

DRAGONFLIES FROM THE GAMBIA: AN ANNOTATED LIST OF RECORDS UP TO THE END OF 1980

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A paper compiled from a handwritten draft by the late R.M. Gambles, listing all known records prior to the end of 1980.

INTRODUCTION

Amongst the papers left by the late R.M.Gambles was a MS draft of a paper setting out the results of collecting visits, prior to the end of 1980, to The Gambia. The main visits were by NWM, mid-July to mid-September 1948; RMG, one day September 1958, three weeks October/November 1980; Lund University Expeditions (LE), November 1977, and MH, December 1980.

A summary of this paper, combined with the results of the British Dragonfly Society tour in October 1989, has already been published (GAMBLES et al. 1995). The paper, which RMG labelled "Preliminary Draft", was never published. However the list of species in it, with his comments, gives details not found elsewhere of all known records prior to the end of 1980, and thus is a valuable source for future workers, and hence worth publishing.

The present paper has been compiled almost verbatim from the species accounts in Gambles's handwritten MS draft, except that some of the introductory material, already published in GAMBLES et al. (1995), has been omitted. Though there were marginal references to a typewritten draft and amendments, these have not been found amongst his papers at the British Museum of Natural History or elsewhere.

NWM's material, part papered and part in spirit, was never completely identified and was deposited in the BMNH. RMG worked through this collection and NWM's

notebook before setting out for The Gambia himself. The spirit material could not be traced. As nearly all the papered specimens were carefully numbered, and marked with the date and locality, and the field notes gave a serial number for each specimen, it was possible to reconstruct the collector's exact itinerary. This enabled RMG, in the few cases where specimens were labelled with only a serial number, to calculate the probable date and locality of its capture. In 1977, the University of Lund, Sweden sent two brief expeditions, each covering parts of both The Gambia and Senegal. RMG was later invited to examine their collection of 413 specimens, and concluded that, as far as he had been able to work through them, they largely confirmed, but slightly expanded, previous information. The collection was, in due course, returned to Lund University but nothing has been published by them. They have now kindly given permission for the inclusion of their records in this paper.

MH also sent his material, except for a few whose identity was obvious, to RMG for identification.

Prior to mapping the distribution of species, the map of The Gambia was divided into 10 km squares, conforming with those of UTM Grid Zone 28, numbered arbitrarily from 1 to 162 (Fig.1). For each species, the 10 km squares in which it has been recorded are given.

SPECIES ACCOUNTS

In the following accounts, unless otherwise attributed, the records are by RMG.

LESTIDAE

- *Lestes ochraceus* Sel. A female taken by MH at Bakau, Cape St Mary (39) 13 Dec. 80.
- *L. pallidus* Ramb. One of each sex netted over a roadside pool, containing water-lilies, a few *Juncus* and fringed with ricefields, just N. of Kartung village (161) 31 Oct. 80. A female taken, and another specimen seen settling on an

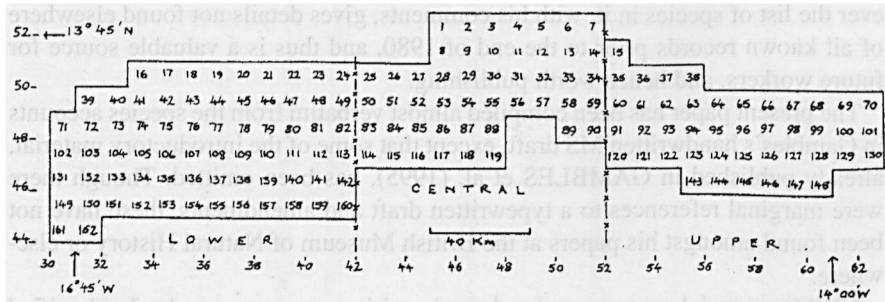


Fig. 1. The Gambia. Arbitrarily numbered 10 km squares plotted against U.T.M. Zone 28 grid.

emergent twig, at a roadside pool 2 km S. of Basori (133) on 11 Nov. 80. A teneral male and three teneral females taken over a roadside swamp with much emergent vegetation, outside Kau-Ur opposite 145 km post (9) 13 Oct. 80. A female in the Royal Scottish Museum, taken by Dr D.F. Davidson on 6 Jul. 74 at Basse (126), was identified as *L. ictericus* Gerstaecker, a species which, at that time, was confused with *L. pallidus*.

PROTONEURIDAE

- *Elatoneura nigra* Kimmins. A female 11 km south of Kuntaur (33) by NWM 31 Jul. 48 (det. RMG). Unconfirmed diary reference calls it "common in riverine scrub Barajali" (33).

PLATYCNEMIDIDAE

- *Mesocnemis dupuyi* Legrand. Basse (126), 2 males 10 Aug. 48, NWM (det. RMG). NWM notes the species as common along the R.Gambia, Barajali and Basse (33, 126). This species had previously been confused with *M. robusta* (Sel.), from "Nubia", i.e the Sudan; and RMG has identified specimens from Nigeria and Sierra Leone. It is much less wide-spread than the common *M. singularis* Karsch (possibly *M. singularis* may prefer wider rivers). These species have for many years been called *Metacnemis* which was thought of as a synonym, as the character supposed to separate the two genera was found to be completely unreliable. However, a type-species had been assigned to each genus, and in a recent revision PINHEY (1980) has shown other more valid differences between the two types sufficient to justify splitting the genus into two, *Metacnemis* (type *M. valida* Sel.) and *Mesocnemis* (type *M. singularis*).
- *Platycnemis sikassoensis* (Martin). Specimens no longer extant, but found by NWM at a bolon, presumably near Kuntaur. They were compared with BMNH specimens, and said to have been found identical with specimens of *Allocnemis rufipes* (Sel.) from Ibadan, Nigeria. However, at that time, the BM only contained one specimen of *rufipes*, not in the main collection, but in the type-cabinet, and it was not from Ibadan, but from Cameroon. RMG re-examined the BM specimens in 1958, by which time the identification had been corrected, a further specimen of the real *rufipes* acquired, and the Ibadan specimens separated off as a distinct, new and undescribed species. The Ibadan species was not actually new, but was later found to be the same as *Copera subaequistyla* Fraser, the type of which was housed elsewhere in the collection. The latter species has since been found to be the same as *Platycnemis sikassoensis* (Martin). Under these circumstances, NWM's record can be fully accepted as referring to *Platycnemis sikassoensis*. MH took a female at Abuko (73) on 15 Dec. 80.

