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A Survey of the Dragonflies (Odonata) of South Africa. Part 1.

by

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A detailed check-list, with references to genera and species, is presented of the Zygoptera known in the region south of the Limpopo River, and including South West Africa/Namibia. The region embraces the Republic of South Africa, Swaziland and Lesotho. Previous papers on this area are reviewed, together with check-lists by the author for territories north of the Limpopo. A total of 162 species has been recorded from this region. A selection of data on specimens in many Institutions and some private collections is given, as well as type depositions and brief notes on ecology and distribution.

This paper completes the series of surveys of southern African territories (with the exception of Angola), from the Cape Province to Zambia and Malawi. The region reviewed here is of particular interest for several reasons: there is a remarkable number of species described from the region; there are relict Gondwana elements; the number of species of Zygoptera is unusually close to that of the Anisoptera.

INTRODUCTION

Revisional papers on the Odonata of this region, loosely termed here the South African region, have covered major portions but lacked data for general distribution. There was Ris (1921), an invaluable introduction to south African dragonflies, followed by Barnard's (1937) important addition to the Cape fauna. Pinhey (1951) covered the area south of the Zambesi, followed by a detailed Catalogue (Pinhey, 1962) of the Afrotropical region. Swedish expeditions produced a number of early records, culminating in Brinck's (1955) detailed report of the Lund University expedition and the ecology of the sites at which Odonata had been collected. Balinsky's (1961) paper on Zululand, Harrison (1964) on the Cape, Hersalek (1969) on a few species from the eastern Cape, Allanson, Bruton and Hart (1974) on species from Lake Sibaya, Zululand and information from museums and private collectors provided the information on which this survey is based.

During the past thirty years many new species have been described, other species from elsewhere have been found here, and there have been changes in names at different taxonomic levels and in a few earlier identifications. I have published regional reviews of the following territories to the north: Pinhey (1966b, 1979) Malawi, (1976b) Botswana, (1981a) Moçambique, and (1984) for Zimbabwe and Zambia. Now, with data available from many sources, it seems opportune to provide a detailed account of adult dragonflies in the territories of 'South Africa', those countries south of the Limpo-

po River, the Republic of South Africa, Swaziland, Lesotho (formerly Basutoland), Transkei and also Namibia (South West Africa) which extends up to the Cunene River on the southern border of Angola and stretches an arm eastwards, the Caprivi Strip.

Original references are quoted for all genera and species. Essential synonymy and infra-specific taxa are given where necessary, but subfamilies and subgenera are excluded, since this is not a taxonomic revision. Type-species and the depositions of types are, however, recorded as far as possible, but as will be seen types were not designated in many of the species described by early specialists, especially de Selys Longchamps.

General distribution of each species supplements the South African regional data provided by Museums, Universities and from private collections and a few notes from the literature. All the sources are ennumerated in a list of Abbreviations after the Introduction. The review is by no means exhaustive of institutional or private collections, but the information here can be accepted as a general guide to odonate distribution. The most inportant of the South African Odonata collections consulted were the British Museum of Natural History (*BMNH*), the National Museum, Bulawayo (*NMB*), Pretoria University collection (*PU*), the South African Museum (*SAM*), the de Selys Collection (*SCIS*), the Transvaal Museum (*TM*), the University of Lund (*ZMUL*)and the United States National Museum (Smithsonian) (*USNM*). Of private collections the most outstanding is that of B. I. Balinsky (*BC*), with a number of remarkable discoveries.

Under the term distribution a short note on ecology has been inserted where possible. Least known of the areas of this region seems to be the northern Cape.

The South African Region under consideration is of particular interest for a number of reasons. It supplements the information published for the territories to the north. There are three relict genera of Gondwana ancestry, living evidence of the earlier connection with Australasia. There is a remarkably high proportion of species originally described from this region, mostly from the Republic. The number of species of Zygoptera is not far short of the number of Anisoptera. These last three points will be considered in more detail.

Brief mention will be made under the acknowledgements of a few of the entomologists and naturalists or specialists in other spheres who collected some of the material, and thereby helped to establish more complete records of distribution. Amongst the earliest, however, were the Swedish biologists and their contribution will be alluded to since it led to the survey by Brinck. Nomenclature has been brought up-to-date but in one case, *Paragomphus genei* (Selys) the subspecific status is by no means clear, as I have mentioned in another paper awaiting publication. The species *genei* was described from Europe, with a so-called 'African' race *hageni* (Selys), which has been regarded as a separate subspecies: this is clearly unsatisfactory since *hageni* was described from Egypt in Palaearctic North Africa. If the Afrotropical populations of this common and widespread species are definitely distinct from *genei* there are names available in the synonymy to provide for this.

SPECIFIC DISTRIBUTION

There are four categories, those species not found outside South Africa, those described from here but found elsewhere, those described from another region but found in South Africa and a few species which have not yet been recorded from South Africa but will probably be discovered here in the future.

1. Species described from South Africa and not known elsewhere:

Zygoptera

Chlorolestes apricans, conspicua, draconica, fasciata, tessellata, umbrata, Ecchlorolestes nylephtha, peringueyi, Metacnemis angusta, valida, Allocnemis leucosticta, Pseudagrion caffrum, citricola, draconis, furcigerum, inopinatum, newtoni, umsingaziense, vaalense, Enallagma polychromaticum, rotundipenne, sapphirinum, Agriocnemis falcifera

Total Zygoptera species 23

Anisoptera

Ceratogomphus triceraticus, Paragomphus dicksoni, Syncordulia gracilis, venator, Aeshna minuscula, Orthetrum rubens, Urothemis luciana

Total Anisoptera species 7

Category 1. Total Odonata species 30

2. Described at least in part from South Africa, but also found elsewhere in Afrotropical Africa *(ATA)*:

Zygoptera

Chlorolestes elegans, Lestes plagiatus, virgatus, Elattoneura frenulata, glauca, Ceriagrion glabrum, Pseudagrion acaciae, assegaii, hageni, (massaicum) f.kogmani, salisburyense (in pars S. Africa), *spernatum natalense, Enallagma glaucum, sinuatum, Agriocnemis pinheyi, ruberrima, Phaon iridipennis, Platycypha caligata, fitzsimonsi*

Total Zygoptera species 19

Anisoptera

Notogomphus praetorius, Crenigomphus hartmanni, Ceratogomphus pictus, Paragomphus elpidius (pars), *Onychogomphus supinus, Aeshna subpupillata, Anax speratus, Gynacantha zuluensis, Macromia picta, Orthetrum caffrum, O. julia capicola, O. robustum, Nesciothemis farinosa, Palpopleura jucunda, Crocothemis erythraea, C. sanguinolenta, Brachytemis leucosticta* (pars), *Trithemis arteriosa, dorsalis, stictica, Zygonyx natalensis, Rhyothemis mariposa*

R.mariposa was described from Namibia, the rest from Rep. S. Africa.

Total Anisoptera species 22

Category 2. Total Odonata species 41

Total species described South Africa, Categ. 1 + 2 (30 + 41) 71

3. Species, or relevant subspecies, found in South African region, but originally described from another territory or another continent:—

Total South African species of Zygoptera described from *ATA* north of Limpopo River 26

Note that this total includes *Lestes ochraeus* Selys, believed to have been described from Senegal (not S.African Cape, teste Pinhey, 1980). Three of the species are found in Asia, as well as Africa, *Ischnura senegalensis, Pseudagrion inconspicuum* and *P. sublacteum*.

Total S.A. Anisoptera described from ATA north of Limpopo River 52

Note that eight of these also occur outside *ATA*:
Anax imperator, tristis, Acisoma panorpoides, Trithemis annulata, kirbyi, Zygonyx torrida, Rhyothemis semihyalina and *Tramea basilaris.*

Species whose original description omits country of origin 2

Both are Rambur species, both purely *ATA* by distribution:—
Paragomphus cognatus and *Rhyothemis notata fenestrina.*
Although all S. African Zygoptera were at least partly described from *ATA*, several Anisoptera were originally described outside its limits:

Total Anisoptera in S. Africa described from outside *ATA* 11

These are, from Europe: *Orthetrum trinacria, Sympetrum fonscolombei*
from Canary Islands: *Orthetrum chrysostigma*
from North Africa: *Paragomphus genei hageni, Diplacodes lefebvrei, Urothemis edwardsi*
from Asia: *Hemianax ephippiger, Tholymis tillarga, Pantala flavescens, Macrodiplax cora*

Total Odonata species described from outside the S. African region (omitting the two of unknown origin) (26+52+10) 89

Total in categories 1+2 71

Unknown origin 2

Total Odonata species recorded in South African region 162

From these figures it is evident that an exceptionally high proportion, over 80% of the South African species, were described from south of the Limpopo. In other territories, the number originally described from them is much less, as a study of Pinhey's regional papers mentioned earlier will indicate. For instance, out of a total of 146 species in Moçambique only 14 taxa were described from that country, 7 of which were species, the other 7 synonyms or varieties. Out of 112 species in Botswana, 5 species and 2 subspecies were described from there.

The reasons for the high figure in South Africa are threefold:

A. The wealth of different ecological conditions from desert to forest, from sea-level to moderately high elevations.
B. The Gondwana links, 9 species of Chlorolestidae in two genera and 2 *Syncordulia.* In continental equatorial Africa the number of intercontinental links is very few indeed compared to the great wealth of species.
C. Widespread species described from Port Natal (Durban) or Cape of Good Hope, by Burmeister (1839) and Rambur (1842). They were, of course, collected on early sea-voyages when these two were the most likely ports of call on this Continent.

Another point of interest concerning this fauna is that recorded species of Zygoptera (68) are 70% as numerous as anisoptera (94). In other African territories the ratio is generally, much lower. For instance, in countries to the north there were the following figures, firstly Zygoptera, then Anisoptera:—

Botswana	42	70	Malawi	44	87
Moçambique	50	96	Zambia+Zimbabwe ..	88	171

In all these figures for species, Zygoptera are approximately half as numerous as the Anisoptera. One reason for the high proportion in South Africa appears to be the smaller number of the larger, more robust dragonflies, especially the Libellulidae. In this connection it may be noted that the total of 171 Anisoptera in Zambia and Zimbabwe includes 105 Libellulidae and this figure alone is far greater than the respective Zygoptera total of 88. A possible explanation may be that the harsher and cooler climate of the Cape influences selection in favour of either slender Zygoptera or, for larger species, those of adaptable life cycles. The total S. African figures will, of course, be modified by species breeding in warmer, more luxuriant areas like Zululand or the Caprivi. One of the most readily adaptable is the ubiquitous *Pantala flavescens*, known to survive in temporary pools.

In hot, moist tropical regions with more even temperatures, despite the greater proportions of Anisoptera, the Zygoptera families Protoneuridae, Platycnemididae, Calopterygidae and Chlorocyphidae are much more prolific in species and, moreover, in equatorial zones there are examples of two further families, Megapodagrionidae and Amphipterygidae. Such increases take place only gradually from the Limpopo to north of the Zambezi, but from the northern half of Zambia through the great central African Zaire basin onwards the increase in species numbers mounts rapidly.

One other point to mention is that endemics of the western Cape and the Drakensberg show an unusually large number with a preference for, or adapted to the cooler waters of montane streams or pools. In tropical regions of Africa truly montane species are little known, one exception being *Pseudagrion bicoerulans* Martin, which is only found at moderate altitudes on the East African mountains.

4. Lastly, a few species not yet found in our region have been included as possible future discoveries within this area:–

Lestes pinheyi Fraser, *Chlorocnemis marshalli* Ris, *P. glaucescens* Selys, *P. sjoestedti* Förster and *Crocothemis divisa* Karsch. There are also three aeshnids included for other reasons: *Aeshna rileyi* Calvert, formerly confused with *subpupillata* McLachlan; *Anax dorsalis* (Burm.), a probable synonym of *imperator* Leach; and *A. georgius* Selys, erroneously recorded as possibly African. None of these Odonata are incorporated in the figures of the previous categories.

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Cape records of J. Davey (Pinelands). Still further assistance, in one way or another, came from Oliver S. Flint (*USNM*); B. Kiauta (Utrecht); K. K. Günther and G. Peters (*ZMHU*); I. Meskin (Johannesburg) and P. I. Persson (*NRS*).

There were many who provided material or information when I was on museum Staff, *NMB* or *TM*, and only some of these can be briefly recalled here. There was H. D. Brown (Pretoria); H. Capener (former membracidist and school teacher); F. M. Chutter (Water Res., Pretoria); R. C. (Tim) Dening (formerly Zambia and Malawi); C. G. C. Dickson (Cape Town); A. J. & N. Duke (East London); H. N. Empey (sphecidist, Johannesburg); the late C. Koch & G. van Son (*TM*); J. G. H. Londt (Natal Museum, Pietermaritzburg); the late K. M. Pennington (Balgowan) and B. C. Wilmot (*AMG*).

It is through all these sources that the preparation of the survey has gradually been made possible and to all these, and others not mentioned, I am deeply indebted. I would, however, like to recall in this connection the late Dr A. H. Newton, who had a medical practice at Nqutu in Zululand, for his encouragement and friendship over the years I knew him, from 1948 to 1962. His collection, mostly from Natal, was presented to the National Museum, Bulawayo.

In conclusion, brief mention may be made of a few of the earlier collectors who, apart from other activities, captured some South African Odonata. Soon after the start of the 19th century, there was the German Ludwig Krebs, who collected material for *ZMHU*. Also, early in the century there was the first of the Swedish naturalists Johan A. Wahlberg, who spent most of the years 1839 to 1856 in Southern Africa until his tragic death whilst hunting in Ngamiland. Next of the Swedish hunters and collectors was Axel W. Eriksson, who was in the Cape and Kalahari from 1866 to 1901. Ivor Trägårdh (1904) followed him to study inquilines in Natal and like the others he collected a few Odonata. Half a century later Lund University launched their productive Expedition of 1950 to 1951, the results of which appeared over the years in the volumes of *South African Animal Life*. One of the editors, Per Brinck, collected the Odonata, which he sent for examination, and published his ecological survey as well as a history of Swedish exploration in 1955. Dragonfly records will also be found in these pages from such well known early Cape entomologists, Directors of the South African Museum, as L. Péringuey and R. Trimen. Another collector after the turn of the present century was the indefatigable Miss Margaret Fountaine.

