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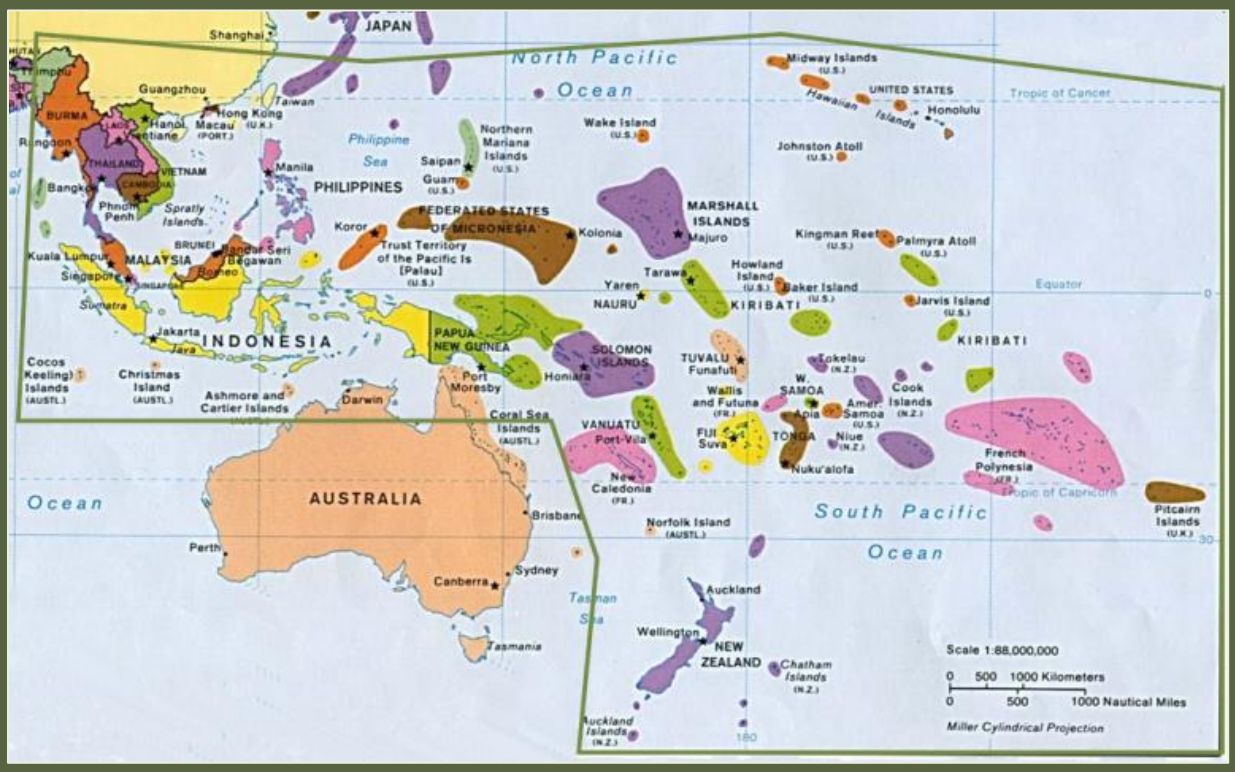
Pacific Islands comprise of Micronesian, Melanesian and Polynesian Islands.



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Previously unpublished Odonata records from Sarawak, Borneo. Part I. Kuching Division excluding Kubah National Park, and Samarahan Division.

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Abstract

Records of Odonata from Kuching and Samarahan, the western administrative divisions of Sarawak in Malaysian Borneo, are presented. Forty-two species are listed from Bako National Park, and eighty-nine species are listed from various other locations. Notable records, not yet published in detail elsewhere, include *Aciagrion* ?*fasiculare*, *Bornargiolestes* species, *Pericnemis* species cf *triangularis*, *Coeliccia* new species and *Tetrathemis flavescens*.

Key words: Odonata, Kuching, Samarahan, Peninsular Malaysia, Borneo

Introduction

Since 2005 the authors, plus also Stephen Butler and Robin Ngiam, have been engaged in an on-going survey of the Odonata of Sarawak in Malaysian Borneo. The present paper is the first of a series of publications in which we hope to list all the Odonata records we have made in Sarawak in 2005-2012 and which have not been and are not scheduled to appear in some other journal. In this first paper of the series we present records from western Sarawak.

Kuching and Samarahan are the westernmost of Sarawak's administrative divisions. Kuching Division is home to the state capital, Kuching. Recent Odonata records from these divisions can be found in Dow (2004, 2006, 2010a, 2010b, 2011, 2012a, 2012b),

Dow, Choong & Ng (2010), Dow & Orr (2012a, 2012b), Dow & Reels (2010, 2011a, 2011b), Grinang (2004) and Hisamatsu & Sasamoto (2003). Older records appear in Asahina (1966), Hincks (1930), Inoue & Kuwahara (1974), Kitagawa (1997), Laidlaw (1911, 1913, 1914, 1915, 1918, 1920, 1934), Lieftinck (1929, 1940a, 1953, 1954, 1964, 1965, 1968), Matsuki & Kitagawa (1992, 1993), Ris (1913, 1919) and van Tol & Norma-Rashid (1995).

Here we present all of our unpublished records to-date from Kuching and Samarahan Divisions, except for those from Kubah National Park, which will be published as the second part of this series. The records are presented in two sections: those from Bako National Park, and those from a number of other locations that have received fewer days of sampling effort.

The following abbreviations for names of collectors are used below: RAD – Rory A. Dow, GTR – Graham T. Reels, LCK – Lim Chan Koon.

Bako National Park

Bako (marked 'B' in Fig 1) is a small national park situated on a headland not far from the state capital Kuching in the division of the same name. It has a strongly seasonal climate and, despite its small size, has a high habitat diversity, with seven vegetation types listed from the park (Hazebroek & Morshhidi, 2001). The dominant vegetation is closed canopy kerangas forest and kerangas shrubland with stunted trees; the latter is