COENAGRIONIDAE

- *Aciagrion attenuatum* Fraser. A very teneral female, squashed beyond recognition but which could well be this species, all other possibilities having been excluded. No data, but reference number suggests that it was found near Banjul (73) during the second week of Sep. 48. NWM.
- *Agriocnemis exilis* Sel. NWM took a male and a female 11 kms S. of Kuntaur (33) on 31 Jul. 48, and a female at Kuntaur (14) 5 Aug. 48. Other specimens recorded have not been traced, but their reference numbers imply they were from Kuntaur (14) and Basse (126). He also notes that it was common in paddyfields at Kuntaur (14) and Barajali (33). It also occurred in long grass away from water, and was still extant during the first week of Sep. 48. Some of these records may refer to *A. zerafica* where specimens are not available for checking.
- *A. maclachlani* Sel. NWM found five males and three females near Kuntaur (14) between 16 and 28 Aug. 48, and also recorded another male which he attributed to the same species between 3 and 5 Sep., but the specimen can no longer be traced. RMG took two females in the Abuko Nature Reserve (73) on 3 Nov. 80 by a pond with water-lilies, *Polygonum* sp., and emergent reeds and grasses. On 8 Nov. 80, an unmistakable male heavily pruinosed and with characteristic appendages was taken at the same pond, and two further females.
- *A. victoria* Fraser. NWM recorded a male from Basse (126) which he thought might be a new sub-species of *victoria*. He compared it with the holotype in the BMNH and found it identical, apart from a minor difference in the spines on the superior anal appendages. The specimen cannot now be traced. However, the difference in spines was probably of no significance, and no other species have appendages at all similar, except the considerably larger *A. forcipata* Le Roi from East Africa for which it could not be mistaken. It can therefore be accepted as typical *victoria*. RMG took three males (two mature and one still coloured red) and a red female inside Abuko Nature Reserve (73) on 3 Nov. 80 by the same pond as the previous species. In 1974, D.F. Davidson collected a male and a female in Abuko, and another male at Basse (126).
- *A. zerafica* Le Roi (= *A. ebneri* Ris). This species is very similar to the last and, unless specimens are available for checking, records cannot always be trusted. However, *zerafica* appears to be much the more abundant of the two. NWM took two specimens at Kuntaur, a male on 29 Jul. 48 and a female on 5 Aug. 48, whose identity was confirmed by RMG, as was a female taken by MH at Abuko (73) on 15 Dec. 80. RMG found the species plentifully at various locations; a ricefield SW of Kiti (132) 31 Oct. 80, roadside ponds outside Abuko Reserve (73) 4-6 Nov. 80, ricefields just south of Walli Kunda (58) 10 Nov. 80, and near Sankuli Kunda (60) 11 Nov. 80.

The specimens taken by RMG outside the Abuko Reserve were noted to be of

all ages. The youngest were parasitised by larval watermites. (In the USA, such mites have been used for ageing dragonflies during the first five days of life (MITCHELL, 1969). The early life history of the mite concerned, *Arrenurus agrioncolus*, has been studied, and the parasite can be aged by changes in colour and morphology. In the present instances, the species of mite has not been identified, and the parasites have dropped off the host species into the spirit in which they have been preserved, several to each tube, so it has not been possible to age the actual specimens observed.)

Now, the succession of colour changes, as the dragonfly develops, can be observed by examining a long series. In *zerafica* (*exilis* undergoes similar changes), the insect rapidly takes on a pale pink colour after emergence, the abdomen then turning a deep red, and the thorax a pinkish red, with antehumeral stripes of iridescent purple. A pattern appears on the dorsal surface of the abdomen with the red darkening, eventually turning to black, while in the paler parts, mostly on the sides, the red turns to green, although this darkens eventually. In the male, however, segments 8-10 remain bright red long after the rest of the abdomen has darkened; the female darkens more uniformly. The ventral surface of the male is whitish, changing to bright green, a change that takes place during the period when the end of the abdomen is still bright red. When the male is fully mature and uniformly dark, the thorax becomes pruinose all over, but never so thickly as in the mature male of *A. maclachlani*. In the Abuko specimens, mites (6 to 13 in number) were present on the undersurface of the thorax of three red-bodied females and of three males with red tips to the abdomen and whitish ventral surface. A male with the terminal segments red but distinctly green ventrally had no mites. Two females and four males with the abdomen wholly dark were without mites.

- *Ceriagrion bakeri* Fraser. This may occur in The Gambia. NWM took an undoubted male, but this was some distance across the frontier into Senegal at Velingara in East Casamance.
- *C. glabrum* (Burm.). Two males were found by D.F. Davidson in the Abuko Nature Reserve (73) in Jul. 74. At least three out of the four males taken by RMG on 31 Oct. 80 were from the R.Benifet near Sanyang Ba (131) and another either here or from near Sifoe (150). Two more males were taken at a pool -formerly a stream- at Busura (151) on 8 Nov. 80. *Ceriagrion* were still present by the Benifet and the Busura pool on 14 Nov. 80, but no specimens were taken. MH took specimens at Kotu Stream (72), Abuko and Camaloo Corner (73), Ndemban (154) and between Brufut and Tanji (102) in Dec. 80.
- *C. moorei* Longfield. A very common and ubiquitous species, not only in The Gambia but throughout West Africa. It has probably escaped notice by being confused with *C. suave* Ris, or even *C. glabrum*. Miss Longfield, identifying NWM's specimens, found it a distinct species, and that there was already unrecognized material in the BMNH from Ghana, Nigeria etc. NWM's Gambian

material consisted of two males without data but probably from near Banjul (73), a male from Kuntaur (14) and 11 km south of it (33). RMG found this species abundant in (73), at Camaloo Swamp and Abuko - both inside and outside the Nature Reserve. *Ceriagrion* was abundant by the R. Benifet, near Sanyang Ba (131) and at least one male *C.moorei* was taken either here or by a flooded ricefield beside a stream near Sifoe (132). Most of those from Sanyang Ba were *C. glabrum* but this was not appreciated until too late, and the origin of the *C. moorei* was uncertain. They were seen abundantly on a trip up-country, near Walli Kunda (33,58) 10 Nov. 80, Sankuli Kunda and Georgetown (60) 11-12 Nov. 80, Kau-Ur (9) and more were seen in (4). The up-country specimens appeared to be all *C. moorei*, and no *C. glabrum* were seen. In Nigeria (also, RMG thought, Ghana and Sierra Leone, subject to confirmation; but there is no record of this having been done), RMG has found *C. glabrum* the commonest species of the genus near the coast but - in Nigeria at least -, although it can be found hundreds of kilometres inland, it is much less common there than *C. moorei*.