LIST OF ABBREVIATIONS

AAM	University of Michigan, Ann Arbor, Michigan.
AHT	Collection of Erich Schmidt: in Asahina Collection, Tokyo.
AMG	Albany Museum, Grahamstown, Cape Province.
ATA	Afrotropical Region, Africa.
BC	Collection of B. I. Balinsky, Blairgowrie, Johannesburg.
BMNH	British Museum (Natural History), South Kensington, London.
CAS	California Academy of Science, San Francisco.
Cape	Records from Cape Province, including Bophuthatswana and Vendaland.
CM	Zoologiske Museum, University, Copenhagen.
DC	Collection of Dr Jonathan Davey, Pinelands, Cape Province.
DM	Durban Museum and Art Gallery, Durban.
GM	Museo Civico di Storia Naturale, Genova.

HC	Collection and notes by L. P. Hersalek, Cape Province.
HDO	Hope Department Museum, University of Oxford, Oxford.
HM	Zoologisches Museum und Institut, Hamburg.
KCB	Collection of Dr B. Kiauta, Bilthoven, Utrecht.
Les	Records from Lesotho (formerly Basutoland).
LM	State Museum of Natural History, Leiden.
MCFS	Musée d'Histoire Naturelle, Les Chaux-de-Fonds, western Switzerland.
MCZ	Museum of Comparative Zoology, Harvard, Massachusetts.
MLUH	Zoologisches Museum, Martin Luther Universität, Halle–Wittenberg.
MNHN	Muséum National d'Histoire Naturelle, Paris.
MW	Naturhistorisches Hofmuseum, Wien (Vienna).
Nam	Records from Namibia, South West Africa.
Nat	Records from Natal and Kwazulu.
NMB	National Museum, Bulawayo, Zimbabwe.
NMK	National Museum of Kenya (formerly Coryndon Memorial Museum), Nairobi.
NRS	Naturhistoriska Riksmuseet, Stockholm.
OFS	Records from Orange Free State Province.
PAS	Academy of Natural Sciences, Philadelphia.
PPI	Plant Protection Institute, Harare (Salisbury), Zimbabwe.
PU	Pretoria University, Pretoria.
RSM	Royal Scottish Museum, Edinburgh.
RUG	Rhodes University, Grahamstown, Cape Province: the collection of Odonata is only used for instruction. Records received in 1948 may no longer be available, but they have been repeated here for locality data.
SAM	South African Museum, Cape Town.
SCIS	Collections of de Selys Longchamps and Rambur, in Institut Royal des Sciences Naturelles de Belgique, Bruxelles.
SMF	Senckenbergische Naturforschende Gesellschaft, Frankfurt am Main.
SUC	Stellenbosch University, Stellenbosch, Cape Province.
Swaz	Records from Swaziland.
TK	Records from Transkei (formerly eastern Cape Province).
TM	Transvaal Museum, Pretoria.
TMB	Musée Royal de l'Afrique Centrale, Tervuren, Bruxelles.
Tvl	Records from Transvaal Province.
USNM	United States National Museum, Smithsonian, Washington, D.C.
UTM	Instituto e Museo di Zoologia, Universitá di Torino, Torino (Turin).
ZMHU	Zoologisches (Naturkunde) Museum, Humboldt Universität, Berlin, DDR.
ZMUL	Zoological Museum, University of Lund, Lund, Sweden.

SYSTEMATIC CHECK-LIST

As explained, subfamilies and subgenera will be omitted.

ZYGOPTERA Selys

CHLOROLESTIDAE Fraser

Genus *Chlorolestes* Selys, 1862

Type-species *Chlorolestes conspicua* Selys (1862)

C. apricans Wilmot, 1975: 13 (Eastern Cape)

Holotype ♂, type ♀, paratypes in *AMG* from Stutterheim, E. Cape 7.iv.1973(B. C. Wilmot)

AMG Type series from Eastern Cape. Wilmot (1973) gives many localities in the Stutterheim and Amatola-Winterberg range: Clifton, Upper Chilton, Glen Etive, Grasslands, Kwa-Kayaletu, Plaatjieskraal, Port Retief and Woburn.

BMNH Paratype, Stutterheim.

NMB Paratypes of both sexes, Stutterheim 7.iv.1973 (Wilmot).

Keistamma Rd, N.W. Stutterheim, E. Cape 27.xii.1983 (Duke & Pinhey).

DISTRIBUTION. Wilmot says it was found in open sedge and reed beds. An eastern Cape endemic.

C. conspicua Selys, 1862: (34, sep.) (Cape)

Type series, both sexes, in *SCIS* from S.W. Cape, but not designated.

BMNH *Cape* – Fransch Hoek range 21.iii.1949 (C. G. C. Dickson); Hawequas Mtns 31.iii.1949 (Dickson)

DC *Cape* – Jonkershoek, Stellenbosch

LM *Cape* – Fransch Hoek 23.i.1962

NMB *Cape* – Fransch Hoek Mtns 14.iv.1972; Gootradens Bosch 10.iii.1968; Hawekwasberg 2.i.1978 (N. Duke); Hawequas Mtns iii.1949 (Dickson); Piquetberg ii.1957 (Dickson); Platteklip 9.iv.1971 (N. Duke); Robinson Pass 29.i.1967; Table Mtn ii.1959 (Dickson)

PU *Cape* – Great Winterhoek Mtns iv.1916

SAM *Cape* – Table Mtn ii.1894 (R. M. Lightfoot)

SCIS Type series from S.W. Cape

SUC *Cape* – Stellenbosch 2.v.1927 (J. Lombard) 9.vii.1965 (H. Geertsema)

TM *Cape* – Bosch Kloof, Worcester i.1933; Wolfkloof, Swellendam)

USNM *Cape* – Hawequas Mtns 31.v.1949 (Dickson); Table Mtn ii.1959

ZMUL *Cape* – Blinkwater ravine 15.xii.1950 (P. Brinck)

Harrison & Barnard (1972: 141) say it is common on Table Mtn.

DISTRIBUTION. Endemic in montane streams or pools. South West Cape Province.

C. draconica Balinsky, 1956: 511 (Drakensberg Mtns)

Holotype ♂, allotype in *TM* from Gudu Galls, Natal Nat. Park, Mont-aux-Sources 29.i.1954 (B. I. Balinsky)

BC *Nat* – paratype Gudu Falls
BMNH *Nat* – paratype Gudu Falls i.1954 (Balinsky)
NMB *Nat* – paratype ♂ Gudu Falls 27.i.1954 (Balinsky)
TM Types, as above, from Gudu Falls 29.i.1954 (Balinsky)

DISTRIBUTION. Endemic in montane streams, Natal – Drakensberg.

C. elegans Pinhey, 1950: 260 (Transvaal)

Holotype ♂, allotype in *TM* from Woodbush, Haenertsberg, Transvaal xii.1907

BC *Tvl* – Matlopetsi River, Haenertsberg; Duivels Kloof; Woodbush
BMNH *Tvl* – Woodbush
NMB *Tvl* – Trichardt Dale, Haenertsberg iii.1956 (Shiela Thompson); Woodbush
SUC *?Nat* – Champagne 27.i.1946 (M. Webb): the only Natal record; requires checking
TM Holotype, allotype, paratypes from Woodbush. *Tvl* – Duivels Kloof 20.iii.1952 (Balinsky); Entabeni forest xi.1931

A species near *elegans* has been found xii.1983 near East London (Duke & Pinhey).

DISTRIBUTION. Montane kloofs and forests near small streams. Natal? Transvaal, Zimbabwe–Moçambique border Mtns and Malawi.

C. fasciata (Burmeister, 1839): 822 (Port Natal)

Holotype ♂ in *MLUH* from Port Natal (Durban)

Melanic morph *nigerrima* Pinhey, 1980a: 1–4 (Soutpansberg), holotype ♂, allotype, paratypes in *NMB* from Outlook Estate, Soutpansberg xii.1978 (E. Pinhey), v.1979 (N. Duke)

AMG Paratypes of *nigerrima*, as above
BMNH Paratypes of *nigerrima*. *Nat* – Cathedral Peak; Durban; van Reenen; Willbrook, Estcourt *Tvl* – near Johannesburg; Soutpansberg
KCB *Les* – Roma 7.iv.1974 (J. W. Boyes) *Swaz* – Usutu forest, above falls 17.iv.1977 (Boyes)
LM *Les* – Mamathes 29.iii.1951 (P. Brinck) *TK* – Qachas Nek 7.iii.1951 (Brinck)
Nat – Balgowan 20.iii.1949 (Pinhey)
MLUH Holotype from Durban
NMB *Cape* – Barkly West 3.iii.1966; Beacon Bay 5.vi.1979 (A. J. Duke); Hogs Back 1500 m v.1951, iv.1969; Hurley xi.1958; Kraai River 1800 m, Rhodes 3.iii.1966; Pitsing Pass 2.iii.1966
Les – Kalanana River 21.iii.1963 (D. H. Eccles); Likalaneng River 21.iii.1963 (Eccles)
Nat – Balgowan 21.iii.1949, v.1955 (K. M. Pennington); Durban; Karkloof 3.iv.1960; Langkrants 27.xii.1979; Mont-aux-Sources 5.ii.1979; Natal Nat. Park iv.1951 (A. H. Newton); Nkandhla i.1949, vii.1950, iii.1951; Nqutu ix.1948, vii.1951, xi.1960, ii.1961 (all Newton);

Pongola Bush 19.ii.1979 (J. G. H. Londt); Qudeni ii.1949, iv, v.1951, ii.1953 (all Newton); Sani Pass 10.i.1970; Little Switzerland 16.ii.1980

OFS – Golden Gate Nat. Park 27.iv.1977

Swaz – Holiday Inn, Mbabane 2–7.iv.1978 (Londt)

Tvl – Outlook Est., Soutpansberg xii.1978 (Pinhey & P. Mhlanga), 4.i.1979 (Pinhey), v.1979 (N. Duke); Pilgrims Rest 28.xii.1976; Type series *nigerrima*, as above, Outlook Est. xii.1978, i.1979 (Pinhey), v.1979 (N. Duke); Graskop 13.xii.1978 (F. C. de Moor)

RSM *Nat* – Dargle 13.ii.1909 (M. Fountaine)

(RUG *Cape* – Molteno i.1948; Port Elizabeth vii.1949)

SAM *Cape* – Burghersdorp 1883 (Dr Kanameyer); Prince Albert Distr. 1884

Nat – Durban ii.1914 (W. Haygarth)

Tvl – Middleburg xi.1935

SMF *Nat* – Willbrook, Estcourt i, ii.1913; iii.1927

SUC *Cape* – Lady Grey 3.i.1924, 14.ii.1924

Nat – Champagne 26.i.1946 (M. Webb)

Tvl – Carolina 29.i.1943 (E. C. Anderssen)

TM *Cape* – Stellenbosch xii.1925 *TK* – Cala xii.1948; Saamloop iii.1932

Nat – Cathedral Peak; Mahai River, Nat. Nat. Park v.1931; Mont-aux-Sources v.1938; Tugela River v.1931; van Reenen; Willbrook, Estcourt 1913

Tvl – Johannesburg; Rustenburg x.1948; Waterval Boven iv.1907; Woodbush xii.1901, iv.1915

USNM *Nat* – Balgowan iii, xii.1949, iv.1951 (Pennington & Pinhey); Drakensberg gardens 22.iii.1968 (P. J. Spangler); Giants Castle 2400 m xii.1948 (H. D. Brown); Underberg 22.iii.1968 (Spangler)

ZMUL *Les* – Lancers Gap, Maseru 22.iii.1951; Makheke Mtns, Mokhotlong 7.iv.1951; Mamathes 29.iii.1951; Mount Machache, Maseru 25.iii.1951

TK – Qachas Nek, Matatiele 7.iii.1951 (all P. Brinck)

Nat – Nat. Park, Tugela & Mahai Rivers iv, vi.1951

Tvl – Lydenburg 7.v.1951 (Brinck)

Appleton (1974) recorded it from Nelspruit, Transvaal; I. Meskin reports (iv.1983) it at Wolhuterskop 30.iii.1982.

Distribution. A widespread endemic in mountain streams. Cape, Lesotho, Natal, Free State, Swaziland and N. Transvaal.

C. tessellata (Burmeister, 1839): 822 (Port Natal)

Holotype ♂ in *MLUH* from Durban (Port Natal)

C. longicauda (Burmeister, 1839): 823 (Port Natal), holotype ♂, allotype ♀ in *MLUH* from Durban: It is not yet fully established whether *longicauda* is only an unbanded male form or phase or a separate species. The late F. C. Fraser told me verbally that he found a difference in the transverse width of the wings. Further investigation is necessary but here they will be recorded together.

BMNH *Nat* – Durban

HC *Cape* – van Stadens Pass

LM *Nat* – Durban 8.iii.1939 (J. J. van der Starre)
Tvl – Marieps Kop 31.x.1949 (N. Mitton)
MLUH Holotypes of *tessellata* and *longicauda*, as above –
NMB *Cape* – Hogsback iii.1966; Keurbooms River i.1969; Stutterheim 15.iii.1980; van Stadens Pass 22.i.1941
TK – Port St Johns iv.1951
Nat – Karkloof 3.i.1960; Qudeni 30.iv.1951 (Newton)
PU *Tvl* – Barberton; Pretoria ii.1964
RSM *Nat* – Eshowe 16, 17.iii.1908 (M. Fountaine)
(RUG *Cape* – Keurbooms River vi.1948; Port Elizabeth vii.1948)
SAM *Cape* – Bosjiesbergen Mtns ii.1940; St Mathews, Kingwilliamstown 1894
TK – Port St Johns (—)(G. Shortridge)
Tvl – Barberton v, xi.1911, xii.1912 (H. E. Edwards)
SMF *Cape* – Grahamstown 1885; Pirie Bush 1898
Nat – M'Fongosi ii-iv.1911 (W. E. Jones)
TM *Cape* – Elands River iii.1939; Groot River ii.1941; Oak Valley, Grahamstown 19.iv.1973; van Stadens Pass i.1941
Nat – Eshowe iii.1938
Tvl – Marieps Mtn iv.1932, iv.1948, 4.iv.1964
USNM *Nat* – Balgowan iii.1949 (Pennington); Eshowe 13.iv.1950 (J. M. McGough)
ZMUL *Cape* – Tzitzikama forest 12.i.1951 (P. Brinck)

Barnard (1937) gives other records: George 1936; Robinson Pass, George ii.1932 and Sevenweekspoort 1932. Maden Dam, Kingwilliamstown xii.1983 (Pinhey & Duke)

Distribution. Endemic in shaded or forest montane streams. Cape to Natal and Transvaal.