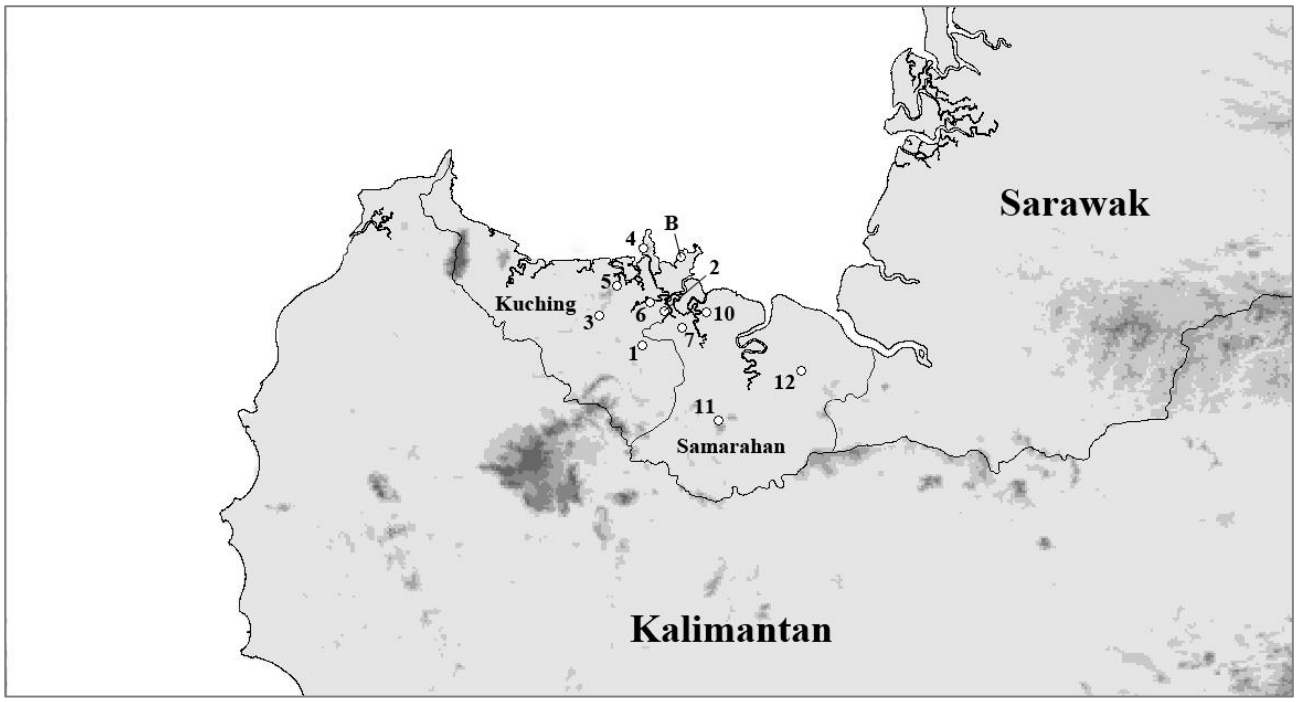

Figure 1. Locations in Kuching and Samarahan Divisions: B – Bako National Park; 1-12 – other locations (8 and 9 not shown).

an extremely unusual habitat in Sarawak. There are also areas of cliff vegetation, beach vegetation, mangrove vegetation, alluvial forest and mixed dipterocarp forest (MDF). In addition to these vegetation types, there is a small area described as peat swamp by the park staff, but that is probably better described as a low pH swamp in closed canopy kerangas forest; the pH is certainly low in this area, but there is not much actual peat there and the topography seems unsuitable for true peat swamp forest to develop.

Collecting was carried out in the park on a total of nine days in 2005, in two different months (March and May). All vegetation types were sampled to some extent, although mangrove forest was only sampled at the margin and very little sampling was carried out in MDF in the park. All specimens were collected by the authors.

Only 42 species have been recorded in Bako National Park; many families (e.g. the Chlorocyphidae, Euphaeidae, Calopterygidae and Platystictidae) seem surprisingly poorly represented. However more species will certainly be found at Bako; in particular *Raphismia bispina* (Hagen, 1867) can be expected in the mangrove at the park.

List of species collected – Bako National Park

ZYGOPTERA

Amphipterygidae

1. Devadatta species A
   A common species in the lowlands of Sarawak, also sometimes found at higher altitudes. ♂, 23.iii.2005, RAD; ♂, 24.iii.2005, RAD; ♂, 22.iii.2005, RAD & GTR; ♂, 25.iii.2005, GTR; ♂, 23.v.2005; RAD; 2 ♂♂, 25.v.2005, RAD.

Chlorocyphidae

2. *Sundacypha petiolata* (Selys, 1859)
   2 ♂♂, 22.iii.2005, RAD; ♂, 25.iii.2005, RAD & GTR.

Euphaeidae

3. *Euphaea impar* Selys, 1859
   ♂, 22.iii.2005, RAD; ♂, 25.iii.2005, RAD; ♂, 25.v.2005, RAD.

Calopterygidae

4. *Vestalis amaryllis* Lieftinck, 1965
   2 ♀♀, 23.iii.2005, RAD; ♂, 23.iii.2005, GTR; 2 ♂♂, ♀, 25.iii.2005, RAD.

Lestidae

5. *Orolestes wallacei* (Kirby, 1889) (Fig. 2)
   A local species in swampy forest habitats. ♂, 24.v.2005, RAD.

Figure 2. *Orolestes wallacei* male. Photo by G.T. Reels.

Megapodagrionidae

6. *Podolestes orientalis* Selys, 1862
   3 ♂♂, 22.iii.2005, RAD; ♂, 23.iii.2005, GTR; ♂, 23.v.2005, RAD; ♀, 24.v.2005, RAD.

7. *Rhinagrion borneense* (Selys, 1886)
   ♀, 25.v.2005, RAD.

Platystictidae

8. *Telosticta dupophila* (Lieftinck, 1933) (Fig. 3)
   See Dow & Orr (2012).

Coenagrionidae

9. *Aciagrion* ?*fasiculare* Lieftinck, 1934 (Fig. 4)
   Aciagrion *fasiculare* was described from Java (Lieftinck 1934) and has never been definitely recorded anywhere else. The species occurring at Bako (and not yet found

anywhere else in Borneo) is closest to *A. fasiculare* but differs in some details of colouration; its status remains an open question. 3 ♂♂, 24.iii.2005, GTR; ♂, ♀, 2(♂+♀), 25.iii.2005, RAD; 2 ♂♂, 25.iii.2005, GTR; 4 ♂♂, 25.v.2005, RAD.

Figure 3. *Telosticta dupophila* male. Photo by G.T. Reels.

10. *Agriocnemis femina* (Brauer, 1868)
♂, 24.v.2005, RAD.

11. *Amphicnemis* species cf *dactylostyla* Lieftinck, 1953
This is a low pH specialist species, most often found in peat swamp forest, but occasionally found in other low pH swamp formations or small swampy areas in mixed dipterocarp or kerangas forest (presumably the pH is low in these areas as well); it appears to be absent from true alluvial forest. 3 ♂♂, ♀, 23.iii.2005, RAD; ♀, 24.iii.2005, RAD.

12. *Amphicnemis wallacii* Selys, 1863
♂, ♀, 22.iii.2005, RAD; ♂, 2 ♀♀, 23.iii.2005, RAD; 4 ♂♂, ♀, 23.iii.2005, RAD & GTR; 2 ♀♀, 24.iii.2005, RAD; 2 ♂♂, 23.v.2005, RAD.

13. *Archibasis viola* Lieftinck, 1948
♂, 22.iii.2005, RAD & GTR; 4 ♂♂, ♂+♀, 24.v.2005, RAD.

Figure 4. *Aciagrion* ?*fasiculare* male. Photo by G.T. Reels.

14. *Ceriagrion cerinorubellum* (Brauer, 1865)
♂, 22.iii.2005, RAD; ♂, 24.iii.2005, GTR.

15. *Teinobasis ruficollis* (Selys, 1877) (Fig. 5)
See Dow (2010a).

16. *Teinobasis cryptica* Dow, 2010
See Dow (2010a).

Platycnemididae

17. *Coeliccia* species cf *nemoricola* Laidlaw, 1912 (Fig. 6)
♀, 22.iii.2005, RAD; ♂, 22.iii.2005, GTR; ♂, 2 ♀♀, 23.iii.2005, GTR; ♀, 24.iii.2005, RAD; ♂, 25.iii.2005, RAD.

