

South-west Australia 2018

'The bottom left-hand corner' – the second Odonatours Australia recce trip

Participants: Phil Benstead, Magnus Billqvist, Ola Elleström and Paul Hopkins.

Trip report by Phil Benstead

Summary

This was a serious attempt to bag the endemic odonates of the Pilbara and the south-west of Western Australia, following on gently from our introduction to the Australian odofauna on last year's Queensland trip. Working this chunk of a huge state gave us a potential 59 species to aim for and resulted in us guiltily clocking up 8000 km on the road. The low available species total belies a very high level of endemism and made for exciting days in the field.

Of the 24 regional endemics available to us we managed to find 18 whilst recording a total of 49 species. Incredibly our total included seven monotypic genera and additionally we made a clean sweep of the regionally endemic flatwing genus *Archiargiolestes*. Although the six regional endemics that we missed included some rarely seen species (eg *Eurysticta coolwanyah* and *Antipodogomphus hodgkini*) it also included two that we put a large amount of effort into trying to see (the *Petalura* and the *Nannophya*), which was ultimately rather painful.

Acknowledgements

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Daily diary

28/11 Lake Leschenaultia

An early morning arrival in Singapore for Phil meant he was briefly in the same country as the rest of the team, who were scheduled to arrive in Perth in three days time. They had great weather for their mangrove forest day and gripped Phil off royally...

Phil arrived off the flight and made it to the campsite in time for a couple of hours in the field. The marshy lake edge produced odes, first up being the widespread *Orthetrum caledonicum*. Things quickly got more interesting as common damselflies here included *Austrolestes annulosus* and *Austroagrion cyane*, both ticks. [Cataloguing of Phil's photos on return revealed the presence here of at least one male *Austrolestes aleison* – a big surprise.]

Perching like *Macrodiplax* at half-mast were the first *Austrothemis nigrescens*, a smart little libellulid that was to prove to be widespread. Walking on a little a likely pond produced the tiny *Archiargiolestes pusillus* (superb!) and further on a roosting *Hemicordulia australiae* got some attention too. A great start to the trip.

29/11 Araluen Botanical Park, Kogolup and Lake Leschenaultia

A day to recce before the guys arrived. Phil headed through about three tasty-looking National Parks on his way south from Mundaring to Araluen. The botanical park was priceless in terms of ease of access to a nice little, and rather varied, stream. At the top end by the carpark Phil found his first *Miniargiolestes*, a fantastic flatwing and quite numerous up this end of the garden. *Hemicordulia australiae* was common here. Working the stream down to the garden proper took some time and was well worthwhile. *Austrogomphus collaris* was reasonably abundant. In more open areas *Adversaeschna* was on the wing and perched occasionally.

All this provided plenty of photographic opportunities but no glory. This finally arrived down near the souvenir shop where a dark riffle produced a superb *Lathrocordulia metallica*. It was a real struggle to get a record shot but afterwards he enjoyed brief views through bins as it darted erratically in the gloom before heading out-of-sight high up into a nearby tree to roost. This was a regional endemic that we had no recent gen for and did not think we were going to see! Magic stuff.

That left a little time to familiarise the route into Kogolup (Beeliar NP). The track in produced a nice *Tramea stenoloba* and the lakeside grasses had a myriad of damselfly nymphs in a rapid survey including new-for-the-trip *Ischnura aurora* and *Ischnura heterosticta*, alongside more *annulosus* and *Xanthagrion*.

30/11 John Forrest NP and Perth area

Not much time for odes today. After shopping Phil parked up outside John Forrest NP and got his first *Diplacodes bipunctata* of the trip and a few interesting fly-pasts. Later he stopped for a leak outside Perth airport and bagged a hanging *Archeosynthemis occidentalis*. Sadly his camera was in the car and when he got back with it the thing flew... The rest of the day was spent driving north up past Wubin and camping by the road in what became a very noisy truckstop...

1/12 Meethakarra and Ophthalmia Dam

More driving this morning. We stopped at Meethakarra en route and bagged a few odes for the dragonfly deprived team; *Xanthagrion*, *Ischnura heterosticta*, *Diplacodes bipunctata* and *haematodes* went down well but were predictable enough.

At last knockings we got to Newman and elected to visit the nearby Ophthalmia Dam, which was a fantastic bird site but failed to produce any serious odonates, the highlight being two unexpected male *Macrodiplax cora*.