C. umbrata Selys, 1862: (37, sep.) (Cape)

Holotype ♂ in *SCIS* from Cape of Good Hope (teste Ris, 1921: 283)
BMNH *Cape* – 'C.G.H.' (= Cape of Good Hope); George i.1936; Kogelberg 1.i.1923; Table Mtn iii.1933; du Toits Kloof i.1923, iii.1932, i.1959; Worcester iv.1936
DC *Cape* – Bains Kloof; Jonkershoek, Stellenbosch
HC *Cape* – van Stadens Pass
LM *Cape* – Groot River 5.i.1962
NMB *Cape* – Blaaukrans River ii.1941; Gouna forest, Knysna 22.i.1976; van Stadens Pass xii.1968 (H. Hersalek); du Toits Kloof 19.ii.1959 (Dickson)
PU *Cape* – Knysna i.1892
SAM *Cape* – Groot Drakenstein 23.iii.1931 (Barnard); Knysna iii.1892; du Toits Kloof iii.1932 (K. H. Barnard), 1.iv.1934 (C. W. Thorne); White River, Wellington Mtns i.1934 (H. G. Wood)
SCIS Holotype, as above
SUC *Cape* – Stellenbosch 1.viii.1963 (H. van der Berg)
TM *Cape* – Blaaukrans ii.1941; George; Groot River ii.1941; Kogelberg i.1923; Table Mtn; du Toits Kloof iv.1934; Worcester

ZMUL *Cape* – Bloukrans River, Plettenberg Bay 14.i.1951 (Brinck); van Stadens Pass 1.iii.1951 (Brinck)

Barnard (1937) said *umbrata* extended from Cape Town east to Coldstream, north to Worcester District. Additional localities he gave were: Buffelshoek, Hex River Mtns iv.1936; Coldstream i.1936; Groot Drakenstein iii.1931; Palmiet River i.1937; Waaihoek Mtns, Goudini iii, iv.1934; Wellington Mtns i.1934.

DISTRIBUTION. Montane pools and streams. Endemic in S.W. Cape Province.

Genus *Ecchlorolestes* Barnard, 1937

Type-species *Chlorolestes peringueyi* Ris (1921)

E. nylephtha Barnard, 1937: 201 (S.W. Cape)

Holotype ♂, allotype in *SAM* from George, Cape i.1931 (K. H. Barnard)

BC *Cape* – Knysna forest 1962

BMNH 2 paratypes from George (without dates)

NMB *Cape* – Jonkersberg, George 1940; Krantzhoek, Knysna 27.i.1981 (M. H. Villet)

SAM *Cape* – Types and paratype ♀ George i.1931 (Barnard); parat. ♂ Kaaimans Gat, George iv.1933 (H. C. Wood); parat. ♂ Lemoenshoek xi.1927; parat. ♂ Robinson Pass ii.1935 (Barnard)

TM *Cape* – Jonkersberg, George xi.1940; Karreedauw Pass xii.1947

ZMUL *Cape* – Tzitzikama forest 13.i.1951 (P. Brinck)

DISTRIBUTION. Ecology not known to me. Endemic to S.W. Cape

E. peringueyi (Ris, 1921): 282 (Cape)

Holotype ♂ in *SAM*, paratype ♂ in *SMF* from Ceres, Cape iv.1913 (R. M. Lightfoot)

BMNH *Cape* – Witte River, Bains Kloof 1.v.1933, 28.xi.1949

NMB *Cape* – Bains Kloof 7.iv.1949 (C. G. C. Dickson)

SAM Type from Ceres, as above. *Cape* – Goudini, Rawsonville iii, iv.1928; Hex River, Buffelshoek, Worcester iv.1930, iv.1936; Stellenbosch iv.1931; du Toits Kloof iv.1934

SMF Paratype ♂, as above, from Ceres

TM *Cape* – Witte River, Bains Kloof xi.1949

Barnard (1937) gives Breede River iv.1933 and Zandrift, Hex River Valley.

DISTRIBUTION. Open streams, settling on rocks or bushes. Endemic to S.W. Cape.

LESTIDAE Calvert

Genus *Lestes* Leach, 1815: 137

Type-species *Lestes nympha* Stephens (1836; synonym of *Agrion sponsa* Hansemann, 1823, Palaearctic)

All African species and subgenera of this family were revised by Pinhey, 1980a: 327–479.

L. dissimulans Fraser, 1955: 38 (Congo Belge)

Holotype ♂ incomplete in *TMB* from Dakwa, Zaire 9.vii.1933 (J. Leroy)

NMB *Tvl* – Mosdene swamps, Naboomspruit 4, 5.xii.1976 (F. C. de Moor)

DISTRIBUTION. Local at pools, swamps and streams. Transvaal, Botswana, north to equatorial East and West Africa.

L. ictericus Gerstaecker, 1869: 222; 1873: 52 (Kenya)

Holotype ♂ in *ZMHU* from Mombasa, Kenya ix.1862 (von der Decken)

At one time this species was confused with *L. pallidus* Rambur.

One of the synonyms is. *L. disarmata* Fraser, 1961: 11 (uganda), holotype ♂ in *BMNH* from Madi Opei, Acholi Distr., N. Uganda iii.1952 (T. H. E. Jackson)

HM *Nam* – Okosongomingo, Klein Waterberg i, ii.1913 (H. Thomson)

NMB *Nat* – Melanic ♂, Ingwavuma 21.ii.1979 (J. Londt). Also in Limpopo Valley, northern side at the Zimbabwe–Moçambique border (Buffalo Bend) iv.1961 (Pinhey).

Ris (1908) records it in the Kalahari desert on Lt. Schultze's Expedition.

DISTRIBUTION. Local at pools or streams in rather dry bush. Namibia. Natal. Limpopo Valley, north to East and West equatorial Africa.

L. ochraceus ochraceus Selys, 1862: 325 (41 sep.)

Holotype ♂ (incomplete) *SCIS*: probably from Senegal (teste Pinhey, 1980b: 462; Selys was uncertain and wrote: "Afrique. Probablement du Cap de Bonne Espérance"). Although common and widespread in equatorial Africa, it is uncommon south of the Zambezi River and there are no firm records south of the Limpopo.

DISTRIBUTION. Streams and pools, mainly in equatorial Africa; very local and uncommon as far south as Malawi, Zambia and Zimbabwe. There are other subspecies in Madagascar and the Aldabra Islands.

L. pallidus Rambur, 1842: 252 (♀ Senegal)

Holotype ♀ in Rambur Collection, *SCIS* from Senegal. It has the thoracic markings prevalent in west equatorial material. Infraspecific variation and the various form names are detailed in Pinhey 1980b.

HM *Nam* – Kalahari 1913 (Ris 1908, *ictericus* Ris, nec Gerstaecker); Okosongomingo, Klein Waterberg ii.1913 (vide Ris, 1921)

NMB *Nam* – Ariamsvlei iii.1963; Gemsbok Nat. Park v.1956; Otjikango vi.1948 (C. Koch)

Les – Maseru iii.1936 (D. H. Eccles)

Nat – Ladysmith iii.1952; Vants Drift, Blood River xi.1948 (A. H. Newton)

Swaz – Eranchi 1954, 1955; "Swaziland" i.1955

Tvl – Gadzani River, Kruger N.P. iii.1971; Mosdene Farm xii.1976 (F. C. de Moor); Olifants River, Kruger N.P. iii.1971 (form *radiatus* Martin); Rustenburg x.1950 (form *chromatus* Martin)

NRS Holotype ♂ of form *wahlbergi* Ris, 1921, from Caffraria (J. A. Wahlberg)

PU *Tvl* – Pretoria iii, iv.1967, 10.iv.1974; Rustenburg iii.1974

SMF *Nam* – Satanplatz

TM *Nam* – Otjikango vi, vii.1948 (C. Koch) (f. *wahlbergi* Ris, melanic)
OFS – Vlakkraal Drift dam 4.xii.1973
Tvl – Pretoria (commonly); Rustenburg x.1948
USNM *Tvl* – Mooketsi

DISTRIBUTION. Pools, streams, swamps or even arid zones; considerable variation in colour and patterns. Swamp forms tend to be melanistic towards f. *wahlbergi*. Namibia. Lesotho. Natal, Transvaal, Botswana and Zimbabwe north to East and West equatorial Africa.

L. pinheyi Fraser, 1955: 10 (Rhodesia)

Lectotype ♂ and allotype in *BMNH* from Rusape, E. Mashonaland ii.1948 (Pinhey)

When first captured this was regarded as a form of *uncifer* Karsch. Although common in the Okavango delta of N.W. Botswana it has not yet been recorded in the South African region. It will probably be found in the Caprivi.

DISTRIBUTION. Pools and swamps. Botswana, Zimbabwe, Moçambique, north to equatorial Africa.

L. plagiatus (Burmeister, 1839): 824 (Port Natal)

Holotype ♂, allotype in *MLUH* from Durban (Port Natal), in Dregé's collection

BMNH *Nat* – Bergville *Tvl* – Fountains, Pretoria 1949 (Pinhey)
DM *Nat* – Haladu 8.iv.1949 (A. H. Newton); Krantzkloof 23.i.1915; Nqutu i.1949 (Newton)
LM *Nat* – Natal Park Hostel 5.iv.1951 (Brinck)
MLUH Types, as above
NMB *Cape* – Alicedale, New Years dam xi.1978; Beacon Bay, Port Elizabeth i.1980 (A. J. Duke); Blaubank, Swart Koppies iv.1957; Grahamstown iv.1971; Keurbooms River, Somerset East i.1970 (C. Besnard); Kirkwood xi.1978; Somerset East x.1978; Vyge Kraal, Plettenberg Bay ii.1968
Nat – Drakensberg xii.1949; Haladu ix.1948; Hluhluwe iii.1950; Ladysmith iii.1953; Nkandhla v.1950; Nondweni vi.1948; Nqutu iv.1949, iii.1951 (all Newton); Pietermaritzburg iv.1950 (K. M. Pennington); Qudeni ix.1948; Spion Kop xii.1949; Umtentweni vii.1951 (all A. H. Newton)
Swaz – Mantengu Falls 4.i.1975 (F. C. de Moor) *OFS* – Loch Vaal v.1957
Tvl – Bundu Inn, Groblersdale iv.1973 (H. N. Empey); Fountains, Pretoria xi.1951 (H. Capener); Klipfontein xii.1979 (C. Car); Mosdene swamps xii.1976 (de Moor); Sterkfontein xii.1966; Zeerust ix.1948
PU *Cape* – Kirkwood iv.1969
Tvl – Groblersdal 17.v.1979; Mac Mac Falls, Pilgrims Rest 23.v.1974; Pretoria iii.1954, ii.1964, iv.1969, iii.1974
SAM *Cape* – Dunbrody 4.iii.1912; East London vii.1925; Knysna i.1936 (H. G. Wood)
Nat – M'Fongosi iv.1916 (W. E. Jones); Princetown *OFS* – Botchabelo ii.1914 (H. A. Junod)
Tvl – Acornhoek xii.1918; Louis Trichardt 1.ii.1928; Waterval xi.1899

SCIS *Cape* – ♂, ♀ Cape of Good Hope
SUC *Nat* – Amanzimtoti 29.iv.1916; Pietermaritzburg 23.iv.1916, 6.vii.1916
TM *Cape* – Groot River ii.1914 *Nat* – Bergville; Hudley xi, xii.1948 (Pinhey)
Tvl – Pretoria; Saltpan, Pretoria ii.1929; Woodbush, Haenertsberg iv.1915
USNM *Tvl* – Kruger Nat. Park
ZMUL *Nat* – Natal Nat. Park iv.1951 (P. Brinck)
Common at East London xii.1983 (Duke & Pinhey)

DISTRIBUTION. Pools, streams, dams, rivers, often abundant. Cape to Transvaal, north to Sudan, westwards to Nigeria.

L. tridens McLachlan, 1895: 24 (Delagoa Bay)

Holotype ♂ in *BMNH* from Delagoa Bay (now Maputo District), Moçambique
BC *Nat* – Nyalazi River, St Lucia 1957
BMNH Holotype from Delagoa Bay. *Nat* – Hudley xi.1948 (Pinhey)
NMB *Nat* – Hudley xi, xii.1948 (Pinhey) *Tvl* – Huwi PNR 2.xii.1977 (R. Chimwendo)
PPI *Nat* – Hudley xi.1948 (Pinhey)
SAM *Nat* – Hudley xi, xii.1948
TM *Nat* – Hudley xi, xii.1948 (Pinhey)
Allanson, et al. (1974) recorded it from Lake Sibaya, Zululand.

DISTRIBUTION. Local at pools or lakes, occasionally abundant, for instance, at Hudley, Zululand, in 1948 and at a crater lake near Arusha, Lake Diluti, northern Tanzania, in 1951. Natal, Transvaal, north to Somalia, across to Northern Nigeria.

L. uncifer Karsch, 1899: 381 (Tanganyika coast)

Holotype ♂ in *ZMHU* from Bondei, Pangani, Tanzania i.1886 (C. W. Schmidt)
NMB *Nat* – Burmans Bush, Durban ix.1956 (C. G. C. Dickson)

DISTRIBUTION. Streams, quiet courses in rivers. Seldom in large numbers, unlike *pinheyi*. Natal. Zimbabwe, north to Somalia, west to Nigeria, like *tridens*.

L. virgatus (Burmeister, 1839): 824 (Port Natal)

Holotype ♂, allotype in *MLUH* from Durban (Port Natal)
CAS *Nat* – Pshowe
DM *Nat* – Umbilo, Durban 1914
HC *Cape* – Brak River, Uitenhage
MLUH Types, as above
NMB *Cape* – Buffalo Pass, East London xi.1979 (N. Duke); East London viii.1963 (A. J. Duke); Grahamstown vii.1963 (Duke); Sydenham, Palmiet River ix.1956 (Newton)
TK – Port St Johns vii.1963 (A. J. Duke)
Nat – Burmans Bush v.1956 (C. G. C. Dickson), xi.1979 (N. Duke); Cowies Hill viii.1959 (Newton); Duffs Road 8.vii.1962; Durban viii.1955 (Dickson); Kambula xi.1950 (Newton); Karkloof iv.1960; Ladysmith iii.1952; Nkandhla vii.1950; Nqutu xi.1948, x.1949 (all Newton); Pietermaritzburg x.1978; Umtamvuma N.R. xi.1979 (Pinhey)

Swaz – Holiday Inn, Mbabane iv.1978 (J. G. H. Londt)
Tvl – Louis Trichardt iv.1976, xii.1978 (Pinhey); Outlook Est., Soutpansberg xii.1978 (Pinhey & Mhlanga); Pilgrims Rest iii.1976, iii.1978 (F. C. de Moor)

PU *Cape* – Knysna xii.1977 *Tvl* – Pretoria 2.iii.1951 (Capener)
RSM *Nat* – Durban 16.xii.1907 (M. Fountaine)
(RUG *Cape* – Barkly East iv.1948)
SAM *Cape* – Dunbrody 6.vi.1912; St Mathews, Kingwilliamstown iv.1894 (R. M. Lightfoot)
SCIS *Nat* – Durban
SMF *Nat* – Durban xii.1907; M'Fongosi iii.1911 (W. E. Jones); Princetown ii.1910
SUC *TK* – Port St Johns 7.vii.1963 (A. J. Duke)
TM *Cape* – Dunbrody 1912; Kingwilliamstown
Nat – Durban; Hudley xii.1948 (Pinhey); Princetown 1910; Sarnia i.1912
Tvl – Cyprus farm, Ofcolaco ix.1961; Fountains, Pretoria ii.1949 (Pinhey); Moordrift x.1907; Pretoria iii.1910
ZMUL *TK* – Mt Frère 5.iii.1951 (P. Brinck)

DISTRIBUTION. Common in woodland, forest or thick bush, not far from pools or streams. Cape, Natal to Transvaal, northwards to equatorial Africa.