- *Enallagma vansomereni* Pinhey. A male taken by Kotu Stream (72) on 26 Oct. 80.
- *Ischnura senegalensis* (Ramb.). Two males taken on 11 Sep. 58 at the edge of Banjul (73). NWM's "sp. 4" sounds like this species, but no specimens have been traced. Their serial numbers suggest that they were mostly from Kuntaur(14) in Jul., Aug. 48.
This species was found ubiquitously in 1980 in (72) and (73), Kotu Stream, Camaloo Swamp, inside and outside Abuko Nature Reserve; and also at a roadside pool just N. of Kartung (161) 31 Oct. 80, Sankuli Kunda (60) 11 Nov. 80, Georgetown (60) 12 Nov. 80, and from Choya, near Pakali Ba (55) 13 Nov. 80. MH found 12 males and 6 females at Kotu Stream (72) and Camaloo Corner (72) in Dec. 80.
- *Pseudagrion angelicum* Fraser. Two males taken in Abuko Nature Reserve (73) (D.F. Davidson) Jul. 74. What looked like two small *Pseudagrion*, but may well have been *Ischnura senegalensis*, observed in tandem, ovipositing on a sticky leaf, but too far off to be taken. MH took a definite female of this species at Abuko on 20 Dec. 80.
- *P. hamoni* Fraser. A single male taken over roadside herbage at the Sankuli Kunda ferry on Georgetown Island (60) 12 Nov. 80. NWM probably took the same species near Kuntaur (14), as he records a "Great red-eyed Agrionid", but the specimens are no longer extant.
- *P. nubicum* Sel. A male and a teneral female taken at a rice swamp south of Walli Kunda (58) 10 Nov. 80, numerous males (also males of *Trithemis annulata*) were seen perched on twigs of bushes overhanging the river at Walli Kunda (33) while I was swimming past, so they could be observed undisturbed (RMG). Two males taken beside the river at Sankuli Kunda (60) 11 Nov. 80, and seen

- again 12 Nov. 80. Another male taken at Georgetown (60) 12 Nov. 80. A species noted as "sp. 3" in NWM's notes, from a paddyfield, Kuntaur (14) on 26 Jul., 29 Aug. and 3 Sep. 48 sounds from its description as if it was this species.
- *P. sjoestedti nigeriense* Gambles. NWM took a male at Prufu Bolon, Basse (126) 16 Aug. 48, and another that was probably the same at Georgetown (60) 8 Aug. 48, but the latter specimen is no longer extant for examination. Seen almost certainly by NWM at Kuntaur (14), by river.
 - *P. sudanicum* Le Roi. NWM took a single female of this at Basse (126) on 10 Aug 48.

GOMPHIDIA

- *Neurogomphus* sp. NWM recorded "*Oxygomphus agilis*" (Martin) - which would nowadays be called *Neurogomphus* sp.- seen along the south bank of the river near Wassu, the hill of Kassang and in the bush near Kuntaur (13) from late Jul. to the first week of Sep.80. A male and a female were taken, at first presumed to be the same species, but the female was later found, from notes that NWM had made at the time, to be a *Gomphidia*. The specimens can now no longer be traced for specific identification. A *Neurogomphus* larva was dredged from deep silt in the river opposite Brikama Ba (33) on 15 Nov. 74 by Dr M.T. Gillies, who also noted a number of exuviae of the same species floating down the river. A female *Neurogomphus*, probably the same species, was swept by LE from long herbage at Sankuli Kunda (60).
- *Gomphidia* sp. NWM found that the specimen that he had taken to be the female of the "*Oxygomphus*" above was actually what was then known as *Diastatomma*. The latter genus has since been shown to have included the African members of *Gomphidia*, previously thought to be an entirely Oriental genus. From notes that he made at the time, it is clear that his specimen was a *Gomphidia* and not a true *Diastatomma*.
- *Phyllogomphus aethiops* Sel. The writing on the label on the male holotype in the BMNH may be read as either "River Gambia" or "River Gambia". However, as the latter is an old name for the former, this is immaterial. In his description, Selys gives the location as "Côte de Guinée" which was the name given to that part of western Africa that lies along the coast from about 12°N. to 16°S., which appears to confirm the type locality as the coast near the mouth of the River Gambia.

AESHNIDAE

- *Anax tristis* Hagen. The only specimen taken by NWM is untraced but its serial number implies it was either from Kuntaur (14) or Basse (126), or between the two, 5-10 Aug. 48. He also notes "very large dragonflies, of this or very simi-

lar species, seen at Bathurst (now Banjul) (73), Kuntaur area and Bansang (92). Over paddy and in the bush. Two seen first week in Sep., Kuntaur (one at dark over bolon, one at midday over paddy). None seen, until these two, for a fortnight at least.” MH took a photograph of a box of pinned insects, and one of these was an unmistakable *tristis*.

- *Heliaeschna lanceolata* Le Roi. Two female specimens untraced but, from serial numbers, these were probably from Kuntaur (14) between 21 and 28 Aug. 48. “Only seen just after sunset, hawking over the bolon bridge”, NWM. LE reported that a male came to light at the waterworks outside the Abuko Nature Reserve (73) 1630-2100h 6 Nov. 77, and a female to light at Bamboo Pool inside the Reserve 18 Nov. 77.
- *Hemianax ephippiger* (Burm.). Two males recorded by NWM but untraced. Serial numbers suggest Kuntaur (14) between 3 and 5 Sep. 48. “Several seen over groundnut fields and bush on 30 Aug. 48. Shot two but picked up very little”, NWM. Two female exuvial skins found by RMG at a pool 1km south of Busura (151) on 8 Nov. 80, “so fished and found a living male larva, which however failed to survive the journey home.”

A specimen, probably male, observed hawking over a roadside pool outside Choya village, near Pakali Ba (55) 13 Nov. 80.

CORDULIIDAE

- *Macromia bifasciata* (Martin). “First seen 3 Aug. 48, possibly before. Likes hawking low over paddy and swampy bush near riverine forest (and bolon). One over Nianija Bolon (11) 19 Aug. 48. Quite plentiful on paddy and bush near Kuntaur (14)”, where one male 7 Sep. 48 - NWM.

LIBELLULIDAE

- *Aethriamanta rezia* Kirby. NWM notes “not seen until 29 Aug. 48 when 10 males (but no females) seen close together on disused paddyfield on edge of Kuntaur (14) (commonest water-plant, Water Lettuce?)”. He collected males on 29 Aug. at Kuntaur, and had previously found a single female, 11 km S. of Kuntaur (in 33). The association between this species and the Water Lettuce *Pistia stratiotes* has been noted by several authors, and the larvae are normally found among the leaves of the plant. LE found this species in Sq. 73 and 132.
- *Acisoma panorpoides inflatum* Sel. (The subspecies of *A. panorpoides* still require careful working out. Nomino-typical *panorpoides* appear to be confined to Asia. Many authors put all mainland African material into *A. p. ascalaphoides* Rambur but, following advice from Miss Longfield, RMG has always kept this name for specimens from Madagascar, and called mainland material *A. p. inflatum*. The original *inflatum* Selys 1882 were from North Africa, and smaller

than *p. ascalaphoides*. West African specimens are certainly very small). NWM noted "Common in paddyfields. Still abundant 1st week Sep. at Kuntaur (14). The commonest paddyfield libellulid?" The extant specimens he collected are all from Kuntaur and consist of males 20 Jul., 22 Jul., 4 Aug., 5 Aug., and a female on 5 Aug. 48.