18. *Copera vittata* (Selys, 1863)
♂, 22.iii.2005, RAD; ♂, 24.iii.2005, RAD; ♂, 23.v.2005, RAD.

Figure 5. ***Teinobasis ruficollis*** **male. Photo by R.A. Dow.**

Figure 6. ***Coeliccia*** **cf** ***nemoricola*** **male. Photo by G.T. Reels.**

19. *Prodasineura dorsalis* (Selys, 1860)
♂, 22.iii.2005, RAD; ♀, 22.iii.2005, GTR; ♂, 23.iii.2005, RAD & GTR; 2 ♀♀, ♂+♀, 24.iii.2005; RAD; ♂, 2 ♀♀, 24.iii.2005, GTR; ♂, 3 ♀♀, 23.v.2005; ♂, 25.v.2005, RAD.

20. *Prodasineura notostigma* (Selys, 1860) (Fig. 7)
In Sarawak this species is only found in the west, and is typically rather local, but it was common at Bako. It occurred in a variety of habitat types, including surpri-

singly open streams in the kerangas shrubland. 3 ♂♂, 22.iii.2005, RAD; 2 ♂♂, ♀, 22.iii.2005, GTR; ♂, 23.iii.2005, RAD; ♂, 23.iii.2005, GTR; ♂, 24.iii.2005, RAD; ♂, 25.iii.2005, RAD & GTR; 2 ♂♂, 25.iii.2005, GTR; ♂, 23.v.2005, RAD; ♂, 25.v.2005, RAD.

Figure 7. *Prodasineura notostigma* male. Photo by G.T. Reels.

ANISOPTERA

Aeshnidae

21. *Anax guttatus* (Burmeister, 1839)
♂, 26.iii.2005, GTR.

22. *Gynacantha dohrni* Krüger, 1899
♂, 22.iii.2005, GTR; 2 ♀♀, 23.iii.2005, GTR; ♂, 24.iii.2005, GTR; ♀, 26.iii.2005, RAD; 2 ♂♂, 25.v.2005, RAD.

23. *Heliaeschna* ?*idae* (Brauer, 1865)
2 ♀♀, 25.iii.2005, GTR.

Libellulidae

24. *Agrionoptera insignis* (Rambur, 1842)
♂, 22.iii.2005, RAD; ♂, 22.iii.2005, GTR; ♀, 25.iii.2005, RAD; ♀, 23.v.2005, RAD.

25. *Brachydiplax chalybea* Brauer, 1868
♂, 24.v.2005, RAD.

26. *Brachygonia oculata* (Brauer, 1878)
♂, 22.iii.2005, GTR; ♂, ♀, 24.v.2005, RAD.

27. *Camacinia gigantea* (Brauer, 1867)
This large species is sometimes seen at shallow, temporary ponds near the park accommodation and was common at a deeper, large swampy pond hidden in forest adjacent to a beach. ♂, 26.iii.2005, RAD; 2 ♂♂, 24.v.2005, RAD.

28. *Cratilla metallica* (Brauer, 1878)
♂, 24.iii.2005, GTR.

29. *Nannophya pygmaea* Rambur, 1842
♂, 23.iii.2005, RAD & GTR; ♀, 24.iii.2005, RAD.

30. *Nesoxenia lineata* (Selys, 1879)
♂, 25.iii.2005, GTR.

31. *Neurothemis fluctuans* (Fabricius, 1793)
♂, 22.iii.2005, RAD; ♂, 25.iii.2005, RAD.

32. *Neurothemis terminata* Ris, 1911
♂, 22.iii.2005, GTR.

33. *Orchithemis pulcherrima* Brauer, 1878
♂, 24.v.2005, RAD.

34. *Orthetrum chrysis* (Selys, 1891)
♂, 22.iii.2005, GTR; 2 ♂♂, 23.iii.2005, GTR.

35. *Orthetrum glaucum* (Brauer, 1865)
2 ♀♀, 23.iii.2005, GTR.

36. *Orthetrum testaceum* (Burmeister, 1839)
♀, 22.iii.2005, GTR; ♂, 26.iii.2005, GTR.

37. *Risiophlebia dohrni* (Krüger, 1902) (Fig. 8)
A local species in a variety of swampy forest habitats. ♂, 26.v.2005, RAD.

38. *Tholymis tillarg*a (Fabricius, 1798)
♂, 25.iii.2005, GTR; ♀, 25.v.2005, RAD.

39. *Tramea transmarina euryale* Selys, 1878
♀, 25.iii.2006, GTR; ♂, 26.iii.2005, GTR.

40. *Tyriobapta laidlawi* Ris, 1919
♂, 22.iii.2005, RAD; 2 ♂♂, 23.iii.2005, RAD; ♂, 24.iii.2005, RAD.

41. *Tyriobapta torrida* Kirby, 1889
♂, 24.iii.2005, RAD.

42. *Zyxomma petiolatum* Rambur, 1842
♂, 24.v.2005, RAD.

Figure 8. *Risiophlebia dohrni* male. Photo by G.T. Reels.

Other locations

Various locations in Kuching and Samarahan divisions. These locations have received varying amounts of collecting effort, from a few hours on one day at some, to five or six days spread across a number of years at others. The positions of most are shown in Fig. 1. In total 89 species have been recorded from these locations.

Kuching Division (locations 1-12):

1. Semenggoh Nature Reserve. Situated quite close to Kuching, habitats here include open, forest edge ponds of various sizes, and small streams in good quality mixed dipterocarp forest which was apparently subject to some selective timber removal (presumably for local use) 70 or more years ago, but that has been left to recover ever since.

2. Sama Jaya Nature Reserve. This is located within the city limits of Kuching and is a popular site for joggers, who use the network of concrete paths that thread through the seasonally dry, swampy (low pH) kerangas forest. The habitats here are highly disturbed, but some interesting species are still to be found.
3. Gunung Singgai. This flat topped mountain is part of the Matang Range where Kubah National Park is also situated, but Gunung Singgai is slightly isolated from the rest of the range. It is famous as the site of the first Catholic Church in Sarawak. The main habitats here are high gradient streams in disturbed mixed dipterocarp forest.
4. Gunung Santubong National Park (streams of various sizes and trailside pools). Situated on an adjacent coastal headland to Bako National Park, Gunung Santubong reaches almost 900m. Streams in mixed dipterocarp forest in steep terrain on the lower slopes of the mountain were sampled on one day in 2005, before it was gazetted as a national park. To date the most notable record from Gunung Santubong is that of *Telosticta santubong* Dow & Orr, which appears to be endemic to the mountain.
5. Sungai Merah (Red Bridge). A stream with its sources in the Matang Range, flowing through highly disturbed forest and open habitats not far from Kubah National Park.
6. In Kuching city, excluding Sama Jaya. No sampling has been carried out here, but incidental records have been made at lights.

Samarahan Division:

7. Peat swamp forest on the Universiti Malaysia Sarawak (UNIMAS) campus at Kota Samarahan. Disturbed peat swamp forest. Part of the area sampled has already been lost to campus expansion (this included the only accessible stream in the area), which is unfortunate as peat swamp forest is undoubtedly the most threatened odonate habitat in south-east Asia, with many range-restricted specialist species.
8. Brackish swamp forest near Kota Samarahan. A dense formation of nipa palm, sampled briefly in 2005. Not shown in Fig. 1, but close to location 7.
9. The Sungai Semawang between Kota Samarahan and Asajaya. A stream partly in a narrow corridor of highly disturbed forest. Not shown in Fig. 1 but close to location 10.
10. Roadside ditches between Kota Samarahan and Asajaya. Broad well-vegetated ditches that provided habitat for many common coenagrionoids and libellulids.