PROTONEURIDAE Tillyard

Genus *Chlorocnemis* Selys, 1863: 175

Type-species *Chlorocnemis elongata* Hagen (in Selys, 1863, Togo)

C. marshalli marshalli Ris, 1921: 291 (Mashonaland)

Lectotype ♂ in *BMNH* from Mazoe, Mashonaland 24.ii.1905 (G. A. K. Marshall)

No records available yet south of the Limpopo River. In Mashonaland on wooded slopes or in kloofs on mountains and might perhaps occur in similar localities in the northern Transvaal.

DISTRIBUTION. Montane woodland or forest streams. Zimbabwe to Malawi, with an equatorial subspecies *superba* Schmidt in Zaire and Uganda.

Genus *Elattoneura* Cowley, 1936: 517

Type-species *Disparoneura glauca* Selys (1860)

E. frenulata (Hagen, in Selys, 1860): 444 (17, sep.) (Cape)

Holotype ♂ in *MCZ* from Cape of Good Hope (Tollin)

BMNH *Cape* – Ceres xi, xii.1920, i.1921; Hex River Valley, Worcester i.1888, i.1893; Witzenberg Valley i.1921
DC *Cape* – Cedarberg Mtns
MCZ Holotype, as above
NMB *Cape* – Ceres xi.1920; Loskop, Villiersdorp 27.ii.1968; Molenaars River, du Toits Kloof 3.xii.1964

SAM *Cape* – Orange Kloof, Table Mtn (i ---); Palmiet River, Kleinmond xii.1934, i.1937
TM *Cape* – Ceres ii.1921; Witzenberg Valley i.1921
ZMUL *Cape* – Bloukrans River, Plettenberg Bay 14.i.1951 (Brinck)

Barnard (1937) records George i.1936 and north of Tradouw Peak i.1935.

DISTRIBUTION. Locally restricted in pools or streams. S.W. Cape and the South West of Angola; but not yet known from Namibia in between (Pinhey, 1975).

E. glauca (Selys, 1860): 443 (15, sep.) (Cape of Good Hope and Durban)

2 males in *SCIS*, not designated as types

Disparoneura mutata Selys, 1886: 164; Cowley, 1936: 518. Lectotype ♂ in *BMNH* from Magila, W. Africa

BMNH Type of *mutata*. *Cape* – Tradouw Pass *Nat* – Estcourt
DC *Cape* – Worcester
KCB *Swaz* – Manzini, Parday Park 23.xi.1976 (M. J. van Brink)
LM *Tvl* – Retiefs Kloof 7.xi.1949 (R. A. Mass Geesteranus)
Tvl – White River 11.xii.1949 (N. P. Mitton)
NMB *Nam* – Andara and Okavango River, Caprivi 27.iii.1974 (de Moor & Pinhey)
Cape – Buffalo Pass, East London xi.1979 (N. Duke); Butterworth xi.1970 (Pinhey); Kirkwood xi.1978; Stonehill & Witrand farms, Warrenton xi, xii.1977, x.1978, i.1980 (F. C. de Moor)
Nat – Albert Falls xi.1958 (Newton); Drakensberg xi, xii.1949, xii.1952; Haladu i.1961; Nondweni xii.1949; Nqutu, many dates Nov. to Febr., 1948–1961; Oakford xi.1955; Oriby Gorge 17.x.1960 (all A. H. Newton); Ramsgate xi.1979 (Pinhey)
Swaz – Mantengu Falls 4.i.1975 (de Moor)
Tvl – Albasini dam, Louis Trichardt xii.1978 (Pinhey); Bundu Inn, Groblersdal iv.1973; Echo Valley xii.1968; Outlook Est., Soutpansberg xii.1978 (Pinhey & Mhlanga)
NRS Caffraria (J. A. Wahlberg)
PU *Tvl* – Rustenburg v.1968
SAM (as *mutata*) *Cape* – Waterval x, xi.1899, xi.1902
Nat – M'Fongosi iv, xii.1911, iv.1916 (W. E. Jones)
SCIS Males in Selys Collection, as above
SMF *OFS* – Botchabelo ii.1914 (H. A. Junod)
SUC *Nat* – Nqutu 5.xi.1960 (Newton)
TM Series from Cape, Natal and Transvaal
ZMUL *Nat* – Hluhluwe G. R. 18 iv.1951 (P. Brinck)

Balinsky (1965) recorded it from Kruger Nat. Park.

DISTRIBUTION. Shaded parts of pools, streams or quiet margins of rivers. Widespread from Namibia and Cape, north to equatorial Africa. North of the Zambezi River it is in competition with several other species of the genus, one of which, *E. tropicalis* Pinhey, was for a time confused with *frenulata*.

PLATYCNEMIDIDAE Tillyard & Fraser

Genus *Allocnemis* Selys, 1863: 173 (29, sep.)

Type-species *Allocnemis leucosticta* Selys (1863)

A. leucosticta Selys, 1863: 174 (30, sep.) (Cape)

Both sexes, undesignated, in *SCIS* from Cape of Good Hope (Dregé & Krauss)

BMNH *Cape* – Bedford; Cape Flats; Ceres; Stutterheim 19.i.1908
TK – Cala 6 xii.1948
Nat – Balgowan 23.xii.1948 (Pennington); Cathedral Peak 6.xii.1951 (Newton); Eshowe; van Reenen xii.1926; Willbrook, Estcourt
Tvl – Barberton

HC *Cape* – van Stadens River; Witteklip

KCB *Swaz* – Usutu forest 10.iv, 15.v.1977 (J. W. Boyes) (the second date was a dwarf ♂)

LM *Cape* – Knysna 2.i.1962; Sevenweekspoort 5.i.1951 (P. Brinck)
TK – Cala 6 xii.1948 (D. A. Swanepoel)
Nat – Durban 8.iii.1939 (J. J. van der Starre); Karkloof forest 14.iii.1962 (A. C. van Bruggen)

NMB *Cape* – Keurbooms River, Knysna 21.i.1970 (C. Besnard); Krantzhoek, Knysna 27.i.1981; Kubusi forest, Stutterheim 2.xii.1979 (B. C. Wilmot); du Toits Kloof ii.1959 (Dickson)
Nat – Nqutu 24.i.1951 (Newton); Oriby Gorge 10.xi.1979 (Pinhey); Qudeni 10.iii.1954; Umkomaas 12.xii.1956 (both Newton)
Swaz – Holiday Inn, Mbabane 2–7.iv.1978 (J. G. H. Londt)
Tvl – Albasini dam, Louis Trichardt 11.xii.1978 (Pinhey); Clouds End, Louis Trichardt 3.iv.1973, 4.iv.1976 (Pinhey); Santa Est., Dullstroom v.1970

PU *Cape* – Cambria 3.i.1981; Fort Napier 1918 *Tvl* – Hazy View 1.iii.1981

RSM *Cape* – Stutterheim 9.i.1908 (M. E. Fountaine) *Tvl* – Barberton 8-20.xi.1908 (Fountaine)

SAM *Cape* – Groenvlei Kloof 6.i.1907; Hex River xii.1884; Waterval ii.1899
Nat – M'Fongosi iii, iv, v, xi.1911 (W. E. Jones); Willbrook, Estcourt i, ii.1913
Tvl – Barberton iii-v.1911, i.1912 (H. E. Edwards); Inando, Barberton i.1910

SCIS In Selys collection, as above

SUC *Tvl* – Soutpansberg 3.iv.1973 (Pinhey)

TM *Cape* – Cape Flats; Ceres; Groot River; Kokstad; van Stadens Pass
TK – "Transkei"
Nat – Balgowan; Botanical Gardens, Durban; Cathedral Peak; Eshowe; Estcourt; Hudley xii.1948 (Pinhey); van Reenen *OFS* – Harrismith
Tvl – Barberton; Kastrol Nek; Louis Trichardt; Marieps Mtn; Woodbush

USNM *Cape* – Sevenweeks Poort 5.i.1951 (Brinck)
Tvl – White River xi, xii.1949 (N. Mitton)

ZMUL *Cape* – Bloukrans River, Plettenberg Bay 14.i.1951; Sevenweeks Poort 5.i.1951; Tzitzikama forest 14.i.1951 (all P. Brinck)

Barnard (1937) gives other Cape localities: Cedar Mtns, Citrusdal; George; Kingwilliamstown 1894; Ladismith; Outeniqua Mtns; Zwartberg Mtns. Appleton (1974) records it from Nelspruit, Transvaal.

DISTRIBUTION. Endemic in South African montane forest or woodland near pools or small streams. Cape to Natal and Transvaal. In these mountain forests this platycnemidid evidently fills the ecological niche, even to the vivid spots of colour on the body (probably identification marks) as well as the yellow wings of the many *Chlorocnemis* Selys (Protoneuridae) of continental tropical and subtropical Africa.

Genus *Metacnemis* Selys, 1863: 160 (16, sep)

Type-species *Metacnemis valida* Selys (1863)

For a revision of the *Metacnemis* group see Pinhey, 1980b.

M. angusta Selys, 1863: 162 (18, sep.) (♀ Cape of Good Hope, Latreille collection) Type ♀ apparently lost. No examples in *SCIS*

BMNH *Cape* – 1 ♀ Ceres xi.1920 (R. E. Turner)

These two females are the only examples known of *angusta* and without a male it is not possible to decide if it is a distinct species or a form or subspecies of *valida*, described by Hagen on the previous page of the same paper by Selys.

DISTRIBUTION. Only recorded from the S.W. Cape.

M. valida Hagen, in Selys, 1863: 161 (17, sep.) (Cape)

Holotype ♂ in Hagen Collection, *ZMHU*, from Cape of Good Hope (Ludwig Krebs)

AMG *Cape* – Kubusi River, Stutterheim xi.1973 (B. C. Wilmot)

BMNH *Cape* – Bedford – (McLachlan Collection)

HC *Cape* – Witteklip

NMB *Cape* – Kubusi River, Kingwilliamstown road, Stutterheim 29.xi.1973 (Wilmot); Palmiet River, Grahamstown 8.x.1965 (F. M. Chutter)

RSM *Cape* – ♀ Kingwilliamstown i.1908 (M. E. Fontaine)

TM *Cape* – Bedford

Fairly common at rocky streams, East London ix-xii.1983 (Duke)

DISTRIBUTION. Endemic in streams and rivers of the Cape. In life, ♂ all pale colours on head and body, including the eyes, are cobalt blue; in juvenile female they are orange, becoming browner at maturity. After Margaret Fountaine's capture of a female in 1908 it was not rediscovered for nearly six decades when Chutter found it in 1965. He has recently informed me that the Palmiet River locality now has dams which have altered the ecology and perhaps it is now an endangered species. This and *angusta* are the only true records of the genus *Metacnemis* in Southern Africa.

Genus *Mesocnemis* Karsch, 1891: 66

Type-species *Mesocnemis singularis* Karsch (1891)

M. singularis Karsch, 1891: 67 (Kameroon)

Holotype ♂ in *ZMHU* from Joachim Albrecht'sHöhe, Cameroun (♂ leg. Conradt, ♀ Tessmann)

NMB *Nam* – Andara, Caprivi 27.iii.1974 (Pinhey & de Moor)
Cape – Witrand farm, Warrenton 3.xii.1979 (F. C. de Moor)

DISTRIBUTION. Swift streams or rivers, settling here or there on vegetation or rocks. In 1950, on the banks of the Nile's torrential waters issuing from Lake Victoria near Jinja, both sexes were settling in enormous numbers on bushes overhanging the turbulent waters (Pinhey, 1961). With one sweep of a net it was possible to capture a large number of specimens, although normally they are only collected singly or in pairs. Namibia. Northern Cape. Zimbabwe north to East and West equatorial Africa.

COENAGRIONIDAE Selys

Genus *Ceriagrion* Selys, 1876: 1235 (235, sep.)

Type-species *Agrion cerinorubellum* Brauer (1865, Ceylon-Sri Lanka)

C. bidentatum Frazer, 1941: 64 (Uganda)

Holotype ♂, allotype in *BMNH* from Entebbe, Budama, Uganda x.1927 (G. D. Hale Carpenter)
NMB *Nam* – Kwando River, Caprivi iv.1970 (H. D. Brown)

DISTRIBUTION. Forest streams or pools. N.W. Botswana, Caprivi, Zambia to Zaire and Uganda.