RMG took a female on a patch of waste ground in Banjul (73) 11 Sep. 58. He later found the species at a stream crossing a road into a flooded ricefield about 2 km S. of Kiti (132) 31 Oct. 80. There were 4 males, one of them still holding prey between its legs (the head of a *Ceriagrion* sp.), and 1 female. He found it at Abuko (73) over the roadside ponds outside the Nature Reserve, 1 male 4 Nov., 1 male, 2 female 5 Nov., 1 female 6 Nov. 80. At a bolon 1 km S. of Marakissa (151) 1 female 8 Nov. 80. Near Walli Kunda, just inside (58), a male and a female, and at the sluice-gate draining Jakhaly swamp 2 more females 10 Nov. 80. In a swamp, 2 km W. of Sankuli Kunda, abutting a strip of riverine scrub (60), further specimens captured but released. A male was taken on 12 Nov. near Kau-Ur (9), at a roadside swamp opposite the 145 km post from Barra, and the species was seen again in a swamp, a branch of the Nianija Bolon, at the 170 km post (4). Two females taken flying over roadside herbage on Georgetown Island (60) 12 Nov. 80. A specimen was taken at a roadside swamp at Choya, near Pakali Ba (55) on 13 Nov. 80, but escaped later.

- *A. trifoldum* Kirby. MH took a female on 9 Dec., and a female on 15 Dec. 80, both outside the Abuko Nature Reserve (73), and 2 males and 2 females between Brufut and Tanji (102) on 16 Dec. 80. LE also found this species by the Lamin River (73).
- *Brachythemis lacustris* (Kirby). NWM found it "very common along the water edge of the R. Gambia. Have also seen it in paddyfields (male and female). A few still about in the first week of September, Kuntaur". Extant specimens consisting of a male 20 Jul., 2 female 21 Jul., 2 female 4 Aug., 2 male 5 Aug. 48, all from Kuntaur (14). NWM has added a pencil note at a later date, "All mine much smaller than BM specimens. Dark patches darker". This agrees with RMG's Nigerian specimens, although the latter have not yet been compared directly with the BM ones in this respect.
- *B. leucosticta* (Burm.). NWM's extant material is all from Kuntaur (14) - 2 males 3 Aug., 1 male 20 Aug., 1 male 5 Sep. 48. He also records "first seen at Barajali (33), 30 Jul. 48 on the R. Gambia. Two males caught in savanna 3 Aug., male and female by roadside puddles by paddy 28 Aug., on emergence day? Several teneral (3 caught). One or two Nianija Bolon (11) 19 Aug. Still several about, 7 Sep. at Kuntaur."

RMG took a banded female by Kotu Stream (72) shortly before sunset on 25 Oct. 80. Another specimen was taken there about the same time next day, but escaped before it could be sexed. A female was taken beside the sluice-gates draining Jakhaly Swamp just south of Walli Kunda (33) on 10 Nov. 80. Nearby,

but in (58), many more mature males were seen on the wing and settling on the ground but only one was taken. The following morning in swampy ricefields near Sankuli Kunda (60), various males were seen and a female ovipositing. Beside the ferry, on the wing and settling on the ground beside the river, many more males were seen, and another female. Back at Walli Kunda, about 1300h local time, many males were on the wing over the river bank, and settling on the bare earth, and a female was taken. This species was seen again by a roadside swamp close to Choya near Pakali Ba (55) on 13 Nov. 80 and one of each sex was taken. This species appears common up country, although it is also found near the coast. It is most abundant about midday.

- *Bradinopyga strachani* (Kirby). NWM records "N.W. French Guinea 2 females 13 Aug. 48" – see under *Crocothemis divisa*.
- *Chalcostephia flavifrons* Kirby. NWM records as "a common late August - early September dragonfly". He found 2 males 16 km W. of Banjul (72) 16 Jul. 48; 2 males, 1 female at Kuntaur (14) between 21 Jul. and 7 Sep. 48; and 2 males and 1 female at Basse (126) 10-16 Aug. 48.

RMG found it outside Abuko Nature Reserve (73), 1 male 5 Nov. 80; by R. Benifet at Sanyang Ba (131), 1 male 31 Oct. 80; near Busura (151), at a bolon 2 km S of the village, 2 males 8 Nov. 80; and at the same bolon 1 km S of Marakissa (151), 1 male (fully mature blue colour on abdomen) and 1 female. Three more females were taken on 11 Nov. at a swamp 2 km W of Sankuli Kunda ferry (60). MH found it at Abuko (73) in Dec. 80, also between Brufut and Tanji (102).

- *Crocothemis divisa* Baumann. NWM records this species from SE Casamance in Senegal (1 male) and NW French Guinea (1 female), both on 13 Aug. 48. *Bradinopyga strachani* and this species are often found together, both breeding mainly in riverside pools, often amongst granite rocks and boulders; and, in the case of *Bradinopyga*, in rainwater pools in boulders well away from rivers. Adults of both species are fond of basking on rock faces, cliffs, walls, or even concrete bridges and pylons, especially on west-facing surfaces that have been warmed by the afternoon sun. *C. divisa* also settles readily on bare earth, either flat or dry banks of streams and ditches. For this reason, it may be that the lower and more level Gambian plain is less suitable for these species, and possibly they may not penetrate the territory at all.
- *C. erythraea* (Brullé). NWM took a male near Fajara probably at the Kotu Stream (72) 16 Jul. 48. From around Kuntaur (14), where he noted the species mainly from paddy, extant material of this very common species consists of a male from each of 29 Jul., 4 Aug., 5 Aug. and 2 Sep., a female 20 Jul. and 2 males 22 Jul. 48. Two males were also taken at Basse (126) on 10 and 16 Aug. 48.

