Odonatologica 25(1): 1-15 *March 1, 1996*

FEMALES OF THE GENUS *TELEBASIS*, WITH A DESCRIPTION OF *T. BASTIAANI* SPEC. NOV. FROM VENEZUELA (ZYGOPTERA: COENAGRIONIDAE)

G.H. BICK[1] and J.C. BICK[1]
1928 SW 48th Avenue, Gainesville, Florida 32608, United States

Received August 4, 1995 / Reviewed and Accepted October 1, 1995

T. bastiaani sp.n. (holotype ♂, de Montecal, Apure State, Venezuela, 20-VIII-1983, IZA; allotype ♀, San Silvestre, Barinas State, Venezuela, 23-XII-1957, IZA) is described. Taxonomic differentiation of femals of 34 *Telebasis* spp. is made practical with an artificial key, tabular summary, and descriptions of posterior prothoracic lobe and mesostigmal lamina of each.

INTRODUCTION

After our (1995) review of *Telebasis*, additional specimens and continuing study unearthed a new species, described herein in alphabetical sequence, and showed that determinations of all known females of the genus could be made practical. This review includes: (1) an artificial key to 34 species, emphasizing the more striking and readily visible characteristics, (2) Table I in which 5 characteristics of the same 34 species can be quickly compared, (3) species descriptions featuring for each the posterior prothoracic lobe and the mesostigmal lamina. This section adds 2 species which may be invalid, *T. coccinea* (Selys), *T. erythrina* (Selys) and 4, *T. flammeola* Kennedy, *T. fluviatilis* St. Quentin, *T. livida* Kennedy and *T. versicolor* Fraser, which are unknown or too poorly known for keying and tabulation.

This paper should be used with our (1995) review giving a distribution table and other details not repeated here. We now list only numbers of females examined, although their determinations were often confirmed by association with males. Complete collection data and deposition of all specimens examined are available from the authors.

[1] Research Associate, Florida State Collection of Arthropods, Gainesville, Florida, United States

KEY TO *TELEBASIS* FEMALES

1 Prothoracic horns obvious, extending anteriorly from hind lobe 2
1' These horns absent or minute and difficult to detect 18
2 Rear of head half black, half pale; epicranium with 3 transverse orange bands ..... ***sanguinalis***
2' Head without the above combination of colors 3
3 Rear of head mostly black; carina dark 4
3' Rear of head mostly pale; carina either dark or pale 12
4 Abdomen 35 mm, hind wing 24 mm ..... ***garleppi***
4' Abdomen 24 to 31 mm 5
5 Humeral suture with a distinct, narrow, black line; mesinfraepisternum with a C-shaped black mark ..... ***aurea***
5' Humeral suture and mesinfraepisternum not as above 6
6 Mesepimeron mostly black; West Indies 7
6' Mesepimeron mostly pale 8
7 Prothoracic horns extend 1/2 or more the length of the middle prothoracic lobe ..... ***vulnerata***
7' Horns extend 1/3 or less the length of the middle prothoracic lobe ..... ***dominicana***
8 Prothoracic horns stout, apically rounded, reaching almost to the anterior margin of the middle lobe ..... ***abuna***
8' Prothoracic horns reach half or less the length of the middle lobe 9
9 Dorsal surface of middle prothoracic lobe almost entirely black ..... ***digiticollis***
9' Dorsal surface of middle prothoracic lobe mostly brown 10
10 Labrum, anteclypeus, postclypeus red-brown ..... ***carota***
10' These parts yellow-brown 11
11 Mesostigmal lamina postero-medially strongly elevated ..... ***watsoni***
11' Lamina not elevated postero-medially ..... ***limoncocha***
12 Carina dark ..... ***coccinata***
12' Carina pale 13
13 Posterior part of mesepisternal black widened laterally 14
13' Posterior part of mesepisternal black not so widened 15
14 Horns do not extend over middle prothoracic lobe; known only from Baja, Mexico (specimens not seen; data from WILLIAMSON & WILLIAMSON, 1930) ..... ***incolumis***
14' Horns extend over middle prothoracic lobe; widespread, southern US to Colombia and Venezuela ..... ***salva***
15 Abdomen 18 mm or less ..... ***carminita***
15' Abdomen 23-27 mm 16
16 Wings flavescent ..... ***theodori***
16' Wings hyaline 17
17 Epicranium posteriorly with large, round, paired orange spots connected by an occipital band; prothoracic horns extend 1/2 or more the length of the mid lobe ..... ***corallina***
17' Epicranium with a narrow, occipital, pale band terminating at each end with a small orange spot; prothoracic horns extend only 1/3 or less the length of the mid lobe ..... ***carmesina***
18 Rear of head half black, half pale 19
18' Rear of head either mostly black or mostly pale 21
19 Epicranium with 3 transverse orange bands ..... ***sanguinalis***
19' Epicranium not as above 20
20 Abdomen 24-25 mm; middle lobe of prothorax pale brown with a black spot on each side ..... ***griffinii***
20' Abdomen 31 mm; middle prothoracic lobe not as above ..... ***garrisoni***
21 Rear of head mostly black 22