C. glabrum (Burmeister, 1839); 821 (Cape)

Holotype ♂ in *MLUH* from Cape of Good Hope
BC *Nat* – St Lucia Bay
BMNH *Cape* – Stellenbosch *Nat* – Tongaat
DC *Cape* – Table Mtn
HM *Nam* – Grootfontein vi.1911 (W. Michaelsen)
LM *Nat* – Charters Creek camp, St Lucia 18.iii.1975 (A. C. & W. H. van Bruggen)
Tvl – Pienaars River, Roodeplaat 9.i.1958 (A. C. van Bruggen)
MLUH Holotype, as above
NMB *Nam* – von Bach dam, Okahandja 27.xii.1977 (de Moor)
Cape – Belmont Valley, Grahamstown 12.iv.1971; Buffalo Pass, East London xi.1979 (N. Duke); Elgin Apple farm, Grabouw 24.iii.1980 (D. K. B. Wheeler); Plettenberg Bay 14.ii.1968 (Cottrell); Tamboers Kloof, Cape Town 3.i.1975 (Pinhey) *TK* – Port St Johns 7.vii.1963 (A. J. Duke)
Nat – Empangeni iii.1950 (Newton); Eshowe 25.iv.1978; Hluhluwe v.1952 (Newton); Kloof xi.1958 (Newton); Ndumu Game Res. 8.iii.1970; Ramsgate 20.xi.1979 (Pinhey); Richards Bay v.1963; St Lucia Bay iii.1975, ii.1980; Umhlanga Rocks iii.1959 (C. G. C. Dickson); Umtamvuna N.R. 4.xi.1979 (Pinhey)
Swaz – Mbabane 2-7.iv.1978 (Londt)
Tvl – Huwi N.R., Ellisras xii.1977 (R. Chimwendo); Klipfontein xii.1979 (Car & Mhlanga); Mosdene swamps xii.1976 (F. C. de Moor)
PU *Tvl* – Carolina xii.1972, i, ii, iii.1981; Pretorius Kop 16.iv.1981

SAM *Cape* – Avontuur road, Knysna i.1936 (H. G. Wood); Blue Cliff, Dunbrody ii.1912
Nat – M'Fongosi iv.1911, iv.1916, iv.1935 (W. E. Jones)
SUC *Cape* – Stellenbosch x.1923 *Nat* – Amanzimtoti iv.1916
Tvl – Pietersburg ii.1924
TM *Cape* – Stellenbosch *Nat* – Durban; Tongaat *Tvl* – Several localities
ZMUL *Nat* – Hluhluwe G.R. 18.iv.1951 *Tvl* – Skukuza, Kruger N.P. 1.i.1951 (Brinck)

Allanson, *et al.* (1974) record it from Lake Sibaya, Zululand.

DISTRIBUTION. Common at pools, streams, rivers, open grassland, swamp or thick woodland. All areas of South Africa except in very arid zones or at high elevations. Widespread through Afrotropical Africa, whether continental or insular.

C. suave Ris, 1921: 316 (Shaba = Katanga)

Holotype ♂ in *TMB* from Kapiri, Shaba, Zaire
BC *Tvl* – Kruger Nat. Park
NMB *Nam* – Andara Mission, Caprivi 27.iii.1974 (Pinhey & de Moor)
TM *Nat* – ? ♀ Kosi Bay vii.1948: identification requires checking
ZMUL *Tvl* – Skukuza, Kruger N.P. 18.iv.1951 (P. Brinck)

DISTRIBUTION. Bush streams or pools in warmer areas. Namibia. Natal? Transvaal, north to Ethiopia, west to Ghana and Mali.

Genus *Pseudagrion* Selys, 1876: 490 (200, sep.)

Type-species *Agrion furcigerum* Rambur (1842)
For a revision of all *ATA* species of this genus refer Pinhey, 1964.

P. acaciae Förster, 1906b: (56, sep.) (Transvaal)

Lectotype ♂, allotype in *AAM* from Komatipoort, Transvaal
AAM Types, as above
NMB *Nat* – Empangeni 8, 9.v.1952 (Newton) *Swaz* – Tshaneni 1980 (H. C. Percy)
SAM *Nat* – M'Fongosi iii-xi.1911, iv.1916, iii, iv.1935 (W. E. Jones)
TM *Cape* – Vioolsdrift 14-18.ix.1970 *Nat* – Ndumi Game Res. 13.iii.1972
OFS – Stroomkraal 9.xii.1973; Vlakkraal, Modder River 11.xi.1973

Kiauta & van Brinck (1977) examined material from Mkusi Game Reserve.

DISTRIBUTION. Pools or streams with moderate current. Northern Cape, Natal to Transvaal, north to tropical East Africa. Previous identifications for Somalia and palaearctic North Africa now refer to *P. niloticum* Dumont.

P. assegaii Pinhey, 1950: 261 (Transvaal)

Holotype ♂, allotype, paratypes in *TM* from Moordrift x.1909 and Nilstroom, Potgietersrus x.1948, Transvaal
NMB *Tvl* – Huwi PNR, Ellisras 2.xii.1977 (R. Chimwendo); Klipfontein 3.xii.1979 (C. Car); Mosdene swamps 4.xii.1976 (F. C. de Moor)
TM *Tvl* – Types series, as above

DISTRIBUTION. Streams and pools. Transvaal, Botswana to Zambia.

P. caffrum (Burmeister, 1839): 821 (Port Natal; but not Comoro Islands)

Type series said to be in *MLUH* and *MCZ*, from Durban. Probably not designated?

BMNH *Nat* – Willow Grange, Mooi River i, ii.1913 (R. C. Wroughton)
LM *Nat* – Balgowan xii.1948 (K. M. Pennington)
MCZ See above
MLUH See above
NMB *Cape* – Prince Albert Pass, Knysna x.1970 (A. Archer); Tyumie River, Hogsback Mts 3.i.1970 (C. Besnard) *TK* – 17 km north of Mt Fletcher 2.iii.1966
Nat – Balgowan iii.1949 (Pennington); Empangeni 8.v.1952; Madeira Hill, Queenstown 24.iii.1962; Nkwaleni 28.iv.1958; Nqutu x, xi.1948, ix.1949, xi.1957, i.1958 (all A. H. Newton); Pongola Bush Nat. Res. ii.1979 (Londt)
Tvl – 16 km south of Pilgrims Rest (?) 28.xii.1976 (de Moor): requires confirmation
SAM *Nat* – Willow Grange, Mooi River i, ii.1913 (R. C. Wroughton)
TM *Nat* – Balgowan xii.1948 (Pinhey)
USNM *Nat* – Underberg iii.1949, 22.iii.1968 (P. J. Spangler)
ZMUL *Les* – Mokhotlong 6.iv.1951 *Nat* – Nat. Park, Tugela Valley 3.iv.1951 (P. Brinck)

Harrison (1964) gives Muizenberg, Cape.

Distribution. Pools and streams. Endemic in Cape and Natal, with an unconfirmed Transvaal record.

P. citricola Barnard, 1937: 212 (Cape)

Holotype ♂, allotype, paratypes in *SAM* from Kridouw Krans, Olifants River, Citrusdal ix.1931 (K. H. Barnard)

NMB *Cape* – Aughrabies Falls 23.iii.1963 (D. H. Eccles); Belmont Valley, Grahamstown 12.iv.1971; Schoemanspoort 9.iii.1966; Somerset East 29.x.1978
TK – Xuka River, Engcobo 26.x.1978 *Nat* – Giants Castle G.R. 4.x.1978
OFS – Clocolan 18.i.1966; Wynberg–Excelsior iii.1963 (H. N. Empey)
Tvl – Benoni xi.1979 (Empey); Boschkop dam, Johannesburg x.1953; Klein Jukskei, Johannesburg x.1956, x.1957; Klipriver, Johannesburg x.1957; Letaba Valley 10.xii.1955; Vereeniging iii.1979; Wolmaranstad 8.ii.1977 (H. N. Empey)
(RUG *Cape* – Albany iv, ix.1948)
SAM Type series, as above. *Nat* – Mooi River i, ii.1913
TM *Cape* – Albany & Grahamstown iii, iv.1948; Butterworth xii.1948; Clanwilliam xi.1948 (Dickson); Elliot 27.iii.1954
OFS – Stroomkraal 9.xii.1973; Vlakkraal, Modder River 11.xi.1973
Tvl – Meersberg, Pretoria 12.x.1973
ZMUL *Tvl* – Jukskei River, Johannesburg 11.x.1950 (P. Brinck)

Appleton (1974) records it from Nelspruit, Transvaal.

Distribution. An endemic in pools and streams. Cape to Natal and Transvaal.

P. commoniae (Förster, 1902): (69, sep.) (Erythraea, Eritrea)

Holotype ♂ *Erythromma commoniae* in *AAM* from Eritrea, now a section of Ethiopia.

P. nigerrimum Pinhey, 1950: 265 (Mtoko road and Dora River, Umtali, Mashonaland), holotype ♂ and allotype *(in copula)* in *TM* from Mtoko road: this appears to be a subspecies.

AAM Type of *commoniae*

BC *Nat* – Nyalazi River 27.xii.1957 *Tvl* – Limpopo Valley

NMB *Nat* – Empangeni 4–8.v.1952; Hluhluwe 31.iii.1950 (both Newton)
Swaz – Eranchi 5–10.i.1955 (A. H. Newton)
Tvl – Njelele dam, Messina road 6.i.1979 (Pinhey)

TM Types of *nigerrimum*

Allanson, *et al.* (1974) record it from Lake Sibaya, Zululand.

DISTRIBUTION. Pools or streams with moderate current and fringed with rushes or grasses. Natal to Transvaal, north to Somalia, with nominotypical *commoniae* in Ethiopia.

P. draconis Barnard, 1937: 213 (Cape: as a variety of *kersteni* Gerstaecker)

Holotype ♂, allotype, paratype said to be in *SAM* from Kogmanskloof, Montagu, Cape xi.1935

BMNH A specimen labelled as lectotype ♂, from Groot Drakenstein, Cape iii.1931, requires investigation, whether it was one of Barnard's type series.

NMB *Cape* – Malmesbury 21.x.1964 (Pinhey); Olifants River, Citrusdal 4.x.1965; Waterval, Tulbagh 13.xi.1975 *TK* – Mt Fletcher 2.iii.1966

SAM *Cape* – Berg River

SMF *Cape* – Groot Drakenstein

Harrison (1964) also records Clanwilliam, Cape. Common at Montagu xi.1983 (Pinhey).

DISTRIBUTION. Streams and pools. Endemic to S.W. Cape.

P. furcigerum (Rambur, 1842): 261 (Cape)

Holotype ♂ (design., Selys) in *SCIS* from S. W. Cape

DC *Cape* – Bains Kloof

LM *Cape* – Fransch Hoek Pass 21.i.1962; Sevenweeks Poort Pass 5.i.1951 (Brinck)

NMB *Cape* – Elandskloof Pass, Citrusdal 8.i.1962; Kirstenbosch 21.xi.1970 (Pinhey); Kruisvalley, Buffelsnek 22.x.1970; Orange Kloof, Cape Town 21.x.1969 (Dickson); Schusters Kraal 25.x.1948; Silver Mine Valley 14.xii.1948; Spitzkop, Knysna 10.xii.1970; du Toits Kloof i, ii.1959 (C. G. C. Dickson)

SAM *Cape* – Bot River i.1937

SCIS Holotype, as above

TM *Cape* – Schusters Kraal x.1948; Silver Mine Valley xii.1948

ZMUL *Cape* – Bloukrans River, Plettenberg Bay 14.i.1951; Sevenweeks Poort 5.i.1951 (P. Brinck)

DISTRIBUTION. A fairly common endemic, closely resembling *kersteni*, at pools or streams in valleys or on mountains. S.W. Cape.

P. gamblesi Pinhey, 1978a: 2-4 (Mashonaland; nom. nov. pro *gigas* Pinhey, 1950, nec Schmidt (Ris, MS) 1936, of equatorial West Africa)

Holotype ♂, allotype from Bazeley Bridge, Umtali Distr., Mashonaland, 10.xi.1965 (Pinhey), paratypes from various localities, in *NMB*

BC *Tvl* – Badplaas xii.1968 (Balinsky)

NMB Type series from Zimbabwe and Zambia, a paratype from Badplaas (Balinsky)

Nat – Drakensberg x.1948 (Newton); Nondweni 24.xii.1949 (Newton)

DISTRIBUTION. Long grasses or reeds and rushes on banks of fast streams or rivers. Natal, Transvaal, north to Shaba (Zaire) and Angola.

P. glaucescens glaucescens Selys, 1876: 498 (208, sep.) (Sierra Leone)

Both sexes, undesignated, in *SCIS* from Sierra Leone

Although occurring in territories directly to the north of our region this species has not been reported from here. The most likely area would be the Okavango River in the Caprivi since it is found in the Okavango delta of N.W. Botswana.

DISTRIBUTION. Streams or large rivers. Botswana, Zimbabwe and Moçambique, north to East and West equatorial Africa. In Moçambique there is a different race.

P. hageni hageni Karsch, 1893: 38 (Cape) (formerly confused with *angolense* Selys)

Holotype ♂ in *ZMHU* from the Cape, collected by Ludwig Krebs

P. rubridorsum Balinsky, 1963: 245, holotype ♂, allotype in *TM* from Port St Johns 28.xii.1956 (B. I. Balinsky). Outside Cape Province there is a subspecies:

P. hageni tropicanum Pinhey, 1966a: 289, 290 (Katanga), holotype ♂ in *NMB* from Lubudi, Shaba, Zaire i.1958 (Pinhey)

AMG *Cape* – Kubusi River, Stutterheim

BC *TK* – paratype ♂ *rubridorsum* from Port St Johns

Nat – *(tropicanum)*: Crystal Waters; Umgeni River, Howick; Umsingazi Swamp, Richards Bay 1957, 1958

Tvl – Barberton; Soutpansberg, Louis Trichardt; Kings Kloof, Johannesburg; Mecklenburg farm, Sekukuniland; Sabie Riv.

LM *Nat* – *(tropicanum)*: Durban 8.iii.1939 (J. J. van der Starre)

NMB *(hageni)*: *Cape* – Belmont Valley 12.iv.1971; Kubusi River, Stutterheim 7.iv.1973 (Wilmot); van Stadens Pass 22.i.1941, 20.iv.1958

(tropicanum, including holotype)

Nat – Empangeni 21.iii.1950; Kloof Falls 25.xi.1961; Nqutu 10.xii.1960, i, ii.1961 (all Newton); St Lucia 30.iii.1975 (R. C. Dening)

Swaz – Holiday Inn, Mbabane 2–7.iv.1978 (Londt)

Tvl – Letaba Valley 10.xii.1958; Levubu River, Louis Trichardt 13.xii.1978 (Pinhey); Outlook Est., Soutpansberg xii.1978 (Pinhey & Mhlanga); Sterkfontein xii.1966 (Pinhey)

SAM *Nat* – M'Fongosi v, xii.1911 (W. E. Jones) *Tvl* – Barberton i.1912
SUC *Nat* – Amanzimtoti 29.vii.1916; Pietermaritzburg 23.iv.1916
TM Holotype *rubridorsum. (hageni): Cape* – Groot River, Plettenberg Bay; van Stadens
(tropicanum): Nat – Hudley xii.1948 (Pinhey) *Tvl* – Pretoria
ZMHU Holotype of *hageni*
ZMUL *(hageni): Cape* – Tzitzikama forest 14.i.1951 (Brinck)
(tropicanum): Nat – Hluhluwe G.R. 18.iv.1951 (Brinck)

Appleton (1974) records it from Nelspruit, Transvaal. I. Meskin reported it at Wolhuterskop ii, iii.1982. Common around East London, xi-xii.1983 (Duke & Pinhey).