11. Ranchan Recreational Park at Serian. A strip of disturbed mixed dipterocarp forest around a rocky stream in steep terrain, surrounded by second growth forest.
12. Highly disturbed peat swamp forest habitats by the road to Simunjan.

List of species collected - various

ZYGOPTERA

Amphipterygidae

1. *Devadatta podolestoides* Laidlaw, 1934
   In Sarawak the true *D. podolestoides* appears to be confined to the western part of the state (it also occurs in northwest Kalimantan). Much more local in occurrence than the next species. Loc. 3 – ♂, ♀, 2.x.2008, RAD. Loc. 11 – ♂, 14.ii.2008, RAD.
2. *Devadatta* species A
   Loc. 1 – ♂, 29.v.2005, RAD. Loc. 4 – 2 ♂♂, 2 ♀♀, 28.v.2005, RAD.

Chlorocyphidae

3. *Heliocypha biseriata* (Selys, 1859)
   Loc. 5 – ♂, 28.x.2008, RAD. Loc. 11 – ♂, 14.ii.2008, RAD.
4. *Libellago hyalina* Selys, 1859
   In western Sarawak this species is only known from a few low pH sites: the two listed below and a site on the Matang Road (Dow & Reels 2011b). Loc. 7 – ♂, 24.i.2006, RAD; Loc. 2 ♂♂, 24.i.2006, GTR; ♂, 2 ♀♀, 2.iv.2012, RAD. Loc. 9 – ♀, 20.iii.2005, RAD.
5. *Sundacypha petiolata* (Selys, 1859)
   Loc. 1 – ♂, 29.v.2005, RAD; 3 ♂♂, 24.ii.2008, RAD; ♂, 7.x.2011, RAD. Loc. 4 – 6 ♂♂, ♀, 28.v.2005, RAD.

Euphaeidae

6. *Euphaea impar* Selys, 1859
   Loc. 1 – ♂, 29.v.2005, RAD. Loc. 4 – 2 ♂♂, ♀, 28.v.2005, RAD. Loc. 5 – ♂, 28.x.2008, RAD. Loc. 11 – ♂, 14.ii.2008, GTR.
7. *Euphaea subcostalis* Selys, 1873
   Loc. 5 – ♂, 28.x.2008, RAD.

Calopterygidae

8. *Vestalis amaryllis* Lieftinck, 1965

Loc. 1 – ♂, 25.ii.2006, RAD; ♂, 24.ii.2008, RAD; 2 ♂♂, 7.x.2011, RAD. Loc. 4 – 6 ♂♂, ? ♀, 28.v.2005, RAD.

9. *Vestalis atropha* Lieftinck, 1965
Loc. 5 – 2 ♂♂, 28.x.2008, RAD.

Megapodagrionidae

10. *Bornargiolestes* species
The genus Bornargiolestes will be discussed in detail elsewhere (Dow in preparation). Loc. 3 – ♀, 2.x.2008, RAD.

Figure 9. *Podolestes harrisoni* female. Photo by G.T. Reels.

11. *Podolestes harrisoni* Lieftinck, 1953 (Figs. 9, 10)
A peat swamp forest specialist species. Loc. 7 – 2 ♂♂, 30.v.2005, RAD; 2 ♂♂, 2.vi.2005, RAD; ♂, 24.i.2006, RAD; 8 ♂♂, ♀, 25.ii.2008; ♂, 7.vi.2010, RAD; 4 ♂♂, ♀, 2.iv.2012, RAD.

12. *Podolestes orientalis* Selys, 1862
Loc. 2 – 2 ♂♂, 22.ii.2008, RAD. 7 – 2 ♂♂, ♀, 30.v.2005, RAD; 2 ♂♂, ♀, 2.vi.2005; 2 ♂♂, 25.ii.2008, RAD; ♂, 7.vi.2010, RAD.

13. *Rhinagrion borneense* (Selys, 1886)
Loc. 1 – ♂, 24.ii.2008, RAD; ♂, 7.x.2011, RAD. Loc. 5 – ♂, 28.x.2008, RAD.

Figure 10. ***Podolestes harrisoni*** **male eating** ***Coeliccia*** **new species male. Photo by G.T. Reels.**

Figure 11. ***Drepanosticta*** **species cf** ***forficula*** **male. Photo by R.A. Dow.**

Platystictidae

14. *Drepanosticta* species cf *crenitis* Lieftinck, 1933
    Loc. 3 – 2 ♂♂, ♀, 2.x.2008, RAD.

15. *Drepanosticta* species cf *forficula* Kimmins, 1936 (Fig. 11)
    The species that occurs at Semenggoh Nature reserve and a few other locations in Sarawak appears to be distinct from the true *D. forficula* (type locality Mount Dulit). Loc. 1 – ♂, 29.v.2005, RAD; ♂, 25.ii.2006, RAD; 3 ♂♂, ♂+♀, 24.ii.2008, RAD; ♂, 7.x.2011, RAD.

16. *Drepanosticta rufostigma* (Selys, 1886)
    Loc. 3 – 6 ♂♂, 2.x.2008, RAD. Loc. 4 – 6 ♂♂, ♀, 28.v.2005, RAD. Loc. 11 – 6 ♂♂, ♀, 14.ii.2008, RAD; 2 ♂♂, 2 ♀♀, 14.ii.2008, GTR.

17. *Drepanosticta versicolor* (Laidlaw, 1913)
    Loc. 1 – ♂, 29.v.2005, RAD; ♂, 24.ii.2008, RAD; 2 ♂♂, 7.x.2011, RAD.

18. *Telosticta bidayuh* Dow & Orr, 2012
    Loc. 3, 4 – See Dow & Orr (2012).

19. *Telosticta dupophila* (Lieftinck, 1933)
    Loc. 2 – See Dow & Orr (2012). Fig. 3.

20. *Telosticta santubong* Dow & Orr, 2012
    Loc. 4 – See Dow & Orr (2012).

Coenagrionidae

21. *Aciagrion borneense* Ris, 1911
    Loc. 2 – ♂, 22.x.2008, RAD.

22. *Agriocnemis femina* (Brauer, 1868)
    Loc. 1 – ♂, 29.v.2005, RAD. 5 – ♂, 28.x.2008, RAD. Loc. 10 – ♂, 20.iii.2005, RAD.

23. *Agriocnemis minima* (Selys, 1877)
    See the comments in Dow (2012b). Loc. 12 – ♀, 16.ii.2008, RAD.