21' Rear of head mostly pale 29
22 Posterior prothoracic lobe with middle area posteriorly produced and indented; lateral wing strongly elevated, as an erect plane, medially high and sloping downward laterally ..... ***racenisi***
22' Posterior prothoracic lobe various but not with all of the above characteristics 23
23 Carina dark; abdomen 24-25 mm 24
23' Carina pale; abdomen 16-18 mm 27
24 Anterior margin of mid dorsal carina with a small elevated projection ..... ***collopistes***
24' Mid dorsal carina without such a projection 25
25 Pterothorax and abdomen strikingly blue and black; epicranium with a curved pale stripe from median ocellus to each antenna ..... ***dunklei***
25' Pterothorax and epicranium not as above 26
26 Middle lobe of prothorax pale brown with a black spot on each side ..... ***griffinii***
26' Middle lobe of prothorax brown without lateral black spots ..... ***selaopyge***
27 Mesostigmal lamina postero-medially with a conspicuous, black, elongate, dorsal, elevated projection ..... ***filiola***
27' Mesostigmal lamina without such a projection 28
28 Black of abdominal segment X transversely divided by a narrow pale band ..... ***inalata***
28' Abdominal segment X not marked as above; Argentina only ..... ***willinki***
29 Carina very dark bronze or black 30
29' Carina pale 33
30 In mature specimens, abdominal segments VIII-X mostly reddish; metepisternum, metepimeron and first 2 abdominal segments laterally blue ..... ***rubricauda***
30' Without the above color combination 31
31 With a black depression at anterior end of mid-dorsal carina ..... ***boomsmae***
31' Without such a depression 32
32 Compound eye bordered postero-medially by a black band which extends medially a short distance; mesostigmal lamina not bordered posteriorly by a conspicuous elevation ..... ***bastiaani***
32' Compound eye not so bordered, but occiput with an orange band connecting round, orange spots; mesostigmal lamina bordered posteriorly by a conspicuous elevation (epaulette) .. ***demararum***
33 Posterior part of mesepisternal black widened laterally 34
33' Mesepisternal black not so widened 35
34 Horns do not extend over middle prothoracic lobe ..... ***incolumis***
34' Horns extend over middle prothoracic lobe ..... ***byersi***
35 Mesepisternal black covers about 75% of its width; abdomen 22 mm. (Specimens not seen; data from MACHADO, 1956) ..... ***paraensei***
35' Mesepisternal black covers 13% or less of its width; abdomen 25-26 mm 36
36 Middle lobe of prothorax with a lateral depression on each side ..... ***isthmica***
36' Middle lobe of prothorax without such a depression ..... ***brevis***

DESCRIPTIONS OF SPECIES

TELEBASIS ABUNA BICK & BICK

We examined the allotype ♀ and 2 ♀ paratypes, all damaged.

Posterior Prothoracic Lobe (PPL). Dark brown, middle area produced posteriorly, scarcely set apart from the slightly elevated lateral wings.

Mesostigmal Lamina (ML). Broadly triangular, black touched with pale along the posterior margin, with a postero-medial elevation; without a posterior bordering depression.

TELEBASIS AUREA MAY

We studied the allotype female.

PPL. – Black middle area slightly produced posteriorly, differentiated from pale, strongly elevated wings.

ML. – An elongate triangle, yellow-brown, a black band across middle, with a posterior bordering black depression.

MAY (1992) described and figured the depression just laterad of the terminus of each prothoracic horn. We noted this depression in *coccinata, garleppi, isthmica* as well as in *aurea.*

TELEBASIS BASTIAANI SP. NOV.