DISTRIBUTION. Forest, woodland or bush streams and rivers. The nominotypical race is a Cape endemic, but subspecies *tropicanum* ranges from Natal and Transvaal to East and West equatorial Africa. *P. angolense* Selys (1876) is a close relative, not known outside Angola.

P. hamoni Fraser, 1955: 239 (Congo République)

Holotype ♂ in *MNHN* from Yabassi, République du Congo

P. whellani Pinhey, 1956: 18 (Northern Uganda), holotype ♂, allotype *(in copula)*, paratype in *BMNH* from Madi Opei, Uganda iii.1952 (T. H. E. Jackson)

NMB *Nam* – Andara, Caprivi 27.iii.1974 (Pinhey & de Moor)
Swaz – Eranchi 10.i.1952 (Newton)
Tvl – Njelele dam, Messina road 6.i.1979 (Pinhey); Olifants camp, Kruger N.P. 14.iii.1971 (Balinsky)
PU *Tvl* – Kaapmuiden 4.v.1981

DISTRIBUTION. Streams or pools with moderate current. Namibia. Swaziland, Transvaal, north to East and West equatorial Africa, and into palaearctic North Africa.

P. inconspicuum inconspicuum Ris, 1931: 98 (Angola)

Paratype ♂ (and possibly holotype ♂) in *SMF* from St Amaro, Angola ix.1928

DC *Cape* – Jonkershoek, Stellenbosch
LM *Cape* – Fransch Hoek 17.i.1962
TM *Cape* – Ceres 450 m, x, xi.1920; Clanwilliam xi.1948

DISTRIBUTION. Streams, rivers or pools. S.W. Cape, Angola, Zambia, Malawi and Shaba (Zaire); a race in Iraq. It will probably be found in the Caprivi or other parts of Namibia between the Cape and Angola.

P. inopinatum Balinsky, 1971: 11-15 (Transvaal)

Holotype ♂ in *TM* from Badplaas, Eastern Transvaal 12.xii.1968 (B. I. Balinsky)

BC *Tvl* – Paratype ♂ from Badplaas
NMB Paratype ♂ from Badplaas 12.xii.1968 (Balinsky)
Nat – ♂ Drakensberg 5.x.1948 (A. H. Newton)
TM Holotype as above

DISTRIBUTION. Ecology not known to me. Endemic to Natal and Transvaal.

P. kersteni (Gerstaecker, 1869): 222 (Tanganyika)

Holotype ♂ (damaged), allotype in *ZMHU* from Mbaramu, Tanzania coast

P. praetextatum Selys, 1876: 204, holotype ♂, allotype said to be in *SCIS* from Zanzibar

DC *Cape* – Cedarberg Mtns

HM *Nam* – Grootfontein 1913 (H. Thomson)

KCB *Swaz* – Manzini 20.xi.1976 (J. W. Boyes)

LM *Nat* – Durban 8.iii.1939 (J. J. van der Starre)
Swaz – Havelock 23.ix.1958; Ulaticula 25.ix.1958

NMB *Cape* – Prince Alfred Pass, Knysna 22.x.1970; Somerset East 29.x.1978; & variety: Spitzkop, Knysna 1969 (Cottrell)
TK – Mt Frère 4.xi.1970 (Pinhey)
Nat – Empangeni iii.1950, vi.1951; Eshowe ix.1949; Haladu iv.1949; Nkandhla iv.1961; Nqutu ix.1948; Nsuzi Valley iv.1952 (all Newton); Port Edward xi.1979 (Pinhey); Ramsgate xi.1979; Umdoni Park xi.1979 (both Pinhey); Umkomaas xii.1956 (Newton)
Swaz – Holiday Inn, Mbabane 2-7.iv.1978 (Londt); Mhlumeni 18.iv.1970
Tvl – Fountains, Pretoria xii.1950 (Capener); Klipfontein xii.1979 (C. Car); Letaba Valley xii.1958; Levubu River, Louis Trichardt xii.1978 (Pinhey); Nelspruit x.1967; Outlook Est., Soutpansberg xii.1978 (Pinhey & Mhlanga); Woodbush xii.1966 (Pinhey); Wylies Poort xi.1973 (Pinhey)

PU *Tvl* – Carolina ii.1979; Groblersdal iii.1975; Pretoria iv.1974; Sabie iv.1970; Witbank 11.iv.1979

SAM *Cape* – Blue Cliff, Dunbrody ii.1912 *Nat* – M'Fongosi iii-xii.1911, v.1916 (W. E. Jones)
Tvl – Barberton v.1911 (H. Edwards)

TM Series from Cape, including Pirie forest 23.ii.1954; Natal and Transvaal

ZMUL *Cape* – Bloukrans River, Plettenberg Bay 14.i.1951; Kokstad 6.iii.1951 (Brinck)
Nat – Albert Falls 13.iv.1951; Hluhluwe G.R. 18.iv.1951 (P. Brinck)

DISTRIBUTION. Pools, lakes, streams or rivers, but absent in swamp or thick forest. Generally abundant from Cape to equatorial Africa.

P. makabusiensis Pinhey, 1950: 263 (Mashonaland)

Holotype and paratype ♂ in *TM* from Makabusi River, Salisbury (now Harare), Zimbabwe

NMB *Tvl* – Hangklip, Louis Trichardt v.1979 (N. Duke); Klipfontein 5.xii.1979 (C. Car); Hanglip, Waterberg 9.xii.1976 (F. C. de Moor)

DISTRIBUTION. At streams amongst rushes or long grasses. Northern Transvaal, north to Zambia, and eastern Angola.

P. massaicum Sjöstedt, 1909: 48 (Mount Kilimanjaro)

Holotype ♂, allotype in *NRS* from Kibonoto, Mt Kilimanjaro, North Tanzania

Variety *kogmani* Barnard, 1937: 215 (Cape), holotype ♂, allotype, several paratypes of both sexes in *SAM* from Kogmans Kloof, Montagu, Cape i, xi.1935; 3 ♂, 2 ♀ syntypes in *BMNH, id. loc.* xi.1935 (A. J. Hesse & C. W. Thorne)

The true status of this infra-specific form (also recorded as *cogmanni* or *cogmani*) would require comparison between normal, widespread *massaicum* and a series from the Cape to decide its status, possibly racial.

BC *Nat* – Enseleni River, Richards Bay; St Lucia; Umfolozi Game Reserve
BMNH Syntypes of *kogmani*
HC *Cape* – Grahamstown
NMB *Cape* – Witrand farm, Warrenton 2.xi.1977 (F. C. de Moor)
Tvl – Mosdene swamps 5.xii.1976 (de Moor); Njelele dam, Messina road 6.i.1979 (Pinhey)
NRS *Nat* – Caffraria (Wahlberg)
PU *Tvl* – Pretoria xii.1960
SAM Type series of *kogmani*, as above
Cape – Kridouw Krans ix.1931 (K. H. Barnard) *Nat* – M'Fongosi iv, v.1934 (W. E. Jones)
TM *Cape* – Vioolsdrift x.1971 *Nat* – Several localities
OFS – Krugers Drift dam 10.xi.1972
Tvl – Pienaars River dam 14.i.1973; Pretoria
USNM *Tvl* – Pretoria ii.1949 (Pinhey)

Allanson, *et al.* (1974) record it from Lake Sibaya, Zululand. East London xii.1983 (Duke & Pinhey).

DISTRIBUTION. Pools, streams or quiet margins of rivers. Cape to Natal, Transvaal, north to East and West equatorial Africa. With possible subspecific status of the Cape populations.

P. newtoni Pinhey, 1962a: 895 (Zululand)

Holotype ♂, allotype in *NMB* from Nqutu, Zululand ii, iii.1961 (A. H. Newton)

BC *Cape* – Groot River *TK* – Port St Johns *Nat* – Lions River
NMB Type series, as above.
Nat – Nqutu 3.i.1944, 29.xii.1948, 21.xii.1949, 14.ii.1950, 11.i.1951, 30.xii.1957, 2.i.1958, 1–3.xii.1960, 16.ii.1961, 18.iii.1961 (all A. H. Newton)

DISTRIBUTION. Species not seen by me in life. Endemic to eastern Cape, Transkei to Zululand.

P. salisburyense Ris, 1921: 306 (South Africa and Rhodesia)

Paratype ♂ (and probably holotype) in *SMF* from Salisbury (now Harare), Zimbabwe

KCB *Swaz* – Kwaluseni 20.xi.1976 (J. M. van Brink); Malkerns 18.xi.1976 (J. W. Boyes); Umtulalali Valley 11.xi.1976 (van Brink); Usutu forest 17.iv.1977 (Boyes)
LM *Nat* – Durban 8.iii.1939 (J. J. van der Starre)
Tvl – Happy Rest den, Soutpansberg; Roodeplaat, Pienaars River 9.i.1958 (A. C. van Bruggen); the barrage, Vaal River, 13.xi.1958; White River 11.xii.1949 (N. P. Mitton)

NMB *Cape* – Aughrabies Falls 18.ii.1977; Belmont Valley, Grahamstown 12.iv.1971; Keimoes, Orange River 4.ii.1980; Witrand farm, Warrenton x, xi.1978, i.1980 (F. C. de Moor)
Nat – Cowies Hill ix.1959; Drakensberg xii.1949 (Newton); El Mirador x.1948; Haladu iv.1949; Ladysmith xi.1951, xii.1952; Mulders Drift xi.1950; Nqutu ix.1948 (all A. H. Newton); Umzimkulu xi.1970 (Pinhey)
OFS – Parys 4.ii.1979
Tvl – Albasini dam, Louis Trichardt xii.1979 (Pinhey); Echo Valley, Krugersdorp xii.1968; Klipfontein xii.1979 (C. Car); Levubu River, Louis Trichardt xii.1978 (Pinhey); Nylstroom x.1968; Pretoria x.1963; Sterkfontein xii.1966; Vereeniging iii.1979 (H. N. Empey); Wolmaranstad ii.1977 (Empey); Wylies Poort x.1968 (Pinhey)

PU *Tvl* – Brits i.1979; Groblersdal v, xii.1979; Marico ii.1973; Middleburg iv.1981; Olifantsnek dam 28.iii.1970; Pilgrims Rest iv.1979, ii, iv.1981; Vaalwater 1.iii.1980

SAM *Cape* – Kingwilliamstown 1894 (R. Lightfoot); Waterberg i.1920
Nat – M'Fongosi iii, ix.1911 (W. E. Jones)

SMF Type series included South Africa

TM Series from Cape (including Vioolsdrift x.1971); Natal; Transvaal (including Nelshoogte forestry 24.xi.1972; Pafuri xi.1973). Also *OFS* – Stroomkraal 30.xii.1975

ZMUL *Cape* – Tzitzikama forest 14.i.1951 *Nat* – Albert Falls 13.iv.1951
Tvl – Jukskei River, Johannesburg 10.x.1950 (all P. Brinck)

Appleton (1974) records it from Nelspruit, Transvaal. Abundant at East London xii.1983 (Duke & Pinhey).

DISTRIBUTION. Reedy or grassy pools, streams or river margins; common in South and eastern Africa. Cape to Natal and Transvaal, north to Somalia.

P. sjoestedti sjoestedti Förster, 1906b: (62, sep.) (Kameroon)

Holotype, ♂ damaged, in *AAM* from Bipindi, Cameroun

One of the most variable of African Zygoptera, but not yet recorded from this region. Subspecies *jacksoni* Pinhey (1961: 36, Uganda) is common in the Okavango delta of N.W. Botswana and probably occurs across the border in the Caprivi. Subspecies *pseudosjoestedti* Pinhey (1964: 88) is found in Mashonaland and Moçambique and may perhaps extend to the Limpopo Valley.

DISTRIBUTION. Pools, swamps, streams or rivers, but not stagnant waters. The races and forms are found in tropical or subtropical Africa beyond our northern borders.

P. spernatum natalense Ris, 1921: 307 (Natal)

2 Paratype ♂ (and probably the holotype), 1 parat. ♀ in *SMF* from M'Fongosi, Natal 1911 (Jones)

NMB *Cape* – Somerset East 29.x.1978
Nat – Drakensberg 6.xii.1949; Kambula 2.iii.1950; Nkandhla 3.iv.1961; Nqutu i.1951, xii.1957, x.1960, ii, iii.1961 (all A. H. Newton)
Swaz – Mantengu Falls 4.i.1975 (F. C. de Moor)
Tvl – Clouds End, Louis Trichardt 4.iv.1976 (Pinhey)

SAM *Nat* – M'Fongosi iii–xi.1911 (W. E. Jones)
SMF Paratype *natalense*. *Nat* – Willow Grange, Mooi River
SUC *Cape* – Herold 10.ii.1972 (R. Matare) *OFS* – Edenburg 17.xi.1976 (J. M. Hermann)
Tvl – Nelspruit (Appleton)
TM *Nat* – Balgowan ii.1949 (K. M. Pennington)
Tvl – Sterkfontein ix.1948 (Pinhey); Woodbush xii.1907
USNM *Nat* – Balgowan iii.1949 (Pinhey) *Tvl* – Pretoria iii.1949 (Pinhey)
ZMUL *Cape* – Kokstad 6.iii.1951 (Brinck)

Ris (1921) gives Stutterheim, eastern Cape and Appleton (1974) Nelspruit, Transvaal.

DISTRIBUTION. Streams or rivers in the open or in forest, often montane. Subspecies *natalense* occurs from eastern Cape and Natal to Transvaal and Mashonaland. Near Stutterheim, E. Cape 27.xii.1983 (Duke & Pinhey). Subspecies *spernatum* Selys (1881) and *gerstaeckeri* Karsch (1899) extend the range from North Zambia to Zaire and Ethiopia.

P. sublacteum sublacteum (Karsch, 1893): 40 (Togo)

Holotype ♀ in *ZMHU* from Togoland

P. pseudomassaicum Pinhey, 1951: 93, holotype ♂ and allotype in *TM* from Makabusi River, Mashonaland 1947–48

NMB *Nam* – Popa rapids, Okavango River, Caprivi 12.iv.1970 (H. D. Brown)
Tvl – Balule camp, Kruger N.P. 14.iii.1971; Huwi PNR, Ellisras 2.xii.1977 (R. Chimwendo): Skukuza, Sabie River, Kruger N.P. 16.iii.1971 (B. I. Balinsky)
TM Types of *pseudomassaicum*, as above. *Nat* – Umhlatuzi River, Empangeni xii.1948 (Pinhey)
ZMUL *Cape* – Aughrabies Falls 11.xi.1950; Kakamas 12.xi.1950 (P. Brinck)

DISTRIBUTION. Moderately fast currents in pools, streams or rivers. Namibia. Northern Cape, Natal, Transvaal, north to equatorial Africa, with darker race *doualae* Pinhey in West Africa and another in Israel and Arabia.

