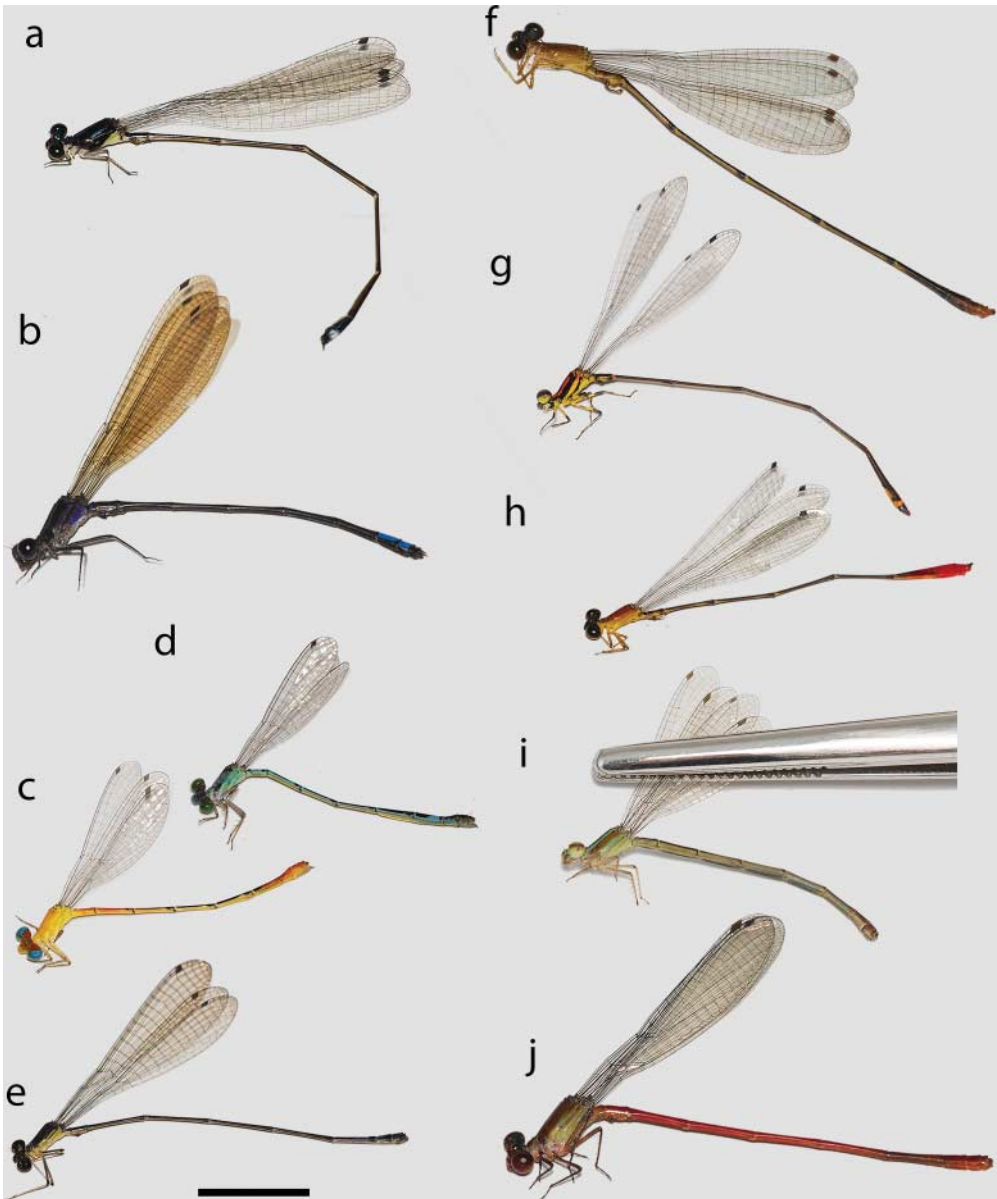


Figure 2. New Odonata species recorded for Colombia. Coenagrionidae: a) *Amazona westfalli* Vereda El Libano, Putumayo 22 Jan 2017; b) *Argia schneideri* La Isla Escondida reserve, Putumayo 20 Jan 2017; c) and d) *Calvertagrion mauffrayi* island on Putumayo river close to Puerto Leguizamo, Putumayo 31 Jan 2017, both female, c) is an immature specimen; e) *Depranoneura letitia* close to Tumaco, Nariño 18 Feb 2017; f) *Metaleptobasis gabrielae* Vereda Miraflor, Cauca 23 Jan 2017; g) *Protoneura woytkowskii* La Isla Escondida reserve, Putumayo 20 Jan 2017; h) *Psaironeura bifurcata* La Isla Escondida reserve, Putumayo 20 Jan 2017; i) *Telebasis flammeola* Orito, Putumayo 15 Jan 2017, female; j) *Telebasis carota* La Isla Escondida reserve, Putumayo 20 Jan 2017. Photos Michele Viganò.

Dunkle, 1986 and *Stenocora percornuta* Kennedy, 1940, after 131, 48 and 77 years respectively. Also, 17 species were recorded for the first time in Colombia (Figures 2–4), two of them are records for new genera for the country (*Stenocora percornuta* Kennedy, 1940 and *Amazona westfalli* Machado, 2001). The new species for Colombia belong to the following families