RMG saw many males at Kotu Stream and related ponds on 28 Oct. 80, but found them elusive. However, a female was taken, ovipositing. The species had not been seen on two earlier visits, but these had been in late afternoon, nearing

dusk. However, on a late afternoon visit on 29 Oct, an immature-coloured was taken. Many males seen in Camaloo Swamp near Bakau (73) at about 1600h local time on 28 Oct. On a further visit on 7 Nov., at midday, males were seen and a female ovipositing guarded by the male. It was seen in the Abuko Nature Reserve (73) on 3 and 6 Nov. 80. On the roadside ponds outside the Reserve, the species was seen on 4 Nov.; and on 5 Nov. 2 males were taken. One male was seen in tandem followed by coitus, and attended the female whilst she was ovipositing - during the process of guarding, the male had time for a brief affair with another female that flew by. It was abundant by the R. Benifet at Sanyang Ba (131) on 31 Oct. 80, and 2 males were taken, and seen there again on 14 Nov. One male and one female were taken by a pool 1 km S. of Busura (151) 8 Nov. 80, and a young final stage larva. A male and a female were taken beside the stream draining Jakhaly Swamp (58) 10 Nov. 80. At Sankuli Kunda (60) on 11 Nov. 80, in a swamp among ricefields between the village and the ferry, both sexes were seen in numbers, both mature and teneral, including a pair in tandem. A female was taken at the ferry, and 4 more in a swamp W of the ferry abutting a strip of riverine scrub. At Kau-Ur (9) seen by the river at the wharf; and on Georgetown Island beside the Sankuli ferry (60) 3 males were taken. At Choya, near Pakali Ba (55), the species was seen again over a roadside swamp.

- *Diplacodes lefebvrei* (Ramb.). NWM found this species around Kuntaur (14), 1 male and 1 female 21 Jul., 2 males 22 Jul., 2 males 27 Jul., 1 male 18 Aug., 1 male 2 Sep. 48. He also found a female at Basse (126) on 12 Aug. He thought that his two smallest females were *D. exilis* Ris, and RMG had similar suspicions of his own 1958 female. However, *lefebvrei* is a very variable species, and the smallest specimens are fully as small as *exilis*. The small specimens have been carefully compared with those of more normal size, and RMG considers that there is no reason to suppose that *D. exilis* is present in addition to *D. lefebvrei*.

RMG took a small female at Banjul (73) on 11 Sep. 58 while landing briefly from the mailboat from Nigeria. A male was seen on the wing by Kotu Stream (72) on 26 Oct. 80, and a young female taken there on 29 Oct. An almost teneral male was taken at Camaloo Swamp (72) on 27 Oct., and mature males seen and taken the following day. Three more males were taken at the same locality on 7 Nov. 80. Both sexes were seen 2 km S of Busura (161). At Abuko (73), over the roadside ponds outside the Nature reserve, on 3, 4 and 5 Nov. 80, a total of 7 males and 4 females were taken; one of the latter exuding eggs on capture. An immature female was taken in a swamp 2 km W of Sankuli Kunda (60) on 11 Nov. 80. At Kau-Ur (9) a teneral female was taken beside the river 12 Nov. and, outside the village at a swamp opposite the 145 km post, two males and another teneral female were taken. East of Kau-Ur, opposite the 170 km post (4), at a swamp forming part of the Nianija Bolon, more specimens were seen. On Georgetown Island (60) on vegetation beside the ferry, a further male was taken,

- 12 Nov. 80. A male and 2 females were taken at a swamp outside Choya, near Pakali Ba (55) 13 Nov. 80.
- *Hemistigma albipuncta* (Ramb.). NWM took 5 males and 4 females in and around Kuntaur (14) between 20 Jun. and 30 Aug. 48; one of the males was immature in colouration, and one of the females laid eggs. He notes "very common in and by paddyfields, at Kuntaur, and at Barajali (33). Sits halfway up blades of grass, rice etc. Still plentiful Kuntaur, 8 Sep. One of the commonest paddyfield libellulids". RMG found the species plentiful over a patch of waste ground at the west end of Banjul town (73), over an overgrown ditch in some vegetable gardens, on 11 Sep. 58, and 3 males and 4 females were taken. A young male, just starting to turn blue, was taken at Camaloo swamp (73) on 27 Oct. 80, and another male and two females - one of the latter semi-teneral - were taken in the same place on 7 Nov. Three males were taken outside the Abuko Reserve (73) on 4 Nov. Two males and a female were taken by the R. Benifet at Sanyang Ba (131) on 31 Oct, and another male from a bolon S of Busura (151) on 8 Nov. 80. At a stream crossing the road to Walli Kunda (58), 3 males and a female were taken on 10 Nov. 80, and another female by the sluice-gates draining Jakhaly Swamp (33). Seen on the wing over rice swamps outside Sankuli Kunda (60), and a female taken in a swamp 2 km W of the Sankuli Kunda ferry, abutting a strip of riverine scrub, 11 Nov. 80. A male was taken at a swamp at the 145 km post W of Kau-Ur (9) on the road to Barra, and others were seen at the 170 km post at a swamp, which was a branch of the Nianija Bolon near Panchang (4). MH took a male on 14 Dec. 80 at Ndemban (154), and a female at Camaloo Corner (72, close to the border of 73) on 20 Dec. 80.
 - *Olpogastra lugubris* Karsch. NWM took single males at Kuntaur (14) on 22 Jul., 27 Jul. and 6 Aug. 48. A further specimen cannot be traced, but its serial number implies 3 or 4 Aug., also at Kuntaur. He notes; "A creek dragonfly. Returns to same twig over water. Caught no. 40 on exactly the same twig as no. 70." (Specimens of 22 Jul. and 27 Ju. above). "Later watched a male and female doing a "figure of eight" dance over water, then soaring into sky until out of sight. Returned fairly soon after - having copulated?. Seen Niainja Bolon (11) 19 Jul. 48, Kuntaur Bolon (14) 28 Aug. 48. Two or three old tattered specimens about, 7 Sep. 48, Kuntaur."
 - *Orthetrum africanum* (Sel.). NWM took a male of this species (but venation was irregular, and abdominal segments 4-10 missing), Kuntaur (14) 4 Aug. 48. MH took 2 males at Kotu Stream (72) on 11 and 17 Dec. 80
 - *O. angustiventre* (Ramb.). NWM found a male and a female at Kotu Stream (72) 16 Jul. 48; a female, which laid eggs at Kuntaur (14) 5 Sep. 48, and a male and a female S of this, at Barajali (33) 31 Jul. 48. He also noted several others at Barajali and Nianija Bolon on 19 Jul. 48, and one was seen at Barra Point (41) on 10 Sep. 48.

RMG observed a specimen with immature colours beside a pool outside Kartung (161) on 31 Oct. 80. A similarly coloured specimen was taken in the Abuko Nature Reserve (73) but released, 3 Nov. 80. MH took 2 males at Kotu Point (72) 12 Dec. 80, and a female outside Abuko Reserve 20 Dec. 80.

- *O. brachiale* (Pal. de Beauv.). At Kotu Stream (72), NWM took 2 males 16 Jul. 48; at Kuntaur (14) 5 males and 3 females between 20 Jul. and 5 Sep. 48, including a pair in coition; a further male 11 km S of Kuntaur (33) 31 Jul. 48 and, at Basse (126), on 10 Aug. 48, 3 males and 2 females, one of each of which was teneral.