24. *Amphicnemis annae* Lieftinck, 1940 (Fig. 12)
    Usually a peat swamp forest species. Lieftinck (1940b) described the female from northwest Kalimantan with a long horn on the hind lobe of the prothorax, as in the male. Although very little, if any, difference is apparent between males from northwest Kalimantan and those from Sarawak, females from most parts of Sarawak (identified by association with the male and in one case taken in tandem) lack a long horn, instead having the prothorax shaped as in Fig. 12. However one female from the foot of Gunung Pueh in the extreme west of Sarawak and identified as *A. annae* by molecular methods (misidentified as *A. wallacii* in Dow (2012b)) has the long horn as illustrated by Lieftinck. Loc. 7 – 2 ♂♂, 2 ♀♀, 30.v.2005, RAD; ♂,

2.vi.2005, RAD; 2 ♂♂, 24.i.2006, RAD; 3 ♂♂, 2 ♀♀, 25.ii.2008, RAD; 3 ♂♂, 7.vi.2010, RAD; 2 ♂♂,2.iv.2012, RAD. Loc. 12 – 3 ♂♂, ♂+♀, 16.ii.2008, RAD.

25. *Amphicnemis* species cf *dactylostyla* Lieftinck, 1953 (Fig. 13)
Loc. 2 – ♀, 11.iv.2006, RAD; ♀, 4.x.2011, RAD. Loc. 7 – 5 ♂♂, 3 ♀♀, 30.v.2005, RAD; 4 ♂♂, ♀, 2.vi.2005, RAD; 4 ♂♂, 2 ♀♀, 24.i.2006, RAD; 3 ♂♂, ♀, 24.i.2006, GTR; 19 ♂♂, 3 ♀♀, 25.ii.2008, RAD; 4 ♂♂, 7.vi.2010, RAD; 8 ♂♂, 2 ♀♀, 2.iv.2012, RAD. Loc. 12 – 3 ♂♂, 2 ♀♀, 16.ii.2008, RAD.

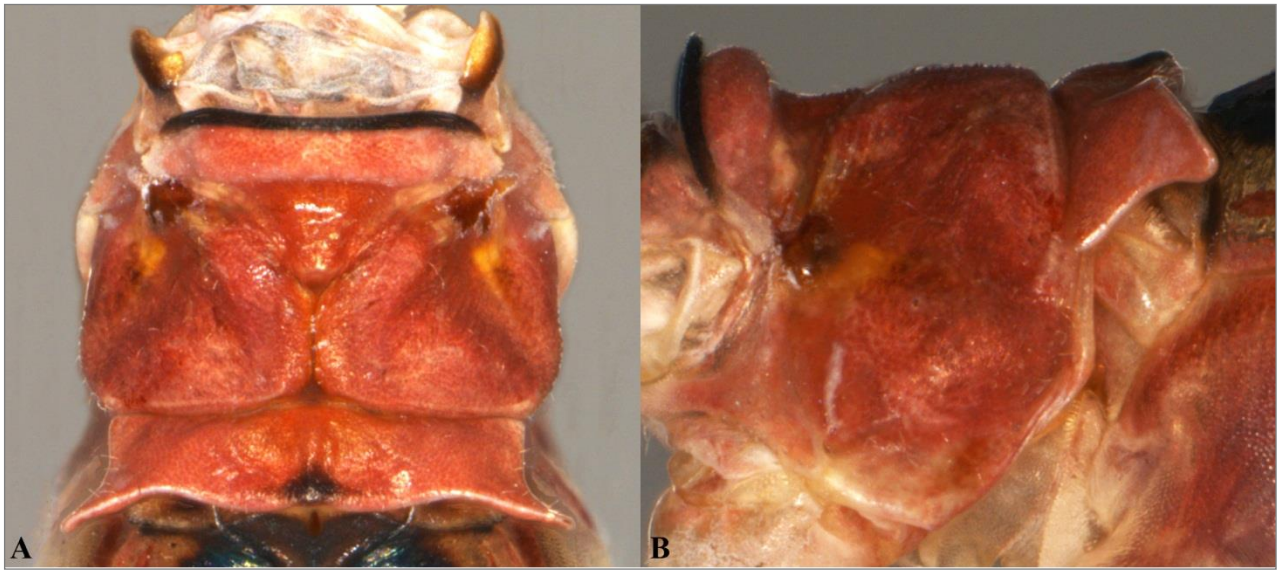

Figure 12. *Amphicnemis annae* female, typical Sarawak form, prothorax: A – dorsal; B – lateral.

Figure 13. *Amphicnemis* species cf *dactylostyla* male. Photo by G.T. Reels.

26. *Amphicnemis ecornuta* Selys, 1889 (Fig. 14)

Loc. 2 – See Dow et al (2012); Sama Jaya Nature reserve remains the only site known in Borneo for this species.

27. *Amphicnemis wallacei* Selys, 1863

Loc. 2 – ♂, 11.iv.2006, RAD; 2 ♂♂, ♀, 22.ii.2008, RAD; ♂, 4.x.2011, RAD. Loc. 7 – 7 ♂♂, 2 ♀♀, 30.v.2005, RAD; 4 ♂♂, 2 ♀♀, 2.vi.2005, RAD; 8 ♂♂, 24.i.2006, RAD; 2 ♀♀, 24.i.2006, GTR; 14 ♂♂, ♀, 5.ii.2008; 2 ♂♂, 7.vi.2010, RAD; 13 ♂♂, 2 ♀♀, 2.iv.2012, RAD. Loc. 12 – 2 ♂♂, 16.ii.2008, RAD; 9 ♂♂, 2 ♀♀, 16.ii.2008, GTR.

Figure 14. *Amphicnemis ecornuta* male. Photo by R.A. Dow.

28. *Archibasis tenella* Lieftinck, 1949

Loc. 1 – ♂, 29.v.2005, RAD; ♂, 24.ii.2008, RAD.

29. *Archibasis viola* Lieftinck, 1948

Loc. 1 – ♂, 25.ii.2006, RAD. 5 – ♂, 25.x.2008, RAD. Loc. 7 – ♂, 2.v.2005, RAD; ♂, 24.i.2006, RAD.

30. *Argiocnemis* species
Loc. 11 – ♂, 14.ii.2008, GTR.

31. *Ceriagrion cerinorubellum* (Brauer, 1865)
Loc. 1 – ♂, 29.v.2005, RAD. 2 – ♂, 22.ii.2008, RAD. Loc. 7 – ♂, 24.i.2006, RAD; ♀, 2.iv.2012, RAD. Loc. 8 – ♂, 20.iii.2005, RAD.

32. *Ischnura senegalensis* (Rambur, 1842)
Loc. 2 – ♂, 22.ii.2008, RAD.

33. *Mortonagrion indraneil* Dow, 2011
For records from locations 7 and 10 made prior to 2011, see Dow (2011). Additional records: Loc. 2 – ♀, 4.x.2011, RAD. Loc. 7 – 3 ♂♂, 2.iv.2012, RAD.

34. *Onychargia atrocyana* (Selys, 1865)
Loc. 1 – ♀, 29.v.2005, RAD. Loc. 7 – ♂, 30.v.2005, RAD; ♀, 25.ii.2008, RAD.

35. *Pericnemis* species cf *triangularis* Laidlaw, 1931 (Fig. 15)
An unnamed species, rarely encountered. Loc. 1 – ♂, 29.v.2005, RAD.