M a t e r i a l. – **Holotype** ♂: VENEZUELA, Apure State, de Mantecal, 20-VIII-1983, J. De Marmels leg., IZA. – **Allotype** ♀: VENEZUELA, Barinas State, San Silvestre, 23-XII-1957, J. Racenis leg., IZA. – **Paratypes** (9 ♂, 2 ♀): VENEZUELA, Guarico State, Calabozo, 20-28-V-1985, Menke & Carpenter leg., 1 ♂, USNM. All following are VENEZUELA and IZA: Apure State, de Mantecal, 18--VIII-1983, J. De Marmels leg., 2 ♂; La Trinidad, 29-VIII-1966, Ojasti, leg., 1 ♂; – Barinas State, San Silvestre, 20-XII-1957, J. Racenis leg., 1 ♂; – Guarico State, Corozo Pando, 1, 2-VIII-1955, J. Racenis leg., 3 ♂, 1 ♀; – Portoguesa State, Guanare, 20-VI-1982, M. Moratorio leg., 1 ♂; 18-VIII-1983, J. De Marmels leg., 1 ♀.

E t y m o l o g y. – *T. bastiaani* for the given name of our friend, Dr Bastiaan K i a u t a, in honor of his many contributions to Odonatology, as Editor, Abstracter, and guiding spirit of Societas Internationalis Odonatologica.

MALE (**holotype**). – H e a d. – Epicranium mostly black; pale streaks between lateral ocelli and antennae; frons, clypeus, labrum blue.

T h o r a x. – Prothorax. – Anterior, middle and hind lobes dorsally black, middle lobe laterally pale.

Pterothorax. – Mesepisternum golden, bounded by two prominent black bands, one along the mid dorsal carina, one along the humeral suture; remainder of pterothorax blue.

Legs. – Pale yellow, femora streaked with black.

Wings. – Pterostigma brown, covering 1 cell; postnodals 10, 10 (f.w.), 9, 9 (h.w.); R3 separates from R2 at 5, 5 (f.w.), 4, 4 (h.w.).

A b d o m e n. – I mostly blue; II dorsally black, laterally blue; III-VII dorsally black expanded apically, laterally pale; VIII, IX blue, X dorsally black, laterally pale.

Appendages. – Cercus brown, apex darker, truncate, with 2 minute, ventral teeth, 0.27 mm, shorter than X, medially with numerous, short, white hairs, cerci not contacting dorso-basally; paraproct brown, 0.2 mm, apically rounded and curving dorsad.

M e a s u r e m e n t s (in mm). – Abd. 27, h.w. 17.

FEMALE (**allotype**). – H e a d. – Dorsally pale brown, black within ocellar tri-

angle, a black band borders each compound eye posteriorly and extends medially along occiput, rear of head pale.

T h o r a x. – Prothorax. – Without horns; anterior lobe dark brown, mid and hind lobes light brown. Posterior prothoracic lobe (PPL) with middle area posteriorly produced, not clearly set apart from the slightly elevated wings.

Pterothorax. – Mid dorsal carina narrowly black, rest of mesepisternum red--brown; remainder of pterothorax pale brown.

Mesostigmal lamina (ML). – Not triangular, elongate; entirely pale, with a posterior bordering, black depression.

Legs. – Pale yellow, femora inconspicuously black-streaked.

Wings. – Pterostigma pale brown, covering 1 cell; postnodals 11, 11 (f.w.), 9, 10 (h.w.); R3 separates from R2 at 5th postnodal in all wings.

A b d o m e n. – Dorsally entirely pale brown; genital valve (1.0 mm) brown, extending to apex of X.

M e a s u r e m e n t s (in mm). – Abd. 28, h.w. 17.

VARIATION. – M a l e s. – Abd. 25-29, h.w. 16-18; postnodals 9-11 (f.w.), 8-9 (h.w.). Although abdominal appendages are similar in all males, there is a great variation in extent of mesepisternal black, in color of abdominal segments VIII, IX, and in color of wing membrane. The mesepisternal black of 2 paratypes, like the holotype, is about 75% of the sclerite, of 5 others almost completely black, of 1 only 11%, and not determined for 1. Abdominal segments VIII and IX are blue in 4, dark brown, gray, or black in 5. The wings are flavescent in 3 specimens from Guarico, Venezuela, but hyaline in all others including 1 other from Guarico. The variations in mesepisternal color are similar to those JOHNSON (1972) reported for the Nearctic *Argia apicalis* (Say).