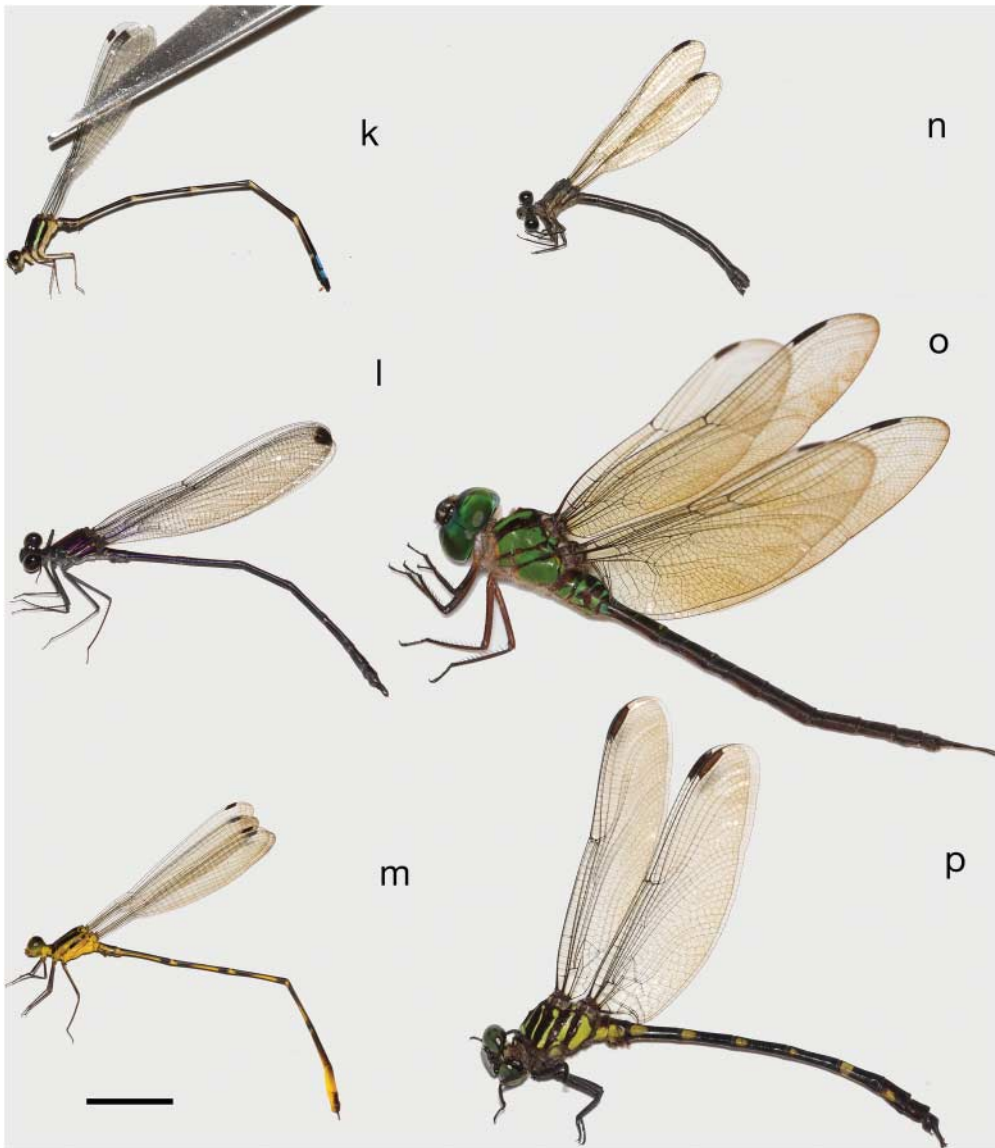


Figure 3. New Odonata species recorded for Colombia. Plastystictidae: k) *Palaemnema picicaudata* Vereda El Libano, Putumayo 22 Jan 2017; Calopterygidae: l) *Mnesarete hauxwelli* La Isla Escondida reserve, Putumayo 18 Jan 2017; Heteragrionidae: m) *Heteragrion bickorum* Vereda El Libano, Putumayo 22 Jan 2017; Polythoridae: n) *Stenocora percornuta* La Isla Escondida reserve, Putumayo 19 Jan 2017, female; Aeshnidae: o) *Tricanthagyna satyrus* Vereda San Francisco, Putumayo 30 Jan 2017; Gomphidae: p) *Phyllogomphoides brunneus* La Isla Escondida reserve, Putumayo 17 Mar 2017. Photos Michele Viganò.

and species: Coenagrionidae (*Amazona westfalli*, *Argia schneideri*, *Calvertagrion mauf-rayi*, *Drepanoneura laetitia*, *Metaleptobasis gabriellae*, *Protoneura woytkowskii*, *Psaironeura bifurcata*, *Telebasis carota*, and *Telebasis flammeola*) (Figure 2), Platystictidae (*Palaemnema picicaudata*), Calopterygidae (*Mnesarete hauxwelli*), Heteragrionidae (*Heteragrion bickorum*), Polythoridae (*Stenocora percornuta*), Aeshnidae (*Tricanthagyna satyrus*) and Gomphidae (*Phyllogomphoides brunneus*) (Figure 3), Philogenidae (*Philogenia minteri* and *Philogenia monotis*) (Figure 4). Our records raise the number of odonate species known from the country