NWM also recorded, "one, Dakota River (= Kotu Stream), Fajara 13 Sep. 48". This was recorded as "*O. stemmale capense*, H mark bush libellulid", so was probably of immature colouration. Mature colours recorded as *O. brachiale* "smaller large pale blue libellulid" of which NWM says, "Still battered specimens about, first week Sep., Kuntaur".

MH found 2 males by Kotu Stream (72) 10-11 Dec. 80, and from Abuko (73) a mature male 9 Dec., an immature male 20 Dec. and 2 females 9 and 18 Dec. 80.

- *O. chrysostigma* (Burm.). A single male at Kaimbujae, Brikama (104) on 9 Dec. 80, MH.
- *O. icteromelan* Ris. NWM found 2 males and 5 females, including a pair at Kuntaur (14) between 22 Jul. and 20 Aug. 48. Three of the females were immature in colour. An immature male was found 11 km S of this (33) on 31 Jul. 48, and another male at Basse (126) on 10 or 16 Aug. 48. He noted this species as "common round bushes at edge of ricefields".

RMG found a youngish female at a pool outside the Abuko Nature Reserve (73) on 4 Nov. 80, and 2 males in the same place on the following day; and a male in the marsh near the Jakhaly sluice-gates (33) on 10 Nov. 80. Two males were taken at Kai-Ur at pools by the roadside at 145km post (9), another male at 170km (4) and 2 more males on Georgetown Island (60) beside the Sankuli Kunda ferry on 12 Dec. 80. A male was taken on 13 Nov. 80 at a roadside pool by Choya village near Pakali Ba (55). MH took 3 males at Abuko (73) 18 Dec. 80, and a female at Camaloo Corner (72) on 20 Dec. 80.

- *O. kalai* Longfield. Abuko Nature Reserve (73), 3 males 3 Nov. 80, 1 male 6 Nov. 80; 2 males outside reserve 5 Nov. 80. Sankuli Kunda (60), 1 male 11 Nov. 80. R. Benifet, S of Sanyang (131), 3 males over herbage on the bank 31 Oct. 80, and a further male on 14 Nov. 80. Roadside pool 1 km S of Basori (133), 2 males. MH took 1 male at Kotu Stream (72), 1 male and 2 females at Abuko (73) 9-18 Dec. 80.
- *O. monardi* Schmidt. NWM took a male and a female *in coitu* at Basse (126) on 11 Aug. 48 - the female extruded an egg mass in the paper triangle. A female had previously been taken on 10 Aug. 48. RMG took a pair *in coitu* at Kotu Stream (72) 28 Oct. 80 and this female also laid eggs. Others taken were 2

males at Walli Kund (58) 10 Nov., 1 male Sankuli Kunda (60) 11 Nov. and 1 male Georgetown Island (60) 12 Nov. 80.

MH took 2 males at Kotu Stream (72) 12 and 17 Dec. 80., 1 male at Abuko (73) 9 Dec. 80, 1 male at Kaputa (153) 18 Dec. 80 and a female at Ndemban (154) 14 Dec. 80.

LE swept a female from vegetation by Kotu Stream (72).

- *O. trinacria* (Sel.). NWM found 3 females at Kuntaur (14) 5 Aug. -3 Sep. 48. The first was mature, the others immature or semi-teneral. RMG took 2 young males at Camaloo swamp, W of Banjul (73) 7 Nov. 80.
- *Oxythemis phoenicosceles* Ris. NWM's specimens are no longer available, but this species is unmistakable. He found one of each sex at Profu Bolon, Basse (126) 10 or 11 Aug. 48.
- *Palpopleura deceptor* (Calvert). NWM found 2 males at Kuntaur (14) 5 Sep. 48, and a female at Basse (126) 10 Aug. 48. and noted that the species was still about during the first week of Sep. 48. RMG found many mature males flying wildly along the edge of some square pools dug for rice planting, beside the Kotu Stream (72) about midday 28 Oct. 80. Two males were taken by the R. Benifet at Sanyang Ba (131) 31 Oct. 80 and, from a roadside pool outside Kartung (161) some 20 km further south, a female which was ovipositing, and laid more eggs when her abdomen was dipped in a tube of pond water. These were starting to hatch on 9 Nov., but none survived to take home to England. None of this species were seen on a return visit two weeks later. On 1 Nov. 80, a male was taken at a pool south of Basori (133), and others were seen there. On a stream crossing the road to Walli Kunda (58, close to boundary with 33) a male was taken on 10 Nov., and the next day a further male was taken in a rice-swamp abutting a strip of riverine scrub 2 km W of Sankuli Kunda (60).
- *P. lucia* (Drury). This and *P. portia* were described by Drury as two separate species (of *Libellula*). Most authors nowadays regard them as forms of the same species, but the exact relationship between the two is far from perfectly understood, and will remain so until a great deal more work, ecological observation in the field, cyto-taxonomic in the laboratory, and microscopic in the museum, has been done. The two frequently occur together. The males are clearly distinguishable, and intermediate forms are extremely rare. Females, however, can be found which are difficult to assign to one or the other, although in their more typical forms the two are readily distinguishable. They will here be dealt with as separate species.

NWM found both *P. lucia* and *P. portia* near Banjul (73) and Fajara (39) on his arrival in Jul. 48, and before leaving in Sep. 48. Around Kuntaur (14) he saw 2 or 3 *P. lucia* in paddy during the first week of Sep., whereas *P. portia* was often seen throughout his stay.

RMG failed to find *P. lucia* around Fajara or Abuko (73), apart from the separate wings of one male which were floating on the surface of a small pool

outside Abuko Reserve, although *portia* was common. However, *lucia* was common on the R. Benifet at Sanyang Ba (131) on 31 Oct. 80, and 4 males and a female were taken. The "river" by this time was reduced to a chain of muddy pools, surrounded by abundant vegetation. *P. portia* was equally abundant and 2 males were taken. On a subsequent visit, on 14 Nov., both species were seen again, and a female *lucia* was taken, which laid eggs. At Busura (151) by a pool in a partly dried bolon, *lucia* males were seen on both 8 and 14 Nov., but no *portia* were in evidence. About 3 km up the same bolon, near Marakissa on 8 Nov., both species were taken, and a female *lucia* was seen perched out of reach. Near Walli Kunda, 200 km up-river from Banjul, where an overgrown stream crossed the road (58), both *lucia* and *portia* were seen and 2 males of each taken on 10 Nov. In a rice swamp abutting a patch of riverine scrub about 1 km W of the Sankuli Kunda ferry (60) 2 female *lucia* were taken, one with the abdomen starting to turn blue, and a third which could have been either species, 11 Nov. 80.