F e m a l e s. – The 1 paratype from Guarico has flavescent wings like the 3 Guarico males mentioned above, but unlike the female allotype from Barinas State.

REMARKS. – Among males, only *bastiaani, demararum* and *dunklei* lack abdominal red. There is no possibility of confusing the long cercus of *demararum* (BICK & BICK, 1995, fig. 1) with the quite short one of *bastiaani*. However, although the *dunklei* and *bastiaani* appendages are similar in general configuration, the two can be spotted most readily by color of rear of head, pale in *bastiaani*, black in *dunklei*. Also, the *dunklei* cercus has a pale process along its medio-ventral surface whereas *bastiaani* bears numerous short hairs medially on its cercus.

T. bastiaani females are similar to *boomsmae, demararum, rubricauda* in having rear of head pale, mid dorsal carina black, and in the absence of prothoracic horns (Tab. I). In addition to differences among these given in key and table, the following are added: *bastiaani* lacks the depression at the anterior end of the mid dorsal carina as in *boomsmae* and the epaulette of *demararum*.

TELEBASIS BOOMSMAE GARRISON

We examined a paratype ♀ (FSCA) from Caracol, Belize.

PPL. – Entirely pale, mid area posteriorly produced, emarginate, lateral wings scarcely differentiated and very slightly elevated.

ML. – Pale, except at the postero-medial angle; posterior margin elevated, without a posterior bordering depression.

The black, mid dorsal carina ends anteriorly in a depression as GARRISON (1994) described and figured.

TELEBASIS BREVIS BICK & BICK

We examined the allotype ♀, 6 ♀ paratypes.

PPL. – Brown, middle area narrow, not posteriorly produced; lateral wings set apart and medially strongly elevated.

ML. – Pale, triangular, posterior margin strongly elevated laterally, without a bordering posterior depression.

The only pterothoracic black, averaging 9% of the mesepisternum, is near but does not touch the pale carina. This narrow, black band and pale carina is shared only with *isthmica*.

TELEBASIS BYERSI WESTFALL

We examined many ♀ paratypes.

Both sexes of *byersi, incolumis* and *salva* have the posterior part of the mesepisternal black widened laterally. Males are difficult to separate but females are readily separated as follows:

1	Without prothoracic horns	***byersi***
1'	With prothoracic horns	2
2	Horns extend over middle lobe	***salva***
2'	Horns do not reach middle lobe	***incolumis***

PPL. – Middle area black, posteriorly produced, its margin pale, with a low transverse ridge; elevated, pale lateral wings overlap middle area.

ML. – Black, broadly triangular, with pale medial and anterior margins and with a small black depression at the posterior border.

TELEBASIS CARMESINA CALVERT

We (1995) gave the first female description from a pair.

PPL. – Brown, middle area wide and slightly produced posteriorly, lateral wings set apart and elevated.

ML. – Broadly triangular, dark brown, with a black color patch at the lateral apex but without a posterior, black bordering depression.

Table I

Summary of characteristics of *Telebasis* females. Prothoracic horns present (1/2, 1/3, 2/3 length of mid lobe or minute, m) or absent. Dark may be black, dark bronze, or dark iridescent green. Percent mesepisternal black is average of 3 specimens of each species unless otherwise noted

Species	Length mm		Rear of head, mostly		Prothoracic horns		Middorsal carina		Mesepi-sternum
	HW	Abd.	Black	Pale	Pres.	Abs.	Dark	Pale	% dark
abuna B & B	16	24	x		2/3		x		60
aurea May	21	29	x		2/3		x		52 (1)
bastiaani sp.n.	17	28		x		x	x		11 (2)
boomsmae Garrison	18	28		x		x	x		10 (1)
brevis B & B	16	26		x		x		x	9
byersi Westfall	15	23		x		x		x	55
carmesina Calvert	16	23		x	1/3			x	50 (1)
carminita Calvert	12	18		x	1/3			x	45
carota Kennedy	22	30	x		1/3		x		55
coccinata Calvert	16	23		x	1/2		x		51 (2)
collopistes Calvert	16	25	x			x	x		47
corallina (Selys)	16	26		x	1/2			x	27
demararum (Wmsn.)	17	26		x		x	x		19
digiticollis Calvert	17	23	x		1/3		x		62
dominicana (Selys)	18	27	x		1/3		x		94
dunklei B & B	16	24	x			x	x		43
filiola (Perty)	13	16	x		m			x	52
garleppi Ris.	25	33	x		1/2		x		65 (1)
garrisoni B & B	21	31	½	½		x	x		36
griffinii (Martin)	17	25	x			x	x		50 (1)
inalata (Calvert)	13	18	x		m			x	87
incolumis Wmsn. & Wmsn. (not seen)	15	24		x	m			x	50
isthmica Calvert	18	25		x		x		x	13
limoncocha B & B	17	28	x		1/3		x		57
paraensei Machado (not seen)	15	22		x		x		x	75
racenisi B & B	19	25	x			x	?		?
rubricauda B & B	17	27		x		x	x		15,34
salva (Hagen)	15	22		x	1/3			x	40
sanguinalis Calvert	16	24	½	½	m-1/3			x	33
selaopyge De Marmels	17	25	x			x	x		44 (1)
theodori (Navas)	20	27		x	1/2			x	18
vulnerata (Hagen)	20	29	x		1/2-2/3		x		86
watsoni B & B	18	26	x		1/3-1/2		x		46
willinki Fraser	13	17	x		m			x	57