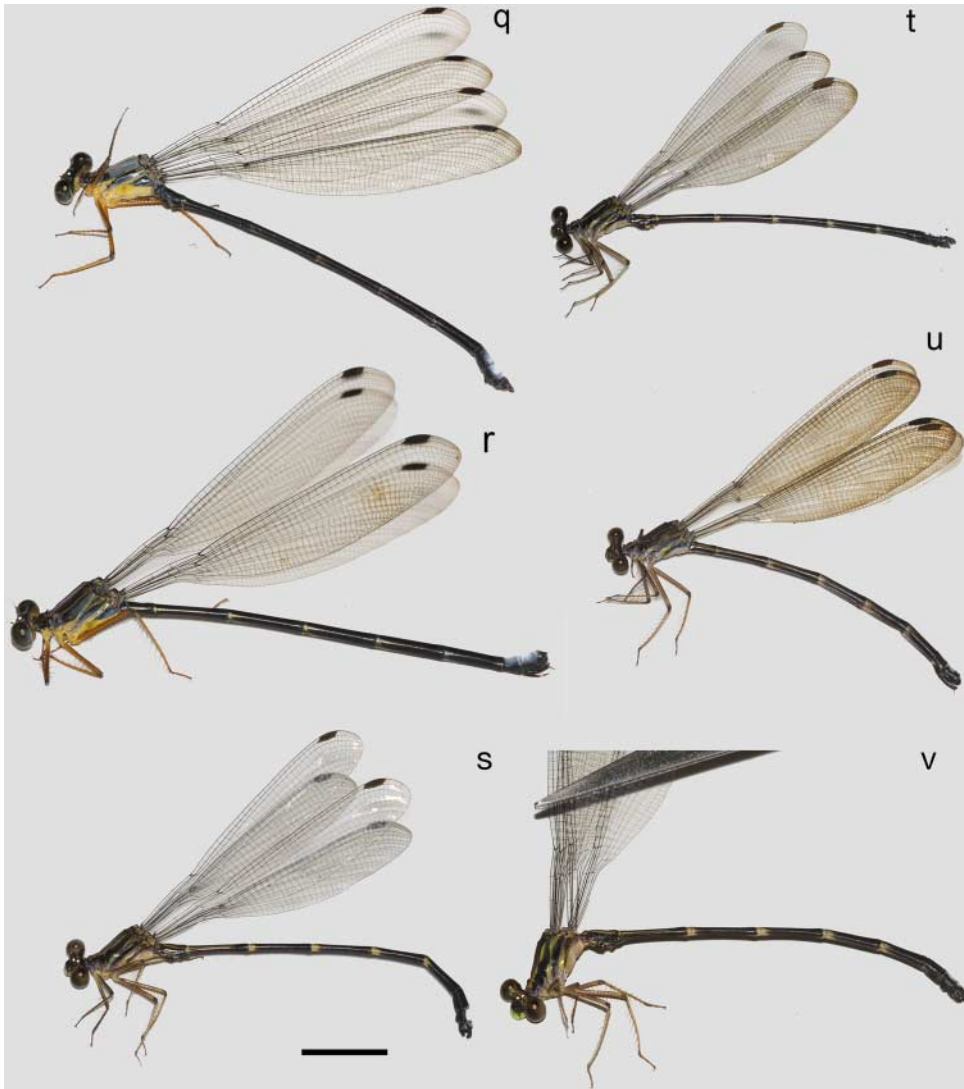


Figure 4. New Odonata species recorded for Colombia and other *Philogenia* specimens. Philogenidae: q) and r) *Philogenia monotis* Rio Nambì reserve, Nariño 17 Feb 2017, respectively male and female; s) *Philogenia sucra* Vereda la Sevilla, Cauca 25 Jan 2017; t) and u) *Philogenia raphaella* La Isla Escondida reserve, Putumayo 19 Jan 2017, respectively male and female; v) *Philogenia minteri* Vereda El Libano, Putumayo 22 Jan 2017. Photos Michele Viganò.

to 423. The number of records in the departments of Cauca, Nariño and Putumayo are increased respectively to 34, 17 and 69 (Table 2).

Discussion

Rare and/or endangered species

Of the 68 species found, 30 have been assessed by the IUCN Red List. Most are listed as Least Concern, but six of the species we recorded are under some threat status. Three are listed as Data Deficient, two as Endangered and one as Near Threatened:

Philogenia raphaella and *P. sucra*, the only Colombian endemics of the six threatened, are rediscovered after 131 and 48 years respectively, since they were first collected (Bick & Bick, 1988; Dunkle, 1986). Both are listed as Data Deficient because they were only known from their respective type localities (Bota-Sierra, Palacino, & Rache, 2016; Bota-Sierra, Palacino, Rache, & von Ellenrieder, 2016). Our records are the first since these species were described. Further, *P. raphaella* was