MH took 4 males at Kotu Stream (72) 17 Dec. 80 and saw a male at Abuko Reserve 18 Dec. He also saw a female that he thought was this species at Kafuta (153) 14 Dec. 80.

- *P. portia* (Drury). NWM took 1 male and 2 females which were probably the same species, although the latter looked a little like intermediate forms between this and *P. lucia*, in mid-Jul. 48. These were all from or near Banjul and Fajara. He observed a "pair courting" by Kotu Stream (72) 19 Sep. 48, but actual details of their behaviour are not available. It was frequent around Kuntaur (14) from late Jul. to early Sep in paddyfields and nearby savannah, and over wayside puddles in bush. It was also found at Basse (126) between 12 and 16 Aug. 48.

RMG found a female perched on top of a grass stem in a patch of bush leading down to the Kotu Stream (72) on 26 Oct. 80 in the late afternoon; but none were seen by the stream nor had there been at the same time the day before. However, when the stream was revisited at 1130h local time on 28 Oct., there were plenty of both sexes, and a female was seen ovipositing. On 29 Oct., again in the late afternoon, he took a male and 2 female of *portia* at the stream and surrounding pools. At Camaloo Swamp (73) at about 1530h local time on 27 Oct., and again next day at about 1630h, he saw fully mature males with beautifully blue abdomens. On 7 Nov., on a further visit to the swamp, from 1130h onwards, it was seen on the wing occasionally, but RMG's attention was mainly elsewhere. At 1500h a pair was found *in coitu* (full cartwheel position) perched half way up a tall grass, somewhat concealed by the tops of other shorter grasses all around. At Abuko (73), it was seen inside the Nature Reserve on the morning of 4 Nov., and 2 males were taken on a pool outside the Reserve the next morning. One of the latter had very dark wings, the cleft between the two transverse bands on the forewing being especially narrow. (This pattern is not un-

common in Gambian specimens. The BMNH also has a similar specimen labelled "Cameroons"). Plenty of males on the wing, in company with *lucia*, by R. Benifet, Sanyang Ba (131) on 31 Oct. and 2 taken. Both species were seen again at the same locality on 14 Nov. *P. portia* was not seen at Busura (151) either on 8 or 14 Nov., although *lucia* was plentiful on both occasions; but further up the same bolon on 8 Nov. close to Marakissa, both species were seen.

Males of *portia* were seen at a stream crossing the road to Walli Kunda (58), together with *lucia* on 10 Nov. On 11 Nov. a female was taken in a swamp abutting riverine scrub 2 km W of Sankuli Kunda (60), which might have belonged to either species. Two females which were definitely *lucia* were taken also, but this one was more like *portia*. MH found the species at Kafuta (153), Ndemban (154), between Brufut and Tanji (102) and Kaimbujae, nr Brikama (104):

- *Pantala flavescens* (Fabr.). An ubiquitous and abundant species, the first to be seen by both NWM and RMG on arrival in The Gambia. NWM observed many of them in and around Banjul (73), watched oviposition in tandem in brackish water in mid-Jul. 48, and took a teneral female on 15 Jul. 48. A female was taken at Kotu Stream (72) on 16 Jul. 48 and probably, from its serial number, a second for which there is no other data. Many more were seen in and around Kuntaur (14) until early Sep. , ("A flock hawking over groundnuts and cleared bush near Pallan, Kuntaur, evening 30 Aug. 48.") and a male was taken on 5 Sep. It was still in evidence as NWM passed through Banjul on the return journey 9-12 Sep. 48.

RMG saw many on the wing over Banjul and nearby waste ground on 11 Sep. 58, and a mature male was taken. It was noted as ubiquitous in (72) and (73) between 25 Oct. and 14 Nov. 80, and in (133) and (151) on 8 Nov. 80. At Camaloo Swamp (73), it was seen in late afternoon, and exuviae found, on 27 Oct.; also on 7 Nov., about midday, flying in tandem, in full copulation (wheel position), and ovipositing. On the morning of 1 Nov. 80, large numbers were similarly engaged over a pond about 2 km S of Basori (133). Pairs were being attacked by Gambian Swallows *Hirundo rustica lucida*, although in no case were any seen to be captured or struck to the ground. (Or could both the swallows and dragonflies have been in pursuit of the same insect prey? This seems improbable, as during pairing *Pantala* would be unlikely to be interested in predation.) A male was taken at Kotu Stream (72) on 28 Oct. 80. The species was seen on the wing near Walli Kunda (58) on 11 Nov.; at a swamp at Choya (55) on 13 Nov.; and on 14 Nov. by the R. Benifet at Sanyang Ba (131). Exuviae were found on 14 Nov. at a pond S of Busura (151) where *Hemianax*, *Diplacodes* and *Crocothemis* were also breeding.

MH took a male and a female at Kotu Stream (72) on 12 Dec. and saw another there on 17 Dec. 80. He saw 2 more at Barra on 19 Dec. 80.

- *Parazyxomma flavicans* (Martin). NWM took a young male at Kuntaur (14) 28

Aug. 48.

LE found a male near Gunjur (149) on 13 Nov. 77.

- *Philonomon luminans* (Karsch). At Kuntaur (14), NWM took a male on 22 Jul. and a female on 20 Jul. 48 noting it was "from paddyfields (near the river especially), and hard to catch. None seen 5 Aug. 48."
- *Rhyothemis notata* (Fabr.). NWM found this species at Kuntaur (14) taking 1 male 27 Jul., 2 males 4 Aug., 2 males 28 Aug. 80. He noted "female savannah, male paddyfield". Pair *in coitu* and others in sunny clearing in wood by bolon. Disappeared when sun went in. When sunning on twigs etc., moves each wing independently, like bird preening, 28 Aug. 48. Still a few about in first week Sep., Kuntaur. Is found by roadside puddles, like *Palpopleura portia*."