2/12 Weeli Wolli and on to Dales Gorge

Finding Weeli Wolli was perhaps unnecessarily difficult but we got there in good time in the end, picking up two Australian bustards en route. The spring-fed stream at Weeli Wolli was superb. We were greeted with a hawking *Tramea (lowei?)* and the first of many *Hemicordulia koomina*. Along the creek and under the trees we searched out loads of new odes. Two species of *Agriocnemis*, including the regionally endemic *kunjina*, were quickly bagged. *Nososticta liveringa* was common. There was a brief *Austroagrion pindara* and then Magnus found the odo of the day and perhaps of the entire Pilbara leg of the trip – a superb *Nannophlebia injibandi*. It perched nicely for photographs and then vanished.

Driving out we headed for Dales Gorge arriving in time to recce the walk for tomorrow and seeing a number of nice odes again including a single *Adversaeschna*, which was new for the guys.

3/12 Dales Gorge and Wittenoom and on to Millstream Chichester NP

Our second visit to the gorge was much more productive and we had an enjoyable morning and a little swimming before it got too hot to operate. At the waterfall pool we quickly connected with the first of a small number of *Austroepigomphus gordonii*, a really attractive gomphid. Moving on we noted small numbers of the blue *Crocothemis* and Paul found us a small roost of *Zygomma elgneri*. We all enjoyed close looks at the regionally-endemic *Austroagrion pindrina* and *Ictinogomphus dobsoni* that were on offer. Eventually we climbed out and checked out the gorge at Wittenoom (the town famous for asbestos mining infamy). We did not see any asbestos and the waterholes in the gorge held few odes but the session did include further good looks at *Austroagrion pindrina* and a few *Pseudagrion aureofrons*. Driving on to Millstream Chichester NP we arrived at dusk and settled in.

4/12 Millstream Chichester and south to Carnarvon

Just after dawn we got ourselves sorted and out into the camp kitchen for breakfast. We worked the nearby stream and pool. Magnus found us our first *Nososticta pilbara*, we were to see many more during the morning. After checking this area we went to the nearby Fortescue Crossing and searched great habitat looking for the *Eurysticta* but failed to find it. A bonus here was our only *Rhyothemis* of the trip – *graphiptera*. The last site of the day before the drive to Carnarvon was the Deep Reach Pool, here we found our only *dobsoni* for the park but not much else. Driving south was good for birds with cockatiel and bustard again and even a surprise flock of budgies. En route the Robe River was mostly notable for the puncture we sustained in the river bed...

5/12 Carnarvon to Kalbarri

A slow start this morning with some shopping and puncture repair necessary before we moved on. The guys spent an hour birding on the seafront and then we all checked out the nearby Chinaman Creek but it only produced commonplace species. Driving south we

checked out several sites for *Austrolestes aridus* without connecting sadly (all our sites were dry and this was one of the species we were destined not to see). Hamelin Bay was fun for stromatolites and western grass-wren performed well on arrival. Continuing our relocation back into the SW we stopped briefly at the Murchison River before pulling into the delightful seaside town of Kalbarri.

6/12 Kalbarri to Lake Leschenaultia

We kicked off the day by exploring parts of the Kalbarri NP but did not find anything of great interest, although we perhaps headed south a little early to be sure that gomphids were not flying here. The drive south to Perth was uneventful (although Phil uncharacteristically managed to pick up a speeding ticket somewhere during the journey...), we stopped for lunch and to photograph yet another obliging shingleback.

7/12 Lake Leschenaultia, Araluen and Pinjarra

First thing this morning we did the rounds of the Lake we were camped at, Leschenaultia produced a big emergence of *Austrolestes analis* this time (not *annulosus*) and other firsts for the team included the splendid *Austrothemis*.

Next up was a trip to Araluen, which also added a few new species for those members of the team that had not visited previously (like *Miniargiolestes* and the *Austrogomphus*). Again we had fleeting glimpses of *Lathrocordulia*, without getting images (an elusive species apparently).

After lunch we headed for Pinjarra and checked out the petaltail site. Here we found a very challenging habitat to work and our first *Austrolestes io*. Birding was good here.

8/12 Pinjarra

We spent a good chunk of the day searching for *Petalura* along the tiny creek at the Pinjarra site – no joy. We did spend part of the day photographing *Austrolestes io* and finding our first (and only?) *Hemicordulia tau*. Later we checked a few potential sites. At Dandelup we found more *Austrolestes io* on the river. At Marrinup Phil had a close encounter with a tiger snake and the habitat looked good for *Petalura* again.

9/12 drive to Pemberton and Lefroy Brook

Leaving Pinjarra behind we headed towards perhaps the most eagerly anticipated site of the tour – Lefroy Brook in Pemberton. On arrival we checked the brook. Walking into the stream bed we flushed our first (teneral) *Archaeosynthemis leachii* – we were to see many of this species at this excellent site during our days here. We also found our first *Austroaeschna anacantha*, which perched nicely for photographs but was sadly tri-winged... Two new families for all of us.