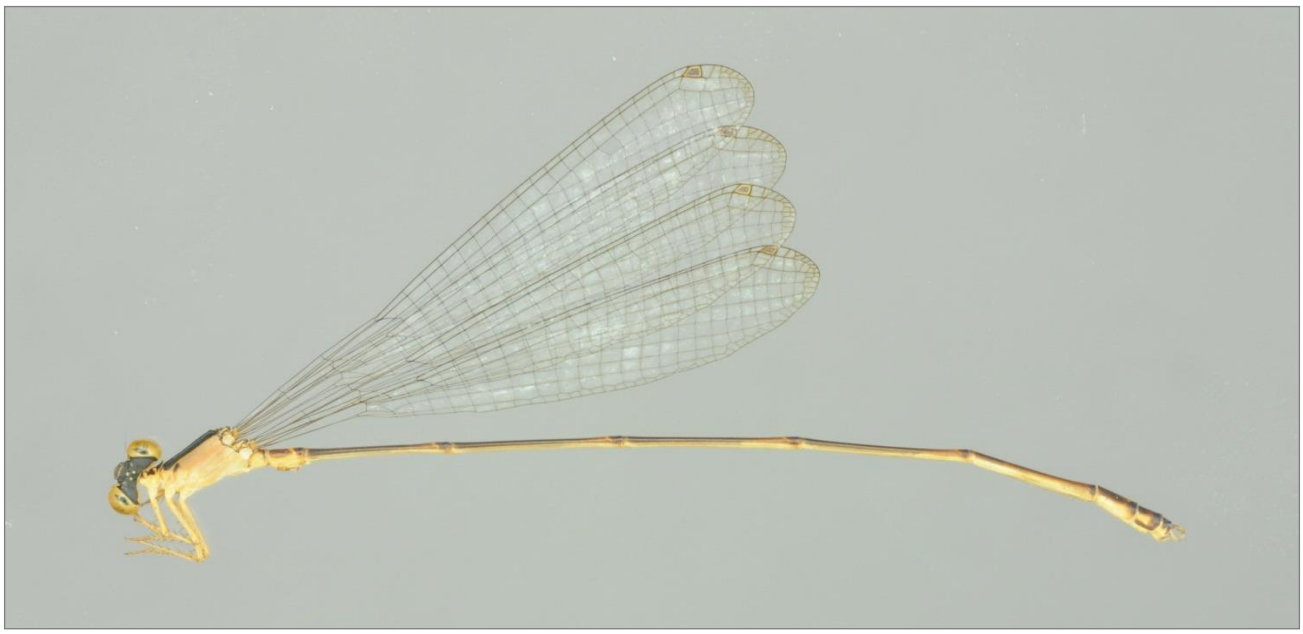

Figure 15. *Pericnemis* species cf *triangularis* male. Photo by R.A. Dow.

36. *Pseudagrion lalakense* Orr & van Tol, 2001
Loc. 1 – 2 ♂♂, 29.v.2005, RAD; 2 ♂♂, 29.v.2005, LCK; 2 ♂♂, 24.ii.2008, RAD.

37. *Pseudagrion microcephalum* (Rambur, 1842)
Loc. 10 – 3 ♂♂, ♀, 20.iii.2005, RAD.

38. *Pseudagrion perfuscatum* Lieftinck, 1937
Loc. 1 – ♂, 29.v.2005, RAD. 5 – ♂, 28.x.2008, RAD.

39. *Stenagrion dubium* (Laidlaw, 1912)
Loc. 3 – ♂, 2.x.2008, RAD. 4 – 3 ♂♂, 28.v.2005, RAD.

40. *Teinobasis ruficollis* (Selys, 1877)
Loc. 2, 7, 8, 9: See Dow (2010a). Fig. 6.

41. *Teinobasis* species cf *suavis* Lieftinck, 1953
Loc. 7: See Dow (2010a).

42. *Teinobasis cryptica* Dow, 2010
Loc. 7: See Dow (2010a).

43. *Xiphiagrion cyanomelas* (Selys, 1876)
Loc. 1 – ♂+♀, 24.ii.2008, RAD.

Platycnemididae

44. *Coeliccia flavostriata* Laidlaw, 1918
Loc. 3, 4: See Dow (2010b).

45. *Coeliccia* species cf *nemoricola* Laidlaw, 1912 (Fig. 7)
Loc. 1 – 3 ♂♂, 29.v.2005, RAD; 4 ♂♂, 2 ♀♀, 25.ii.2006, RAD.

46. *Coeliccia nigrohamata* Laidlaw, 1918
Loc. 1 – ♂, ♀, 29.v.2005, RAD; 2 ♂♂, 25.ii.2006, RAD; ♂, ♀, 24.ii.2008, RAD; ♂, 7.x.2011, RAD. 3 – ♂, 2.x.2008, RAD. Loc. 4 – 6 ♂♂, ♀, 28.v.2005, RAD. Loc. 11 – 3 ♂♂, ♀, 14.ii.2008, RAD; 4 ♂♂, 14.ii.2008, GTR.

47. *Coeliccia* new species (Fig. 10)
A peat swamp forest species, sometimes abundant in the UNIMAS peat swamp and known from one other site on the Matang Road (Dow & Reels 2011b). Fig. 10 shows a male of this species being consumed by *Podolestes harrisoni*. Loc. 7 – ♂, 30.v.2005, RAD; ♀, 2.vi.2005, RAD; ♂, 24.i.2006, RAD; 19 ♂♂, 2 ♀♀, 3(♂+♀), 25.ii.2008; 3 ♂♂, ♀, 7.vi.2010, RAD; 4 ♂♂, 2 ♀♀, 2.iv.2012, RAD.

48. *Copera vittata* (Selys, 1863)
Loc. 1 – ♂, 24.ii.2008, RAD. 7 – ♀, 30.v.2005, RAD; ♂, 24.i.2006, RAD; 2 ♂♂, 25.ii.2008, RAD; ♂, 7.vi.2010, RAD; ♂, ♂+♀, 2.iv.2012, RAD.

49. *Elattoneura analis* (Selys, 1860)
Loc. 11 – ♂, 14.ii.2008, RAD; ♂, 24.ii.2008, GTR.

50. *Prodasineura dorsalis* (Selys, 1860)
Loc. 4 – 2 ♂♂, ♂+ ♀, 28.v.2005, RAD. 11 – ♂, 14.ii.2008, RAD; ♂, ♀, 14.ii.2008, GTR.

51. *Prodasineura haematosoma* Lieftinck, 1937
Loc. 1 – ♂, 29.v.2005, RAD; ♂, 25.ii.2006, RAD; ♂, 24.ii.2008, RAD; ♂, 7.x.2011, RAD. 11 – ♂, 14.ii.2008, RAD.

52. *Prodasineura notostigma* (Selys, 1860) (Fig. 4)
Loc. 4 – ♂, 28.v.2005, RAD.

53. *Prodasineura verticalis* (Selys, 1860)
Loc. 1 – ♂, 29.v.2005, RAD. 5 – ♂, 28.x.2008, RAD.

ANISOPTERA

Gomphidae

54. *Ictinogomphus decoratus melaenops* (Selys, 1858)
Loc. 1 – 2 ♂♂, 29.v.2005, RAD. 5 – ♂, 28.x.2008, RAD. Loc. 9 – ♂, 20.iii.2005, RAD. 10 – ♂, 20.iii.2005, RAD.

55. *Leptogomphus coomansi* Laidlaw, 1936 (Fig. 16)
Probably the most common *Leptogomphus* species in Sarawak, however it should be noted that there are differences between western and eastern populations; possibly they represent distinct species. Loc. 11 – ♀, 14.ii.2008, GTR.