TELEBASIS CARMINITA CALVERT

We (1995) gave the first description of the female from 3 specimens.

PPL. – Entirely yellow-brown; middle area wide, produced posteriorly; lateral wings slightly elevated.

ML. – Black, posterior border pale, without a posterior bordering depression.

This is one of the four (*filiola, inalata, willinki*) smallest species.

TELEBASIS CAROTA KENNEDY

KENNEDY (1936) illustrated color pattern, hind prothoracic lobe, mesostigmal lamina. GARRISON (1991b) contrasted *theodori* with *carota*, figuring the hind lobe and mesostigmal lamina of the latter. We examined 11 female paratypes.

PPL. – Brown; middle area wide, posteriorly produced; lateral wings slightly elevated.

ML. – Broadly triangular, mostly black, but posterior and anterior margins partly pale, a conspicuous, black elevated projection at the postero-medial angle, posterior margin bordered by a black depression.

TELEBASIS COCCINATA CALVERT

We (1995) gave the first ♀ description based on 2 pairs.

PPL. – Brown, middle area and wings evenly rounded, middle area not posteriorly produced, wings not elevated.

ML. – Medially black, laterally pale, a conspicuous, elevated, black projection at postero-medial corner; without a posterior, bordering depression.

On the middle prothoracic lobe is a round depression as in *aurea*.

TELEBASIS COCCINEA (SELYS)

We again exclude this species because neither types nor specimens have been found.

TELEBASIS COLLOPISTES CALVERT

MAY (1992) included *collopistes* females in his key for Mexico and Central America; GARRISON (1994) figured the ♀ thorax, contrasting it with *boomsmae*, and we (1995) verified this. We studied 3 ♀.

PPL. – Anterior half black, posterior half pale and evenly rounded, middle and lateral areas not differentiated, the entire margin scarcely elevated.

ML. – Broadly triangular, black except lateral apex, without a posterior bordering depression.

A distinctive feature is a black elevation at the anterior end of the mid dorsal carina (GARRISON, 1994, fig. 4).

TELEBASIS CORALLINA (SELYS)

The female was included in the original description. MAY (1992), BICK & BICK (1995) record unusual thoracic features. We studied 8 unpaired, 3 paired ♀.

PPL. – Tan; wide middle area slightly produced posteriorly; lateral wings slightly elevated.

ML.– Triangular, mostly pale, lateral apex black (color pattern varies), without a posterior bordering depression.

Postero-laterad of the lamina and separated from it is an elevated, mesepisternal protuberance which we consider the epaulette described by BALINSKY (1957) and PINHEY (1964) for *Pseudagrion* and noted for *Telebasis* by Selys, May, Bick & Bick.

Most specimens of *corallina*, like *paraensei* (MACHADO, 1956), have paired black spots on the rear of the head; otherwise these species have little in common.

TELEBASIS DEMARARUM (WILLIAMSON)

The original description, in *Aeolagrion*, included the female; DUNKLE (1991) suggested and we (1995) agreed that *demararum* should be a *Telebasis*. We studied 7 ♀.

PPL. – Pale brown; middle area posteriorly produced, with 2 small dorsal arched elevations; lateral wings strongly elevated and overlapping the middle area.

ML. – Pale, triangular, posterior margin concave and without a bordering depression.

The lamina is closely bordered posteriorly by a black epaulette, which in turn is bordered by a small black depression. CALVERT (1948) and BICK & BICK (1995) detailed this characteristic.