P. sudanicum rubroviride Pinhey, 1956: 23 (near Zambezi River)

Holotype ♂, allotype *rubroviride* in *BMNH*, paratypes in *NMK* from Maramba River, Zambezi, near Mosi- oa- Tunya (Victoria Falls) x.1953 (Pinhey)

NMB *Nam* – Andara Mission, Caprivi iii.1974 (Pinhey; ♂ as prey of *Laxenecera albicincta* Lar. (Asilidae))

DISTRIBUTION. Streams or rivers with fast currents. Namibia. Botswana and Zambezi Valley north to equatorial Africa; nominotypical *sudanicum* Le Roi from Sudan west to Ghana.

P. umsingaziense Balinsky, 1963: 237 (Zululand)

Holotype and paratype ♂ in *TM* from Umsingazi Lake, Richards Bay, Natal 1957 (Balinsky)

BC Paratype ♂ as above
BMNH Paratype ♂ as above

NMB Paratype ♂.
Nat – Enseleni River 31.xii.1957 (Balinsky); Umsingazi Lake 9.i.1965, 30.xii.1969 (Balinsky)
Tvl – Huwi PNR, Ellisras 3.xii.1977 (R. Chimwendo)
TM Holo- and paratype ♂, as above

DISTRIBUTION. Ecology not known to me. Endemic to N. Natal and Transvaal.

P. vaalense Chutter, 1962: 173 (Transvaal and Free State)

Holotype ♂, allotype and paratype in *TM* from Vaal River, Standerton, Transvaal xii.1961 (F. M. Chutter)
BMNH Paratype ♂ from Standerton
NMB 4 paratypes, both sexes, from Standerton 5.xii.1961 (Chutter)
Cape – Aughrabies Falls 23.iii.1963 (D. H. Eccles); Keimoes, Orange River 4.ii.1980; Vaalhartz weir 13.xi.1977 (F. C. de Moor); Witrand farm, Warrenton x, xi.1977, 31.x.1978 (de Moor)
Les – Maseru 21.iii.1963 (D. H. Eccles)
OFS – Rusfontein dam 25.xii.1973 (O. Bourquin)
Tvl – Prieska 1.i.1978; Vaal River x.1956
TM Types, as above
OFS – Rusfontein dam 25.xii.1973; Vlakkraal, Modder River 11.xi.1973

DISTRIBUTION. Ecology not known to me. Endemic to northern Cape, Free State and Transvaal.

Genus *Enallagma* Charpentier, 1840: 21

Type-species *Agrion cyathigerum* Charpentier (1840, holarctic)

E. elongatum (Martin, 1906): 513 (Kenya)

Holotype ♀ in *MNHN* from Lumba, Kenya (Maurice de Rothschild)
NMB *Nat* – Queen Elizabeth Park, Pietermaritzburg 10.x.1978 (Empey)
Swaz – Holiday Inn, Mbabane 2–7.iv.1978 (J. G. H. Londt)
ZMLU *Nat* – Albert Falls 13.iv.1951 (P. Brinck)

DISTRIBUTION. Reedy or grassy pools and streams. Natal, Swaziland. Zimbabwe north to Somalia and Ethiopa.

E. glaucum (Burmeister, 1839): 821 (Cape)

Holotype ♂ and allotype in *MLUH* from Cape of Good Hope
BMNH *Nam* – Naukluft *Cape* – Ceres; Deelfontein
Nat – Bergville; Durban; Inanda Falls; van Reenen; Weenen
OFS – Harrismith; Kroonstad *Tvl* – Boksberg, Johannesburg
DC *Cape* – Cape Flats
KCB *Les* – Roma 1, 4.ii.1975 (J. W. Boyes) *Swaz* – Big Bend, Kwaluseni 24.iv.1977 (Boyes)
LM *Les* – 5 km from Nazareth 27.iii.1951 (P. Brinck)
Tvl – Pretoria West 20.xi.1949 (N. P. Mitton); Soutpansberg 30.iv.1958
MLUH Types, as above

NMB *Nam* – Bellerode farm, Windhoek 16.iii.1975 (de Moor); von Bosch dam, Okahandja xii.1977
Cape – Aughrabies Falls ii.1977; Buffalo Pass, East London xi.1979 (N. Duke); George 18.iv.1979 (N. Duke): Hope Town iii.1963 (D. H. Eccles); Katzenberg Hill, Mamre ix.1972 (Dickson): Kruisvalley, Buffelsnek x.1970; Plettenberg Bay iv.1971; Somerset East x.1978 (Empey) *Les* – Maseru iii.1963 (D. Eccles)
Nat – Catkin Peak x.1976; Durban viii.1955 (C. G. C. Dickson); Nqutu x.1951, ix.1960, iii.1961; Pietermaritzburg iv.1950 (all Newton), x.1978; Piet Retief x.1960 (Newton); Richards Bay v.1963; Yellow Woods, Balgowan iii.1960 (K. M. Pennington) *OFS* – Edenburg xii.1957
Tvl – Benoni iii.1979 (Empey); Echo Valley, Krugersdorp xii.1968; Honey Dew i.1972 (Empey); Klipfontein xii.1979 (C. Car); Mosdene swamps xii.1976 (de Moor); Outlook Est., Soutpansberg xii.1978 (Pinhey & Mhlanga); Roodepoort xi.1979 (Empey); Vereeniging iii.1979 (H. N. Empey)

PU *Tvl* – Brits vi.1977; Mhlosheni River, Komatipoort 12.vii.1980; Pretoria xi.1975, iii, v.1981, ii.1982; Roodeplaat dam iii.1981

SAM *Cape* – Kingwilliamstown
Nat – M'Fongosi, many dates from ix.1911 to iv.1935 (W. E. Jones)
Tvl – Barberton

SUC *Cape* – Lady Grey 6.ii.1925 (R. J. Nel); Malmesbury 14.v.1971 (Dickson); Robertson 18.iv.1927 (J. C. Nel); Stellenbosch 23.x.1923 (C. K. Brain), 26.iv.1927
Nat – Amanzimtoti 29.iv.1916

TM *Nam* – Naukluft
Cape – Ceres; Deelfontein; Matjesfontein; Tradouw Pass
Nat – Bergville; Inanda Falls; van Reenen
OFS – Harrismith; Rayton, Bloemfontein 3.x.1973; Vlakkraal dry dam 4.xii.1973
Tvl – Boksburg; Johannesburg; Northcliff, Johannesburg 18.ix.1968; Pienaars River dam 14.i.1973

ZMUL *Cape* – Kleinmond 19.xii.1950; Bredasdorp 30.xii.1950; Humansdorp 1.iii.1951; Knysna forest 18.i.1951; Ladismith 5.i.1951; Swellendam 3.i.1951; Tzitzikama forest 12.i.1951 (P. Brinck) *TK* – Mt Frère 5.iii.1951
Les – Leribe 30.iii.1951; Maseru 22.iii.1951; Nazareth 26.iii.1951
Nat – Natal N. Park iv.1951
Tvl – Skukuza, Kruger N.P. 1.v.1951 (all P. Brinck)
Appleton (1974) records it from Nelspruit, Transvaal.

DISTRIBUTION. Pools or streams, especially where there are grasses or rushes. Usually abundant. Namibia, Cape, Natal to Transvaal, north to East and West equatorial Africa; and Réunion, which is surprising since none have been found on Mauritius or Madagascar.

E. nigridorsum nigridorsum Selys, 1876: 531 (114, sep.) (Zanzibar)

Type-series in *SCIS* not found.

BC *Nat* – Nyalazi River and Richards Bay 1957
LM *Tvl* – Skukuza, Kruger N.P. 1.v.1951 (P. Brinck)
NMB *Nat* – Hluhluwe 30.iii.1950 (A. H. Newton); Lake St Lucia 30.iii.1975 (R. C. Dening)
Tvl – Huwi PNR, Ellisras 29.xi.1977 (R. Chimwendo): Mosdene swamps 3.xii.1976 (F. C. de Moor)
TM *Nat* – Hudley xii.1948 (Pinhey); Kosi Bay vii.1948 (Pennington)
ZMUL *Tvl* – Skukuza, Kruger N.P. 1.v.1951 (Brinck)

Allanson, *et al.* (1974) record it from Lake Sibaya, Zululand.

DISTRIBUTION. Pools or streams with marginal vegetation. At crater Lake Diluti, northern Tanzania, 1950, it was in such abundance on the banks of this deep pool that several could be swept up at one stroke of a net (Pinhey, 1961). Natal, Transvaal, north to East and West equatorial Africa; and subsp. *kauderni* Sjöstedt is the only *Enallagma* found on Madagascar. The genus is very sparsely represented on Afrotropical islands far from the coast, but on Socotra there is *E. granti* (McLachlan), one of the most remarkable of this cosmopolitan genus.

E. polychromaticum Barnard, 1937: 220 (Cape)

Holotype ♂, allotype and paratypes in *SAM* from Sevenweeks Poort, S. W. Cape i.1935 (and a paratype ii.1932) (K. H. Barnard)

BC *Cape* – Fransch Hoek 1962
BMNH Paratype, as above, Sevenweeks Poort i.1935
SAM Type series, as above.
Cape – Sevenweeks Poort i.1936 (H. G. Wood); Zwartberg Range
TM *Cape* – Sevenweeks Poort i.1936 (Wood)

DISTRIBUTION. From its small size I suspect that, like *E. angolicum* Pinhey (1966, = *moremi* Balinsky, 1967) and the genus *Agriocnemis* Selys, it has a weak flight and is consequently gregarious amongst vegetation over quiet pools; but I have not seen it in life. A Cape endemic.

E. rotundipenne Ris, 1921: 321 (Caffraria and Zululand)

Holotype ♂ in *NRS* from Caffraria; allotype ♀ in *SAM* from Zululand

NMB *Les* – Maseru iii.1951 *Tvl* – West Park dam, Johannesburg 5.iii.1978 (H. M. Robertson)
NRS Holotype from Caffraria (Wahlberg)
SAM Allotype from Zululand
TM Pretoria ii.1906

DISTRIBUTION. As with the previous species I have not seen this in life. An endemic from Lesotho, Natal and Transvaal.

E. sapphirinum Pinhey, 1950: 267 (Transvaal)

Holotype ♂, allotype, paratypes in *TM* from Sterkfontein, Transvaal 15.ix.1948, i.1949 (Pinhey)

BMNH Paratype from Sterkfontein. *Tvl* – Pretoria
LM *Tvl* – Pretoria West 20.xi.1949 (N. P. Mitton)

NMB Paratype from Sterkfontein. *Nat* – Haladu xi.1948 (A. H. Newton)
OFS – Clocolan 14.x.1963 (Empey) *Tvl* – Sterkfontein 26.xii.1966
PPI Paratype ♂ from Sterkfontein (Pinhey)
TM Type-series, as above; and Sterkfontein ix, x.1948, i.1949 (Pinhey)
Tvl – Pretoria ii.1949 (Mitton & Pinhey)
USNM *Tvl* – Pretoria i.1949 (Pinhey); Sterkfontein 11.xi.1949 (N. P. Mitton)

DISTRIBUTION. Endemic in small streams. Zululand, Free State and Transvaal.

E. sinuatum Ris, 1921: 330 (Congo Belge)

Holotype ♂, allotype in *TMB* from Kapiri, Shaba, Zaire (collected by Legros); cotype ♀ in *SAM* from M'Fongosi, Natal 1911 (W. E. Jones), parat. ♂ from Mashonaland (no data) in *SAM*

SAM Part of type series, as above, from Natal and Mashonaland
SMF Paratype ♀ from M'Fongosi, Natal iv.1911 (Jones)

DISTRIBUTION. Streams, sometimes in rather arid, rocky localities, where a faintly marked dry season form *fugax* Pinhey may occur (descr. from Zambia). Natal. Zimbabwe, north to Tanzania, and Shaba (Zaire).

E. subfurcatum Selys, 1876: 534 (117, sep.) (Abyssinia)

Holotype ♀ in *NRS* from Ethiopia (Abyssinia) Selys (1876) mentions 2 ♂, from Abyssinia (leg. Dillion) in *SCIS*.

BMNH *Cape* – 1 ♀ Ceres 450 m, 27.x.–1.xi.1920 (R. E. Turner): S. Brooks has re-examined the specimen and believes it was correctly identified.
ZMUL *Cape* – 1 large ♂ from Zeekoevlei, Cape Flats 8.xii.1950 (Brinck)

DISTRIBUTION. Often common but normally on montane or upland pools, lakes or quiet streams. The low-lying Cape Flats record seems abnormal but perhaps wind-blown off a higher elevation. Cape. Zimbabwe, north to East and West equatorial Africa; and Mauritius (Pinhey, 1976a).

E. subtile Ris, 1921: 332 (Congo Belge)

Holotype ♂, allotype in *TMB* from Shaba, Zaire

SAM 1 ♀ (without data?), catal. no. 132
TM *Nam* – Otjikango vii.1948 (C. Koch)

DISTRIBUTION. Streams in warm, often arid localities, amongst reeds. Namibia. Botswana, north to Ethiopia.

Genus *Ischnura* Charpentier, 1840: 259

Type-species *Agrion tuberculatum* Charpentier, 1825 (synonym of *Agrion elegans* van der Linden, 1823, Europe)

I. senegalensis (Rambur, 1842): 276 (Senegal, India, etc.)

Type almost certainly lost from Serville Collection. A neotype requires to be erected from Senegal or Oriental material

DC *Cape* – Cape Flats; Jonkershoek, Stellenbosch

LM *Cape* – Zeekoevlei 25.xi.1949 (Geesteranus) *Tvl* – Roodeplaat 9.i.1958 (van Bruggen)
NMB *Nam* – Andara, Caprivi 1974 (de Moor & Pinhey)
Cape – Several localities, including van Schoors Drift; Kamieskroon, Namaqualand
TK Umtata – 1.iii.1966
Nat – Haladu; Kambula; Ladysmith; Mtunzini 15.ix.1949; Southbroom; Spion Kop; Uvongo River 11.xi.1979 (Pinhey)
OFS – Clocolan (Empey) *Tvl* – Many localities including Springs
PU *Cape* – Kirkwood iv.1969; Knysna xii.1977
Tvl – Pretoria i.1974; Roodeplaat dam iii.1981; Zeerust iv.1969
SAM *Cape* – Blue Cliffs, Dunbrody ii.1912; Kingwilliamstown (---)
SUC *Cape* – Cape Town 4.iv.1971
TM Series from Cape, Natal and Transvaal. Also:
OFS – Krugers Drift dam 11.x.1972: Modder River 25.xi.1973; Rusfontein dam 25.xii.1973 (O. Bourquin): Vlakkraal 27.xii.1973 (Bourquin)
ZMUL *Nam* – Kowares, Kaokoveld vi.1951; Omutati, Kaokoveld and Sanitatas vi.1951
Cape – Many localities, including Cape Peninsula and Bredasdorp
Les – Leribe 30.iii.1951 *TK* – Matatiele 7.iii.1951 (all P. Brinck)

Allanson, *et al.* (1974) record it from Lake Sibaya, Zululand.