Lunch was taken at Jarrah Jacks, so the men could sample the local brews. Meanwhile Phil checked out the farm dam for more *Austrothemis*, killer photos of *Xanthagrion* at last and a nice reptile – *Chelodina oblonga*.

Back at Lefroy Brook and the campsite we searched around and familiarised ourselves with the site getting some nice images in the process but nothing new.

10/12 Lefroy Brook and Fernhook Falls (Mount Frankland NP)

Today we motored the short distance into Mount Frankland NP. The puddles on the access road into Fernhook Falls produced a nice flatwing as we had hoped - *Archiargiolestes pusillissimus* no less. Also here more *Austrolestes analis*. Driving on to Fernhook Falls also produced another hoped-for species when we found at least three *Hesperocordulia berthoudi* zooming over the cascades. A really smart cordulid. Working the area produced more *Austrolestes io* – a decidedly variable species it seems.

Back at the campsite we had time for a late afternoon session before heading to the Indian restaurant in Pemberton to celebrate our new odonates.

11/12 Lefroy Brook, Carey Brook and Beedelup NP

We spent this morning working Lefroy Brook and we were rewarded with our first *Armogomphus* and multiple opportunities to photograph *Archaeosynthemis leachii*. In the afternoon we checked Carey Brook and had another male *Armogomphus*. Driving to Beedelup

NP, Ola told us about a dragonfly he had found back at Carey... We did not spend long at Beedelup before heading back to Carey Brook and the stunning *Austrosynthemis cyanitincta* that was occasionally patrolling a shaded logjam in the small stream. Nice find and a great way to end the day.

12/12 Quinn Bridge and Stirling Range NP

Leaving Pemberton we had a poor weather kind of day and this spurred us on to tackle the long drive out to Esperance to check our only real *Nannophya* site. En route we stopped at Quinn Bridge (outside Gnowangerup), which was good for birds (regent and elegant parrot) but otherwise only produced *Austrolestes annulosus*.

Passing so close to the Stirling Range NP made it possible to swing in for a quick bird twitch – the staff at the resort were happy to show us their adult and juvenile owlet-nightjars and we also had yellow-plumed honeyeater and more elegant parrots here in a very quick stop. The local rivers and streams here were dry sadly so we quickly resumed our drive.

13/12 Kaurock NR and the Meyer Rd and Fisheries Rd roadside wetlands

Having camped at a site in Esperance overnight we drove the 100 km to Kaurock NR with our fingers crossed for *Nannophya*. Sadly the habitat we found at the site after a long walk in was all dry, the only consolation being six (inland) hooded plovers on a saline lakeshore en route. Driving out at a junction we spotted a purple swamphen crossing the road and turned off our route to investigate. This proved to be a good idea as the floodway here was wet and crawling with *Austrolestes aleison*, a SWA endemic very high on our target list. Also here were *Austrolestes annulosus* and a nice restricted-range snake (*Drysdalia coronata*). Spurred on we examined more wetlands along the Fisheries Rd and were rewarded with some potential *Nannophya* habitat (no sign though) and more *Austrolestes*, this time a huge emergence of *analis* and much smaller numbers of *annulosus* and *aleison*.

Pleased, we lunched in Esperance and then drove on towards Albany. Camping at Ravensthorpe we fell asleep to the incredible sound of the aptly-named motorbike frog and a distant boobook.

14/12 Cheynes Beach area (Waychinicup NP and other nearby NR's)

Leaving Ravensthorpe it was just a short drive into the Cheynes Beach area and we quickly found a superb marsh on the road into the place for a mid-morning session. This swamp was excellent. *Austrolestes aleison* was again abundant. *Archiargiolestes pusillissimus* and *Archiargiolestes pusillus* were flying together (the only time we had two *Archiargiolestes* flatwings at the same site). *Austrothemis* was present in small numbers but Paul produced the real goods when he found our first (and most obliging) *Archaeosynthemis occidentalis*. Incredibly it was gleaning the abundant flies from the very clothing of the team when Phil finally rocked up to see it. It perched a few times and we got some rather ordinary images of this very fine odo. [Sadly, despite seeing it again on a number of other occasions during the remainder of the trip, this was to be our best encounter.]