TELEBASIS DIGITICOLLIS CALVERT

The species, described from a ♀, included a figure of the prothorax. MAY (1992) keyed the ♀ which we (1995) compared with *griffinii* and *limoncocha* from an examination of 29 *digiticollis* females.

PPL. – Brown, middle area not posteriorly produced; lateral wings slightly elevated and scarcely set apart from middle area.

ML. – Narrowly triangular, black except lateral apex; with a black bordering depression.

TELEBASIS DOMINICANA (SELYS)

The ♀ was included in the original description. KLOTS (1932) added details, and GARRISON (1986) illustrated the ♀ prothorax. We examined 64 unpaired, 7 paired ♀.

PPL. – Mostly dark but posterior and lateral margins pale; middle area narrow, not extending as far posteriorly as the well-elevated, lateral wings.

ML. – Triangular; anteriorly black, posterior margin pale and strongly elevated; with a small, posteriorly bordering black depression.

The mesepisternum and mesepimeron of the West Indian species, *dominicana* and *vulnerata*, are almost entirely black, the metepisternum partly so, making females of these 2 the blackest of all *Telebasis* studied. The prothoracic horns of *dominicana* are not uparched and are shorter (covering 1/3 or less of the middle lobe) than the sometimes uparched ones of *vulnerata*.

TELEBASIS DUNKLEI BICK & BICK

We studied the allotype ♀, 1 unpaired, 2 paired ♀ paratypes, all acetone treated and in very good color.

PPL. – Medially dark brown, laterally blue; middle area slightly overlapped by the scarcely elevated lateral wings which are notched at their lateral apices.

ML. – A plain blue triangle; near, but separate from the postero-medial border of the lamina is a black, elevated epaulette, followed by a small, black depression.

TELEBASIS ERYTHRINA (SELYS)

As in BICK & BICK (1995) *erythrina* is excluded because we still have located neither types nor any specimens.

TELEBASIS FILIOLA (PERTY)

SELYS (1876), considering the Perty description very vague, gave details for both sexes; CALVERT (1902), MAY (1992), BICK & BICK (1995) described the distinctive female mesostigmal lamina. We examined 28 unpaired, 1 paired ♀.

PPL. – Black except posterior margin and lateral apex; non-elevated lateral wings only slightly differentiated from middle area. Horns are minute, easily overlooked tubercles.

ML. – Broadly triangular, black except for lateral apex, without a posterior bordering depression, and with the largest postero-medial elevated projection of any female *Telebasis*. Calvert considered the lamina developed to a rare degree, reminiscent of *Argia*. This projection readily separates *filiola* females from the otherwise similar *inalata* and *willinki*.

TELEBASIS FLAMMEOLA KENNEDY

The female is unknown. We saw no ♀ specimens.

TELEBASIS FLUVIATILIS ST. QUENTIN

We saw no specimens, and ST. QUENTIN's (1960) description gives few details for females. From

his brief notes we extract the following: rear of head pale, without horns, 1/4 of mesepisternum black, ovipositor not surpassing segment X.

TELEBASIS GARLEPPI RIS

MAY (1992) and BICK & BICK (1995) give descriptive notes for females. We examined 1 pairing ♀.

PPL. – Dark brown with a pale margin; middle area produced posteriorly; wings, adjacent to the middle area, are strongly elevated.

ML. – Elongate, laterally pale with a medial, black depression.

On the middle prothoracic lobe, laterad of the terminus of each horn, is a round depression as in *aurea*. *T. garleppi* has the longest abdomen (33 mm) of all *Telebasis* (Tab. I).

TELEBASIS GARRISONI BICK & BICK

We studied the allotype ♀ and 10 ♀ paratypes.

PPL. – Entire lobe plain, light brown and slightly elevated; lateral wings and minutely notched middle area continuous.

ML. – Broadly triangular, black with pale margins, without the usual posteriorly bordering depression but with a small round black depression between lamina and carina.

TELEBASIS GRIFFINII (MARTIN)

CALVERT (1902) gave the first ♀ description. MAY (1992) included females in his key for Mexico and C. America. BICK & BICK (1995) could not verify Calvert's and PAULSON's (1982) records from Mexico. We now have 1 ♀ from Topila, Vera Cruz, Mexico, which is near Calvert's Teapa, Mexico locality. It agrees with Calvert's description: prothorax brownish, a black spot on each side of the mid lobe, a central black spot on the hind lobe.