described in 1886 from a single male labeled “Bogotá”, a catch-all locality for specimens that were collected elsewhere (Bota-Sierra & Novelo-Gutiérrez, 2017). Our record is the first to be associated with a specific locality, which fortunately falls within a protected area. *P. sucra* was only known from Caquetá department; therefore, our records from Cauca expand its range approximately 100 km to the southwest. Cueva de los Guácharos National Park lies between these two sites, and we expect *P. sucra* to occur there.

We suspect that *P. raphaella* is the senior synonym of *Philogenia reduunca* Cook, 1989. Following Calvert’s (1924) key, we easily identified our specimens as *P. raphaella*; in order to confirm we read Selys’s original description which also matches our specimens perfectly (Selys, 1886); however, reviewing Cook’s description of *P. reduunca*, we find that our specimens also match his types perfectly (Cook, 1989). Additionally, the type locality of *P. reduunca* is Yanamanaca (Napo province, Ecuador), only approximately 150 km south of Orito, where we collected our specimens. Nevertheless, the drawings of the type of *P. raphaella* by P. L. Whitycombe in Calvert’s paper are not as accurate as Cook’s illustrations for *P. reduunca*. Therefore, a revision of the holotype of *P. raphaella* in the BMNH is needed in order to clarify this issue and will be the target of our future studies.