DISTRIBUTION. A common and very adaptable species in warm or cool, wet or fairly arid regions, at pools, lakes, streams or rivers, brackish or fresh waters or close to hot springs. With *Ceriagrion glabrum* the most widespread and abundant of African Zygoptera, found from the Cape to Mediterranean Africa and in many islands; and through Asia to the Philippines.

Genus *Agriocnemis* Selys, 1869: 24 (*sine descr.*): 1877: (182, sep.)

Type-species *Agriocnemis lacteola* Selys (1872, selected as type, confirmed by Fraser, 1933)

Ecologically, all African species are similar, gregarious, slow-flying, found at quiet, grassy or rush-filled pools or restricted pools in swamps. For a revision see Pinhey, 1974.

A. angolensis angolensis Longfield, 1945: 15 (Angola)

Holotype ♂, allotype, paratype in *BMNH* from Sangévé, etc., South Angola 11.ii.1933
BC *Nam* – Andara Mission, Caprivi 3.xi.1960 (F. Gaerdes)
NMB *Nam* – Andara 27.iii.1974 (Pinhey)

DISTRIBUTION. Swamp pools. Namibia – Caprivi and South Angola; subsp. *spatulae* Pinhey, 1974, N. W. Zambia (holotype ♂ in NMB).

A. exilis Selys, 1872: (182, sep.) (Madagascar and Mauritius)

Type-series in *SCIS* from Madagascar and Mauritius, not designated, all with nr. 34
BC *Nat* – Nyalazi River, St Lucia 1957; Richards Bay 1957
HC *Cape* – Witteklip

NMB *Nam* – Andara, Caprivi 27.iii.1974 (Pinhey); von Bach dam, Okahandja 27.xii.1977 (F. C. de Moor)
Cape – New Years dam, Alicedale 5.xi.1978
Swaz – Holiday Inn, Mbabane 2.iv.1978 (J. G. H. Londt)
Tvl – Huwi PNR, Ellisras 6.xii.1977 (R. Chimwendo): Outlook Est., Soutpansberg 6.xii.1978 (Pinhey & Mhlanga); Woodbush, Haenertsberg xii.1966 (Pinhey)
TM *Tvl* – Moordrift x.1907

Allanson, *et al.* (1974) found it at Lake Sibaya, Zululand. East London 1983 (Duke & Pinhey).

DISTRIBUTION. Gregarious at grassy or rush-filled pools. Namibia, Cape, Natal, Transvaal, north to E. and W. equatorial Africa; Madagascar and Mauritius. No differences between continental and insular material. Its wide distribution probably caused by wind currents.

A. falcifera falcifera Pinhey, 1959: 465 (Zululand)

Holotype ♂, allotype, paratypes of both sexes in *TM* from Inyezane River, Hudley, Zululand xi, xii.1948 (Pinhey)

Subsp. *transvaalica* Pinhey, 1974: 213 (Transvaal), holotype ♂, allotype, paratypes in *NMB* from Woodbush, Haenertsberg Mtns xii.1966 (Pinhey)
NMB Paratypes of *falcifera*, type series of *transvaalica*
TM Type series of *falcifera*
USNM *Tvl* – parat. ♀ *transvaalica* Tzaneen, Morenski dam 18.ii.1968; ♂ 9 km north of Warmbad 24.ii.1968 (Spangler & Kronbein)

Found near East London xii.1983 (Duke & Pinhey)

DISTRIBUTION. Endemic in pools in eastern Cape and Natal bush *(falcifera)* or Transvaal forest *(transvaalica)*.

A. gratiosa Gerstaecker, 1891: 190 (Zanzibar)

Type ♂ apparently lost; syntypes in *HM*
BC *Nat* – Umsingazi swamp, Richards Bay, Zululand 1.i.1958
NMB *Nam* – Andara Mission, Caprivi 27.iii.1974 (Pinhey)

DISTRIBUTION. Local in reedy or rush-filled swamps or pools. Namibia. Natal. Botswana and Moçambique, north to Zambia, Malawi, Tanzania, Zaire, Uganda and southern Sudan; also, like *exilis*, in Madagascar, but not Mauritius.

A. pinheyi Balinsky, 1963: 247 (Johannesburg)

Holotype ♂, allotype in *TM* from Blairgowrie, Johannesburg, Transvaal 21.iii.1954 (B. I. Balinsky)
BC Paratypes
NMB *Nat* – Haladu ix.1948, i.1949; Kambula xii.1949 (all A. H. Newton)
Tvl – Hanglip, Waterberg xii.1979 (de Moor); Klipfontein xii.1979 (C. Car); Mosdene swamps xii.1976 (de Moor)
TM Types as above

Appleton (1974) found it at Nelspruit, Transvaal.

DISTRIBUTION. Grassy pools. Natal, Transvaal, Zimbabwe, Moçambique and Zambia.

A. ruberrima ruberrima Balinsky, 1961: 72 (Zululand)

Holotype ♂, allotype in *TM* from Richards Bay, Natal xii.1957 (B. I. Balinsky)

BC Paratypes

NMB Paratype ♂.

Nat – Lake St Lucia 30.iii.1975 (R. C. Dening); Richards Bay 6.v.1963; 10.xi.1970 (Pinhey)

TM Types from Richards Bay

DISTRIBUTION. Pools and swamps in Natal; with an Okavango, Botswana subspecies *albifrons* Balinsky, 1963: 249, Ngamiland, holotype ♂ in *TM* (but "allotype" is a ♀ *exilis*, see Pinhey, 1974: 218; allotype *albifrons* is in *NMB*, from Okavango swamps).

CALOPTERYGIDAE Buchecker

Genus *Phaon* Selys, 1853: 22, 23

Type-species *Calopteryx iridipennis* Burmeister (1839)

P. iridipennis iridipennis (Burmeister, 1839): 827 (Port Natal)

Holotype ♂ in *MLUH* from Durban (Port Natal)

AAM *Nat* – Umbilo road, Congella (G. F. Leigh, in Williamson Collection)

BC *Nat* – Nyalazi River, St Lucia Bay xii.1957 (Balinsky)

BMNH *Nat* – Durban: Tongaat

KCB *Nat* – dwarf ♀ (hindwing 39 mm) Mkosi Game Res. 13.xi.1976 (J. M. van Brink)

MLUH Holotype, as above

NMB *Nam* – Andara Mission, Caprivi 27.iii.1974 (Pinhey & de Moor)

Nat – Empangeni 29.iii.1950 (Newton); Ndumu G. R. 13.iii.1970; Umhlanga Rocks xi.1955 (C. G. C. Dickson); Umtamvuna N.R. 26.xi.1979 (Pinhey); Umtentweni vii.1954 (Newton)

Swaz – Mantengu Falls 4.i.1975 (F. C. de Moor)

Tvl – Albasini dam, Louis Trichardt 11.xii.1978 (Pinhey); Mogatekwane River, Alldays 25.iii.1978; Nelspruit 15.x.1967 (Pinhey); Njelele dam, Louis Trichardt 11.xii.1978 (Pinhey & Mhlanga); Wylies Poort 8.viii.1950

NRS Nat – Zululand x.1904 (I. Trägårdh)

PU *Nam* – Andara, Caprivi 30.vii.1973

Tvl – Hazyview 24.v.1979; Waterpoort 19.iv.1981

SAM *Nat* – Durban v, vi.1883 (J. H. Bowker); M'Fongosi ii-xii.1911 (W. E. Jones)

Tvl – Kaapmuiden xii.1918 (R. E. Tucker)

SUC *Nat* – Durban 19.vii.1920 (T. Tuckington)

TM *Nat* – Durban; Kosi Bay; St Lucia; Tongaat *Tvl* – Barberton; Pretoria

ZMLU *Nat* – Albert Falls, Pietermaritzburg 13.iv.1951 (P. Brinck)

Allanson, *et al.* (1974) found it at Lake Sibaya, Zululand. A. J. Duke (14.vi.1983) says "not uncommon" in Buffalo Pass Forest, East London, Cape.

DISTRIBUTION. Shaded streams or pools in bush, woodland or forest. Namibia, Natal to Transvaal, north to E. and W. equatorial Africa; races in West Africa (or distinct species) and Madagascar.

CHLOROCYPHIDAE Cowley

Genus *Chlorocypha* Fraser, 1928: 684 (nom. nud.); Fraser, 1934: 55

Type-species *Agrion dispar* Palisot de Beauvois (1807, Ivory Coast)

C. consueta (Karsch, 1899): 376 (Nyasaland)

Holotype ♂ in *ZMHU* from Malawi, Panimbira, N.E. Lake Malawi (Bümiller)

Formerly confused with *C. luminosa* (Karsch, 1893), a Togo endemic (teste Pinhey, 1967)

PU *Nat* – MBalane (MBilaan) (*vide* Pinhey, 1951: erroneously named *selysi* (Karsch, 1899))

DISTRIBUTION. Forested streams. Natal. Moçambique, Zimbabwe, Malawi, Zambia, eastern Angola and Shaba (Zaire).

Genus *Platycypha* Fraser, 1949: 10

Type-species *Libellago caligata* Selys (1853)

P. caligata caligata (Selys, 1853): 57 (Port Natal)

Holotype ♂ in *NRS* from Durban (Port Natal); series, undesignated, in *SCIS*

BC *Nat* – Nayalazi River, St Lucia Bay xii.1957

HC *Cape* – van Stadens Pass

LM *Nat* – Albert Falls 13.iv.1951 (Brinck); Durban 8.iii.1939 (J. J. van der Starre)

NMB *Nam* – Andara Mission, Caprivi 27.iii.1974 (Pinhey & de Moor); Popa Rapids, Okavango River 12.iv.1970 (H. D. Brown)
Cape – Buffalo Pass, East London 30.xi.1979 (N. Duke): Vaalharts weir 8.i.1980
TK – Mapuzi River, Coffee Bay iii.1974
Nat – Eluhluwe 4.iv.1958; Ladysmith 30.xii.1951; Nkandhla 22.i.1949; Nqutu 10.x.1949, 30.xii.1957; Nsuzi Valley 12.iv.1952 (all A. H. Newton): Port Edward 9.xi.1979 (Pinhey) *Swaz* – Mantengu falls 4.i.1975 (F. C. de Moor)
Tvl – Entabeni Forest Res., Louis Trichardt 10.xii.1978 (Pinhey & Mhlanga); Nelspruit 15.x.1967 (Pinhey); Outlook Est., Soutpansberg 5.xii.1978 (Pinhey & Mhlanga); Swartkop, Krugersdorp 2.ii.1972 (H. N. Empey); Vereeniging 18.iii.1979; Wylies Poort 12.xii.1978 (Pinhey)

NRS Holotype, as above. *Nat* – Zululand x.1904 (I. Trägårdh)

PU *Tvl* – Castle Gorge 3.iii.1979; Crocodile River, Nelspruit 24.v.1974; Loskop dam N.R. 10.iii.1979; Lydenburg iii.1964; Nelspruit xii.1945; Pretoria ii, iii.1980; Rustenburg iii.1974; Sibasa 16.v.1980; Waterpoort 19.iv.1978

RSM *Nat* – Umzinto iv.1909 (M. Fountaine)

SAM *Nat* – M'Fongosi ii, iv.1911 (W. E. Jones)
Tvl – Acornhoek xii.1918 (R. E. Tucker): Kranspoort xii.1906; Waterval xii.1901

SCIS Part of Selys' original series

SMF *Nat* – Amanzimtoti iii.1908 (H. A. Junod)

SUC *Nat* – Amanzimtoti iv, vi.1916, iii.1917 (M. S. Adams)

TM *Nat* – Paddock *Tvl* – Bundu Inn, Groblersdal 23.iii.1974

USNM *Nat* – Pinetown 14.iii.1908 (F. G. Leigh) *Tvl* – White River 11.xii.1949 (N. P. Mitton)

ZMUL *Nat* – Albert Falls 3.iv.1951 (P. Brinck)

I. Meskin (iv.1983) reports it at Wolhuterskop ii, iii.1982

DISTRIBUTION. Fast, sandy or rocky streams, with bushes or trees. Namibia, E. Cape, to Natal, Transvaal, north to Somalia, west to Guinea Bissau; a race in Angola and an ecological lacustrine morph from Malawi.

P. fitzsimonsi fitzsimonsi (Pinhey, 1950): 270 (Natal)

Holotype ♂ in *TM* from Umzimkulwana river Valley, Paddock, Natal xii.1948 (V. Fitzsimons)

AMG *Cape* – Wolff River Bridge, Keistamma Hoek ii.1972 (B. C. Wilmot)

BMNH *Nat* – Umgeni River, Balgowan i.1951 (Pennington)

HC *Cape* – van Stadens Pass

LM *Nat* – Umgeni River, Dargle ii.1951 (Pennington)

NMB *Cape* – Wolff River Bridge, Keistamma Hoek 9.ii.1972 (B. Wilmot)
Nat – Drakensberg 2.x, 30.xi.1949 (Newton): Gillits stream, forest area 7.xii.1978; Umgeni River, Balgowan i, ii.1951 (K. M. Pennington)

TM Holotype, as above.
Nat – Umgeni River, Balgowar i.1951 (Pennington)

USNM *Nat* – Umgeni River, Balgowan and Dargle Dist. i, ii.1951

ZMUL *Cape* – Tzitzikama forest 14.i.1951 (P. Brinck)

Maden Dam, Kingwilliamstown xii.1983 (Duke); Keistamma Rd, Stutterheim 27.xii.1983 (Duke & Pinhey).

DISTRIBUTION. Rocky streams in sheltered river valleys. Eastern Cape to Natal; a montane race *inyangae* Pinhey on Inyanga Mtns, Mashonaland, discovered by J. A. Whellan.

END OF PART I

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