PPL. – Although ♂ ♂ of *griffinii* and *digiticollis* have been confused, horns are absent in our *griffinii* ♀, present in all *digiticollis* females, a difference stated by Calvert and May. In our one female, the lobe is plain, the black middle area scarcely set apart from the pale, slightly elevated lateral wings.

ML. – Damaged, triangular, medially black, laterally pale, with a posteriorly bordering black depression.

TELEBASIS INALATA (CALVERT)

Described as *Aeolagrion inalatum* from one seemingly lost female which DUNKLE (1991) and GARRISON (1991a) suggested may be a *Telebasis*. BICK & BICK (1995) redescribed the female, designated a neotype, and described a male pairing with it.

PPL. – Black, except for narrow pale margins, middle area not produced and scarcely set apart from the slightly elevated wings. The horns are minute and diffi-

cult to detect.

ML. – A somewhat elongate, black triangle with the posterior margin concave and with a posteriorly bordering black depression.

TELEBASIS INCOLUMIS WILLIAMSON & WILLIAMSON

The original description included 8 ♀ from Baja, Mexico, still the only known locality. We saw no ♀.

The WILLIAMSONs (1930) and MAY (1992) point out that the prothoracic horns of *incolumis* do not extend over the middle lobe as in *salva*.

TELEBASIS ISTHMICA CALVERT

All that is known of females is the MAY (1992) key and our (1995) statement that horns are absent. We examined 9 ♀.

PPL. – Pale, middle area posteriorly produced, the differentiated wings strongly elevated.

ML. – Brown, triangular, posterior margin elevated and laterally pale, medially black, without a posterior bordering depression.

Laterally, on the mid prothoracic lobe, is a large, round depression as MAY (1992) described for *aurea*. This depression separates the *isthmica* female from the otherwise similar *brevis*.

TELEBASIS LIMONCOCHA BICK & BICK

We studied allotype ♀, 11 unpaired, 5 paired ♀ paratypes.

PPL. – Illustrated and briefly described by BICK & BICK, (1995), brown, middle area produced posteriorly, separated from the strongly elevated lateral wings. This species differs from *digiticollis* which has only slightly elevated lateral wings.

ML. – Triangular, general surface black, margins pale, with a posterior bordering, black depression.

TELEBASIS LIVIDA KENNEDY

The ♀ is undescribed, but BICK & BICK (1995) stated that one ♀ in the R.W. Garrison collection lacks horns.

TELEBASIS PARAENSEI MACHADO

The original description included 1 ♀; because we saw none, the tabular summary and key are based on MACHADO (1956).

TELEBASIS RACENISI BICK & BICK

The allotype ♀ and 2 ♀ paratypes were studied.

PPL. – Brown, middle area posteriorly produced, medially indented and clearly set apart from the erect lateral wings which are distinctive, very strongly tilted upward and wall-like, the dorsal edge high medially and sloping downward laterally.

ML. – Small, narrowly triangular, entirely pale, without a posterior bordering depression.

Our poorly preserved specimens do not permit an accurate assessment of extent of mesepisternal black and color of mid dorsal carina.

TELEBASIS RUBRICAUDA BICK & BICK

The allotype ♀, 5 unpaired, 1 paired ♀ paratypes were studied.

PPL. – Dark brown; middle area slightly produced posteriorly, with small, arched, paired elevations, so that the middle area appears double; lateral wings hardly elevated and scarcely differentiated from middle area.

ML. – An elongate pale triangle with a concave posterior margin bordered by a black depression.

Abdominal segments VII-X are red-brown, the abdomen and most of the pterothorax laterally blue, making female *rubricauda* very colorful, second only to *dunklei*.

Four females from Montecal, Venezuela, collected with a male *rubricauda*, averaged only 15% mesepisternal black, whereas those from Abuna, Brazil (2) and Iquitos, Peru (1), including pairs, averaged 34% (Tab. I). Also the pterothorax and anterior abdominal segments of Venezuelan females are less strikingly blue, the posterior abdominal segments less strikingly red. We do not have corresponding contrasts for males. The noted differences may relate only to age and/or preservation.

TELEBASIS SALVA (HAGEN)

WILLIAMSON & WILLIAMSON (1930) compared and figured the prothorax of *salva* and *incolumis*; WESTFALL (1957) that of *salva* and *byersi*. MAY (1991) separated *salva* and *incolumis*. We studied 5 unpaired, 5 paired ♀ *salva*.