Figure 16. *Leptogomphus coomansi* female. Photo by G.T. Reels.

Aeshnidae

56. *Anax guttatus* (Burmeister, 1839)
Loc. 5 – ♀, 28.x.2008, RAD.

57. *Gynacantha* species
Loc. 7 – ♀, 25.ii.2008, RAD.

58. *Heliaeschna idae* (Brauer, 1865)
Loc. 11 – ♂, 16.ii.2008, RAD, at lights.

Macromiidae

59. *Epophthalmia vittigera* (Rambur, 1842)
Loc. 1 – ♂, 29.v.2005, LCK. 10 – ♂, 20.iii.2005, LCK.

Libellulidae

60. *Acisoma panorpoides* Rambur, 1842
Loc. 1 – ♂, 29.v.2005, RAD. 2 – ♂, 22.ii.2008, RAD.

61. *Aethriamanta gracilis* (Brauer, 1878)
Loc. 1 – ♂, ♀, 29.v.2005, RAD. Loc. 5 – ♂, 28.x.2008, RAD. Loc. 10 – ♂, 20.iii.2005, RAD.

62. *Agrionoptera insignis* (Rambur, 1842)
Loc. 2 – ♂, 22.ii.2008, RAD.

63. *Agrionoptera sexlineata* Selys, 1879
Loc. 2 – ♂, 22.ii.2008, RAD.

64. *Brachydiplax chalybea* Brauer, 1868
Loc. 1 – 4 ♂♂, 29.v.2005, RAD. Loc. 8 – 3 ♂♂, 20.iii.2005, RAD. Loc. 12 – ♂, 16.ii.2008, GTR.

65. *Brachygonia oculata* (Brauer, 1878)
Loc. 2 – ♂, ♀, 22.ii.2008, RAD; ♂, 4.x.2011, RAD. Loc. 7 – ♂, 30.v.2005, RAD; ♂, 24.i.2006, RAD; ♂, 7.vi.2010, RAD. Loc. 12 – ♂, 16.ii.2008, RAD.

66. *Nannophya pygmaea* Rambur, 1842
Loc. 2 – ♂, 22.ii.2008, RAD. Loc. 12 – ♀, 15.ii.2008, GTR.

67. *Nesoxenia lineata* (Selys, 1879)
Loc. 2 - ♂, 22.ii.2008, RAD.

68. *Neurothemis fluctuans* (Fabricius, 1793)
Loc. 2 – ♂, 22.ii.2008, RAD. Loc. 10 – ♂, ♀, 20.iii.2005, RAD.

69. *Neurothemis ramburii* (Brauer, 1866)
Loc. 1 – ♂, 29.v.2005, RAD. 2 – ♂, 22.ii.2008, RAD. Loc. 5 – ♂, 28.x.2008, RAD.

70. *Neurothemis terminata* Ris, 1911
Loc. 1 – ♂, 29.v.2005, RAD; ♀, 7.x.2011, RAD. Loc. 2 – 2 ♂♂, 22.ii.2008, RAD. Loc. 4 – ♂, 28.v.2005, RAD. Loc. 7 – ♂, 25.ii.2008, RAD.

71. *Orchithemis pulcherrima* Brauer, 1878
Loc. 7 – ♂, 30.v.2005, RAD; ♂, 25.ii.2008, RAD.

72. *Orchithemis xanthosoma* Laidlaw, 1911
Loc. 7 – 2 ♂♂, 7.vi.2010, RAD.

73. *Orthetrum chrysis* (Selys, 1891)
Loc. 9 – ♂, 20.iii.2005, RAD.

74. *Orthetrum sabina* (Drury, 1773)
Loc. 10 – ♂, 20.iii.2005, RAD.

75. *Orthetrum testaceum* (Burmeister, 1839)
Loc. 1 – 2 ♂♂, 29.v.2005, RAD.

76. *Pornothemis serrata* Krüger, 1902
Loc. 7 – ♂, 30.v.2005, RAD; ♂, 2.vi.2005, RAD; ♂, 2.iv.2012, RAD.

77. *Rhodothemis rufa* (Rambur, 1842)
Loc. 1 – ♂, 29.v.2005, RAD. 10 – ♂, ♀, 20.iii.2005, RAD. Loc. 12 – ♂, 16.ii.2008, RAD.

78. *Rhyothemis obsolescens* Kirby, 1889
Loc. 2 – ♀, 4.x.2011, RAD. 12 – ♀, 16.ii.2008, RAD.

79. *Rhyothemis phyllis* (Sulzer, 1776)
Loc. 2 – ♂, 22.ii.2008, RAD. 10 – 2 ♂♂, 20.iii.2005, RAD.

80. *Rhyothemis triangularis* Kirby, 1889
Loc. 1 – ♂, 29.v.2005, RAD.

81. *Risiophlebia dohrni* (Krüger, 1902) (Fig. 8)
Loc. 7 – ♂, 30.v.2005, RAD; 2 ♂♂, 2.vi.2005, RAD; ♂, 24.i.2006, RAD; 2 ♂♂, ♀, 25.ii.2008, RAD; ♀, 7.vi.2010, RAD; 2 ♂♂, 2.iv.2012, RAD.

82. *Tetrathemis flavescens* Kirby, 1889
A very local and seldom encountered swamp forest species. Loc. 7 – ♂, 25.ii.2008, RAD.

83. *Tetrathemis irregularis hyalina* Kirby, 1889
Loc. 7 – 2 ♂♂, 24.i.2006, RAD; 2 ♂♂, 24.i.2006, GTR.

84. *Tyriobapta kuekenthali* (Karsch, 1900)
Loc. 1 – ♂, 29.v.2005, RAD.

85. *Tyriobapta laidlawi* Ris, 1919
Loc. 2 – 2 ♂♂, 22.ii.2008, RAD; ♂, 4.x.2011, RAD. Loc. 7 – ♂, 2.vi.2005, RAD; ♂, 24.i.2006, RAD; ♂, 24.i.2006, GTR; ♂, 25.ii.2008, RAD; ♂, 2.iv.2012, RAD.

86. *Tyriobapta torrida* Kirby, 1889
Loc. 4 – ♂, 28.v.2005, RAD. 11 – ♂, 14.ii.2008, GTR.

87. *Urothemis signata insignata* (Selys, 1872)
Loc. 1 – ♂, 29.v.2005, RAD; ♂, 7.x.2011, RAD. Loc. 5 – ♂, 28.x.2008, RAD.

88. *Zyxomma obtustum* (Albarda, 1881)
Loc. 6 – ♂, 21.ii.2006, LCK.

89. *Zyxomma petiolatum* Rambur, 1842
Loc. 1 – ♀, 29.v.2005, RAD. Loc. 12 – ♂, 16.ii.2008, RAD.

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References

Asahina, S., 1966. Sarawak Odonata taken by Mr. H. Hayashi. Tombo 9(1–4): 28–30.

Dow, R.A., 2004. Looking for Odonata in Hong Kong and Malaysian Borneo. Agrion 8(1): 3–4.

Dow, R.A., 2006. Interesting behaviour by *Podolestes chrysopus* Selys, 1886. Agrion 10(1): 11.