RMG saw a specimen on the wing in the Abuko Nature Reserve (73), but it soon flew off where it was impossible to follow.
- *R. semihyalina* (Desjard.). NWM found males on 18 and 30 Aug., and females on 22 and 29 Jul., and 30 Aug. 48. at Kuntaur (14), and noted "still plentiful in bush etc. first week Sep."
- *Sympetrum navasi* Lacroix. A Gambian specimen was referred to by Pinhey (1976). NWM records a single male from Kuntaur (14), 3-5 Sep. 48. The specimen, which was preserved in spirit, cannot now be traced, but the species is unmistakable, so the accuracy of the identification is beyond question.
- *Tetrathemis bifida* Fraser. R. Benifet, near Sanyang (131) was almost dried up and consisted of a chain of muddy pools on 31 Oct. 80; when, at a spot heavily shaded by overhanging trees, a male, resting motionless on the top of an emergent twig in a muddy pool, was netted. On 14 Nov. 80, another male similarly perched on the same twig was netted.
- *Tholymis tillarga* (Fabr.). NWM's material still extant, all from Kuntaur (14) consists of a teneral female 27 Jun. 48, a male 3 Aug., and a female 2 Aug. 48. His diary refers to other specimens which cannot now be traced, but with numbers suggesting that the males came from Kuntaur, one female from Basse (126) and another across the frontier in East Casamance. His diary contains the following notes on the species: "Queer dancing flight. Often hangs up in bushes, edge R. Gambia and paddyfields. Commonest hawking dragonfly at sunset 3 Aug. 48 over paddy fields, Kuntaur. Watched a male hovering over a female ovipositing in paddy, another male appeared and all flew off fighting. APB observed a similar incident but here the male drove away the intruder. One male came to light - a Tilley on the verandah. This species hunts well after sunset, as do some other smaller sympetrids, and before dawn. Enormous numbers "dancing" about in the air (hunting mosquitoes) over south bank of R. Gambia, at about 1930 - 1945h after violent tornado, sky very black still (19 Aug. 48). About the commonest dragonfly at Kuntaur in first week of Sep. On 5 Sep. 48, watched several males going up and down little flood puddles in our bungalow garden. They appeared to have territories. When two met, which was

frequently, there was always a fight. On one occasion, when a female appeared, a male chased her, copulation occurred in bush and amongst grass, and then the female began ovipositing in a 25 cm long puddle. Whilst she flew up and down ovipositing, the male hovered stationary over her, with the white spot conspicuous, as he first faced one way for a few seconds and then the other. An intruder was driven away, and when I got nearer he advanced to meet me, as if to attack. Finally, the two flew off in separate directions.”

RMG saw a mature male flying wildly over a ricefield pool beside Kotu Stream (72) at 1800h on 25 Oct. 80, and 2 more males at the same place the following day. Exuviae were found at Camaloo Swamp (73) on 27 Oct. Many males were seen flying over a stream crossing the road between Sifoe and Kiti (132) in the late afternoon of 31 Oct. 80. MH took a female in the Abuko Nature Reserve (73) on 9 Dec. 80, and LE recorded it from (60) and (82).

- *Tramea basilaris* (Pal. de Beauv.). NWM saw what must have been this species on the wing at Banjul (73) early in his stay, and took 3 males at Kuntaur (14) on 22 Jul. 48, and 2 at Basse (126) on 10 Aug. He noted it as occurring at paddyfields at Kuntaur where it was fairly easy to catch, and over groundnut fields and savanna at Basse. LE took a female in (60).
- *Trithemis annulata* (Pal. de Beauv.). NWM noted that one or two of this species were seen in mid-Jul. 48 in (72) and (73), and at Kotu Stream (72) on 17 Sep. The only extant specimens, 2 males, were taken at Kuntaur (14) between 27 Jul. and 4 Aug. 48. He noted it as common in paddyfields and by the river edge in early Aug. Regular flight, beat and perch.

RMG received a pair taken in tandem by the swimming pool at Tendaba Camp (82) by Mrs Iris Dicker on 13 Dec. 79. He failed to see any specimens in areas near the coast but, on travelling up-country, it was found abundantly. Just south of Walli Kunda, it was seen in numbers beside a stream draining Jakhaly marsh (58), a short distance above the sluice gates, shortly after midday; and a male was taken at the sluice gates themselves (33) 10 Nov. 80. At Walli Kunda on 11 Nov., again shortly after midday, it was observed plentifully beside the river and, by swimming along the river close to the bank, it was possible to observe large numbers, together with *Pseudagrion nubicum*, resting perched on twigs of the bushes overhanging the river. At Sankuli Kunda (60) on the morning of 11 Nov., numbers were seen on the wing over rice-swamps between the village and the ferry on both sides of the road. A male was taken beside the ferry, and another in a swamp 2 km W of it. On 12 Nov. 2 males were taken beside the wharf at Kau-Ur (9), and another at a swamp outside the village opposite 145 km post. It was seen at a rice-swamp forming part of the Niainja Bolon opposite 170 km post (4); and on Georgetown Island (60), 2 males were taken at the ferry to Sankuli Kunda. It was abundant at a roadside swamp outside Choya (55) on 13 Nov. 80, and was frequently observed being buzzed by a male *Hemianax ephippiger* which was patrolling a beat along the edge of the swamp.

It was not clear whether the encounters were unsuccessful attempts at predation (*T. annulata* has been recorded as prey of *Anax imperator mauricianus* Ramb. in Nigeria) or whether the *Trithemis* was being chased off the territory of the *Hemianax*.

LE found 2 males and 3 females at Tendaba Camp (82) on 14 and 18 Nov. 77.

- *T. arteriosa* (Burm.). This is a common species in most parts of Africa and in many parts of Nigeria the commonest species of the genus, but neither NWM nor RMG encountered it in The Gambia. However, MH found it at Kotu Stream (72) and in Abuko (73) in Dec. 80. LE found 1 male at Kotu Stream on 22 or 23 Nov. 77.
- *T. grouti* Pinhey. Sometimes referred to as *T. atra grouti*, which is incorrect. If *T. atra* is actually a separate subspecies, and not merely a rather small specimen, its name would be *T. grouti atra* Pinhey 1961, as the publication in which *T. grouti* appears has a few months priority over that describing *T. atra*. RMG took 2 males on the wing over a sunlit patch of bankside vegetation on the R. Benifet at Sanyang Ba (131) on 31 Oct. 80, and 2 more males at the same place on 14 Nov. One of NWM's unidentified species from Kuntaur (14), which is no longer extant, was from his description probably this species. LE found 2 males at Lamin Stream, which runs out of Abuko Reserve (73), on 25 and 26 Jul. 77, and another on 18 Nov. 77.
- *T. imitata* Pinhey. This species is extremely similar to *T. arteriosa*, and can only be distinguished by the distribution of the amber colouring at the base of the hind wing and the lateral markings on the thorax. LE found one male at Bakau (39).
- *Urothemis assignata* (Sel.). NWM took males at Kuntaur (14) over paddyfields on 22 and 27 Aug. and 7 Sep., and females on 22 Jul. and 2 Sep. 48. LE recorded it from (132).
- *U. edwardsi* (Sel.). NWM found it quite plentiful over paddy and bush at Kuntaur (14) during first week Sep. 48. He took males on 29 Jul., 21 and 30 Aug. and 4 Sep., and females on 28 and 29 Jul., and 21 Aug. He also took a juvenile male at Basse (126) on 10 Aug. 48.

RMG took a dark-coloured female in a swamp outside Kau-Ur (9) opposite 145 km post on road to Farafenni on 12 Nov. 80.

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