PPL. – Black, but borders pale; middle area wide, scarcely differentiated from the slightly elevated lateral wings.

ML. – Black, anterior and medial margins pale; elongate, triangular, posterior margin slightly concave and not bordered by a depression.

TELEBASIS SANGUINALIS CALVERT

The ♀ was included in the original description. Ten unpaired, 3 paired ♀ were studied.

PPL. – Light brown; middle area posteriorly produced; lateral wings distinct and strongly elevated as BICK & BICK (1995) recorded.

ML. – Broadly triangular, mostly pale, elevated medial margin black; posterior margin concave and without a bordering depression. Postero-laterad of the lamina is a black epaulette.

TELEBASIS SELAOPYGE DE MARMELS

DE MARMELS (1989) described the ♀ with illustrations of the hind prothoracic lobe and the ovipositor. We examined 1 ♀ paratype.

PPL. – Brown; wide middle area slightly produced posteriorly; lateral wings arched medially. DE MARMELS (1989) recorded 2 oblique, lengthened tubercles on the posterior prothoracic lobe which BICK & BICK (1995) called minute horns. Subsequent examination of our only ♀, a paratype, convinces us that horns are absent.

ML. – Elongate, medially black, laterally pale, with a postero-medial black elevation (BICK & BICK, 1995), but without a posterior bordering depression.

TELEBASIS THEODORI (NAVAS)

GARRISON (1991b) redescribed the species figuring the female thorax and we (1995) summarized the taxonomic history. We examined the holotype ♀ and 3 ♀.

PPL. – Yellow-brown; middle area and scarcely elevated lateral wings slightly differentiated.

ML. – Triangular, mostly pale but medial margin and postero-medial corner black; posterior and medial margins elevated, the latter with a posterior knob-like elevation; with a posteriorly bordering depression.

TELEBASIS VULNERATA (HAGEN)

HAGEN (1861) briefly described a paired ♀, SELYS (1876), KLOTS (1932) detailed both sexes, and GARRISON (1986) gave thoracic drawings to contrast *vulnerata* and *dominicana*. We examined 5 paired, 19 unpaired ♀.

PPL. – Middle area black, wings and posterior margin pale; middle area narrow, posteriorly produced, almost continuous with the medially arched lateral wings.

ML. – Narrowly triangular, medially black except for swollen lateral half of posterior border; with a posterior bordering black depression.

TELEBASIS WATSONI BICK & BICK

Included in our (1995) description of the species was the allotype ♀ and 6 ♀ paratypes.

PPL. – Brown, middle area medially notched and not differentiated from lateral wings, the whole posterior margin elevated.

ML. – Broadly triangular, black except lateral apex, postero-medial margin well elevated and bordered by a black depression.

TELEBASIS WILLINKI FRASER

FRASER (1948) gave a few details for his 1 ♀ and we (1995) only noted minute prothoracic horns. We examined 24 ♀, most in poor condition.

PPL. – Mostly black, pale bordered; middle area posteriorly produced; lateral wings slightly elevated, scarcely set apart from middle area. Horns are minute and difficult to detect.

ML. – Mostly black, anterior and posterior margins pale; postero-medial margin well elevated and with a bordering black depression.

ACKNOWLEDGEMENTS

We thank the following for suggestions and loan of specimens: S. BROOKS (BMNH), J. DE MARMELS (IZA), S. DUNKLE, O. FLINT (USNM), R. GARRISON, W.F. MAUFFRAY (IORI), M. O'BRIEN (UMMZ), M. WESTFALL (FSCA).

REFERENCES

For all references except the following cf. BICK & BICK, 1995

BALINSKY, R., 1957. Classification of the females in the genus Pseudagrion (Odonata) based on thoracic structures. *J. ent. Soc. sth. Afr.* 20(2): 230-294.

BICK, G. & J. BICK, 1995. A review of the genus Telebasis with descriptions of eight new species (Zygoptera: Coenagrionidae). *Odonatologica* 24(1): 11-44.

JOHNSON, C., 1972. An analysis of geographical variation in the damselfly, Argia apicalis (Zygoptera: Coenagrionidae). *Can. Ent.* 104: 1515-1527.

PINHEY, E., 1964. A revision of the African members of the genus Pseudagrion Selys (Odonata). *Revta Ent. Moçamb.* 7(1): 5-196.