Dow, R.A., 2010a. A review of the Teinobasis of Sundaland, with the description of *Teinobasis cryptica* sp. nov. from Malaysia (Odonata: Coenagrionidae). International Journal of Odonatology 13(2): 205-230, plate II.

Dow, R.A., 2010b. Revision of the genus *Coeliccia* (Zygoptera: Platycnemididae) in Borneo. Part I: The *borneensis*–group of species. Zoologische Mededelingen 84(7): 117–157.

Dow, R.A., 2011. *Mortonagrion indraneil* spec. nov. from Borneo, and a redescription of *M. arthuri* Fraser (Odonata: Zygoptera: Coenagrionidae). Zootaxa 3093: 35-46.

Dow, R.A., 2012a. Odonata collected around the Borneo Highlands Resort on Gunung Penrissen, Kuching Division, Sarawak, Malaysia in July 2012. International Dragonfly Fund Report 50: 1–12.

Dow, R.A., 2012b. Odonata collected at Gunung Pueh, Kuching Division, Sarawak, Malaysia in October 2012. International Dragonfly Fund Report 54: 1–21.

Dow, R.A., C.Y. Choong & Y.F. Ng, 2010. A review of the genus *Amphicnemis* in Peninsular Malaysia and Singapore, with descriptions of two new species (Odonata: Zygoptera: Coenagrionidae). Zootaxa 2605: 45–55.

Dow, R.A. & A.G. Orr, 2012a. *Telosticta*, a new damselfly genus from Borneo and Palawan (Odonata: Zygoptera: Platystictidae). The Raffles Bulletin of Zoology 60(2): 365–401.

Dow, R.A. & A.G. Orr, 2012b. *Drepanosticta simuni* spec. nov. from Borneo with notes on related species (Zygoptera: Platystictidae). Odonatologica 41(3): 283-291.

Dow, R.A. & G.T. Reels, 2010. The Odonata of three National Parks in Sarawak. Agrion 14(1): 14-19.

Dow, R.A. & G.T. Reels, 2011a. *Coeliccia southwelli* sp. nov. (Odonata: Zygoptera: Platycnemididae) from Mount Dulit, Sarawak. Zootaxa 2832: 63-68.

Dow, R.A. & G.T. Reels, 2011b. Odonata from a remnant patch of disturbed peat-swamp forest on the outskirts of Kuching, west Sarawak. Agrion 15(2): 50-51.

Grinang, J., 2004. Dragonflies. In: Sarawak Bau Limestone Biodiversity (eds. H.S. Yong, F.S.P. Ng and E.E.L. Yen). The Sarawak Museum Journal LIX, No. 80 (New Series); Special Issue 6: 345–350.

Hazebroek, H.P. & A.K.A. Morshidi, 2001. National Parks of Sarawak. Natural History Publications (Borneo).

Hincks, W.D., 1930. Some notes on a collection of Sarawak Odonata. Sarawak Museum Joural 4: 49–56.

Hisamatsu, S. and Sasamoto A., 2003. A record of Odonata collected in Sarawak, Borneo (Kalimanthan) Island, Malaysia. Aohada 2: 22–26.

Inoue, K. & Kuwahara, H., 1974. Malaysian dragonflies taken by Hideo Kuwahara. Gracile 17: 1–11.

Kitagawa, K., 1997. Records of the Odonata from Sarawak, Malaysia. Aeschna 34: 5–10.

Laidlaw, F.F., 1911. Descriptions of two species of Dragon flies (Odonata) from Sarawak. Journal of the Straits Branch of the Royale Asiatic Society 57:190–193.

Laidlaw, F.F., 1913. Contributions to the study of the dragonfly fauna of Borneo. Part I. The Corduliinae: The genus *Amphicnemis*: The legion Protoneura. Proceedings of the Zoological Society of London 1913: 63–80.

Laidlaw, F.F., 1914. Contributions to a Study of the Dragonfly Fauna of Borneo. Part II. The Gomphinae and Chlorogomphinae. Proceedings of the Zoological Society of London, 1914: 51–63, plate I.

Laidlaw, F.F., 1915. Some additions to the dragonfly fauna of Borneo. Sarawak Museum Journal 2(6): 273–275.

Laidlaw, F.F., 1918. Some additions to the known dragonfly fauna of Borneo, with an account of new species of the genus *Coeliccia*. Proceedings of the Zoological Society of London 1918: 223–232, figs 2–9.

Laidlaw, F.F., 1920. Contributions to the study of the dragonfly fauna of Borneo. Part IV. A list of species known to occur in the island. Proceedings of the Zoological Society of London 1920: 311–342.

Laidlaw, F.F., 1934. A Note on the dragonfly fauna (Odonata) of Mount Kinabalu and of some other mountain areas of Malaysia, with a description of some new or little known species. Journal of the Federated Malay States Museums 17(3): 549–561.

Lieftinck, M.A., 1929. A revision of the known Malaysian Dragonflies of the genus *Macromia* Rambur, with comparative notes on species from neighbouring countries and descriptions of new species. Tijdschrift voor Entomologie 72: 59–108.

Lieftinck, M.A., 1934. Descriptions of five new species of Agrionidae from Java (Odonata). Stylops 3(1): 6–17.

Lieftinck, M.A., 1940a. Revisional notes on some species of *Copera* Kirby. With notes on habits and larvae (Odon., Platycnemididae). Treubia 17(4): 281–306.

Lieftinck, M.A., 1940b. Descriptions and records of South–east Asiatic Odonata (II). Treubia 17: 337–390.

Lieftinck, M.A., 1953. Additions to the odonate fauna of the Indo–Australian archipelago. Treubia 22(1): 233–269.

Lieftinck, M.A., 1954. Handlist of Malaysian Odonata. A catalogue of the dragonflies of the Malay Peninsula, Sumatra, Java and Borneo, including the adjacent small islands. Treubia (Suppl.) 22: i–xiii + 1–202.

Lieftinck, M.A., 1964. Synonymic notes on east asiatic Gomphidae with descriptions of two new species (Odonata). Zoologische Mededelingen 39: 89–110.

Lieftinck, M.A., 1965. The species–group of *Vestalis amoena* Selys, 1853, in Sundaland (Odonata, Calopteryiidae). Tijdschrift voor Entomologie 108(11): 325–364.

Lieftinck, M.A., 1968. A review of the genus *Oligoaeschna* Selys in Southeast Asia. Tijdschrift voor Entomologie 111(5): 137–184, plates 12– 13.

Matsuki, K. & K. Kitagawa, 1992. Bornean Odonata taken by Dr. T. Ueda. I. Anisoptera. Aeschna 26: 1–6.

Matsuki, K. & K. Kitagawa, 1993. Bornean Odonata taken by Dr. T. Ueda. II. Zygoptera. Aeschna 27: 1–10.

Ris, F., 1913. Libellulinen 8. Collections Zoologiques du Baron Edm. De Selys Longchamps. Catalogue Systématique et Descriptif 16 (1): 965–1042, figs. 556–604, plate VIII.

Ris, F., 1919. Libellulinen 9. Collections Zoologiques du Baron Edm. De Selys Longchamps. Catalogue Systématique et Descriptif 16: 1043–1278.

van Tol, J. & Norma Rashid, Y., 1995. The genus *Euphaea* Rambur in Borneo (Odonata: Euphaeidae). Tijdschrift voor Entomologie 138: 131–142.

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