The third data deficient species we found is *Metaleptobasis gabrielae* von Ellenrieder, 2013, a recently described species known from a single locality, Tamshiyacu-Tahuayo Reserve in Loreto department, Peru (von Ellenrieder, 2013). Our finding expands its range approximately 700 km to the northeast. Several protected areas – La Paya National Park in Colombia and the Güeppi-Sekime National Park and Ampiyacu Regional Conservation Areas in Peru – lie between these two sites, and *M. gabrielae* is likely to occur there as well.

The two species listed as Endangered were both believed to be endemic to Ecuador: *Philogenia monotis* and *Telebasis flammeola* Kennedy, 1936 (Tennessee & Mauffray, 2016a, 2016b). We discussed *P. monotis* – for which *P. tinalandia* is the junior synonym – above, and our records expand its distribution about 500 km to the north. It has now been documented in three protected areas: the Tinalandia reserve in Ecuador, the Río Ñambí Nature Reserve and Farallones de Cali National Park in Colombia. *T. flammeola* was only known from three localities in the Amazonian foothills of eastern Ecuador. In one of these areas, its habitat recently disappeared due to intensive agriculture (Tennessee & Mauffray, 2016b). Here we report its presence in Putumayo department, a northward range expansion of about 150 km; unfortunately, the site where we found it is an unprotected area also under threat from intensive agriculture.

Finally, *S. percornuta*, in a monotypic genus, is listed as Near Threatened, as it was only known from three localities on the east slope of the Andes in Peru and Ecuador. Its most recent record dates back to 1940 (von Ellenrieder, 2009); therefore, our rediscovery of the species in a protected area approximately 150 km north of its previously known distributional limit is excellent news for its conservation.

Philogenia monotis and *Philogenia tinalandia* synonymy

Kennedy (1941) described *Agnophilogenia monotis* from a female collected on 8 March 1941, at Lorena, close to Santo Domingo de los Colorados (Pacific slope of the northern Ecuadorian Andes in Pichincha province, Ecuador). Bick and Bick (1988) described *P. tinalandia* on the basis of two males collected on 13 May 1985, also near Santo Domingo de los Colorados

and only 3 km away from the type locality of *A. monotis*. von Ellenrieder (2003) examined these type specimens and showed that the characters used by Kennedy to describe the genus *Agnophilogenia* fall within the range of variation of the species of the genus *Philogenia*. She thus synonymized these genera and suggested that *P. tinalandia* was probably a junior synonym of *P. monotis*, but as neither type series included both sexes, she concluded: “whether *P. tinalandia* is a junior synonym of *P. monotis* or whether they represent separate species is a question that will be answered once a series including both males and females is collected within the area E of San Domingo de Los Colorados.” The surprise here is that the answer did not come from Santo Domingo de los Colorados, but from Colombia, where we found two new populations of this species: one located in Nariño department, at the Río Ñambi nature reserve (approximately 250 km north of the type locality), the second in Valle del Cauca department, in the Farallones de Cali National Park (approximately 500 km north of the type locality) (Figure 1). In both locations males and females were found together (some were collected while mating), the males perfectly matching the description of *P. tinalandia* and the females perfectly matching *P. monotis*, confirming that von Ellenrieder (2003) was correct. Indeed, based on the examination of the following specimens, we conclude that *P. tinalandia* is a junior synonym of *P. monotis*:

COLOMBIA: 3♀ and 2♂, Nariño department, Barbacoas municipality, Río Ñambi Reserve, 1.29853°N 78.08317°W, 1400 m asl, 17 February 2017, M. Vigano, A. Corso & O. Janni Leg.; 1♀ and 1♂, Valle del Cauca department, Dagua municipality, Farallones de Cali National Park, 3,57493°N 76, 89015°W, 956 m asl, 9 May 2017, J. Sandoval Leg.

The data collected on this expedition are a significant contribution to the knowledge of the dragonfly diversity in Colombia. We strongly encourage researchers interested in Odonata and other taxonomic groups to contribute their distributional records, as this information remains limited for many areas of Colombia and for many taxa. Better and more complete data is vital for improving assessments of conservation status and the implementation of conservation actions.

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