Checking into the campsite, we lunched and then Magnus took us on an afternoon loop drive around some likely-looking wetlands. The highlight of the session being the North Sister NR, which produced a huge emergence of *Austrothemis*. Every bush and shrub (even along the road) had 1-2 and we all finally got great images of the males and females of this fantastic libellulid. They were so numerous that Paul and Phil even watched one getting caught and eaten by an *Adversaeschma*.

15/12 Cheynes Beach, Quindanning, drive to Pinjarra

Our only dedicated birding session of the trip started just after dawn behind the campsite. We spent a couple of very overcast hours chasing birds and mammals, highlights included glimpses of noisy scrub-bird, good views of the bristlebird and (for Phil) a charming encounter with a feeding honey possum.

On another day of rather poor weather we drove towards Pinjarra. We really only stopped at Quindanning for pub grub and odos at lunchtime. No real highlights on the river and associated swamp here but *Archiargiolestes pusillus* and *Austrolestes annulosus* were photographed.

16/12 Mandurah, Pinjarra, Manning Lake and Lake Leschenaultia

We started our day today with a drive to Mandurah to look at the sea before one last attempt for the *Petalura*. The beach had a steady trickle of flesh-footed shearwaters south, also here a few bridled, fairy and crested tern. Nice!

On arrival we were surprised to find that the stream at our Pinjarra site had largely dried up since our last visit. We worked the area including the few remaining pools of water but failed to find any sign of *Petalura*. In the end we reluctantly left the site and headed for Manning Lake, a site we hoped would provide us with our final flatwing of the trip – *Archiargiolestes parvulus*. Sure enough it did not take long working the swampy paperbark edge of the lake before we located and identified the flatwing. It was in amongst the biggest emergence of *Austrolestes analis* that we had seen to date.

At the end of the day, and close to our Lake Leschenaultia campsite, Ola found us a superb echidna, which (once it recovered from the shock) produced an excellent series of images for us all. Nice one.

17/12 Rockingham and Manning Lake

Phil dropped the team at Shed B in Fremantle in the morning for their quokka and wader jaunt to Rottne Island. [Highlights included the quokka, two banded stilts and a nice selection of common waders.] This left Phil with the chance to check out a coastal lake at Rockingham before lunch. This site was ultimately rather disappointing but provided opportunities to photograph common species. After lunch it was back to Manning Lake for a longer session photographing the much more interesting *Archiargiolestes parvulus*.

After picking up the team again from Shed B we all headed round the back of John Forrest NP to scope out some sites for the next morning but came up blank. All the rivers here were dry.

18/12 John Forrest NP, Araluen and the reservoirs...

This morning we left Lake Leschenaultia and headed for the nearby John Forrest NP. A quick look at the habitat here produced great views of southern brown bandicoot for most of us and Magnus bagged a *Tramea stenoloba* for his troubles. Checking the dam for *Nannophya* habitat produced good views of teneral and in cop. *Austrogomphus collaris* and a single *Austrothemis*. The team were unconvinced by the novelty of the habitat here though so we decided to head back to Araluen to see what was flying here.

Araluen was a fantastic idea and it did not take Magnus too long to find the first of about eight *Zephyrogomphus lateralis* (our final SWA endemic of the trip it transpired). This proved to be a huge favourite and it was hard to stop taking photographs. The other highlight here was another male *Austroaeschna anacantha* and some of us had close encounters with *Lathrocordulia* again....

After lunch we checked numerous historic odo sites, mostly outflow wetlands in the regions many reservoirs and we did not see anything novel. Good views of western spinebill at Canning Reservoir were well received though.

19/12 Lake Joondalup and Gin Gin Brook

Today we headed to the huge Lake Joondalup complex, just north of Perth city centre. Our first stop behind a Gospel Church produced several erratically flying *Archaeosynthemis occidentalis*, but sadly we could not find them perched and they were flying too high to be caught... Very obvious nevertheless, all ginger, yellow and with smoky wing tips. Good numbers of *Archaeosynthemis leachii* present here too and we all managed photographs of perched individuals. [Phil discovered a surprise andromorphic female *Macrodiplax cora* from here in his photos at the airport on the way home.] Working the lakeshore to the north in a series of hops gave us many of the damselflies we had become accustomed to seeing, including good numbers of *Austrolestes annulosus* and we waved goodbye to *Archiargiolestes pusillus*. Birds were good here too, with our only blue-billed duck of the trip and good views of buff-banded rail.

After lunch we drove the short distance to check Gin Gin Brook. Despite the heat there were good numbers of *Archaeosynthemis leachii* flying here and Paul found us our only female *Austroaeschna anacantha* of the trip. We said our goodbyes to the excellent *Miniargiolestes minimus*.

20/12 Serpentine NP, Kogolup and Manning Lake

Today in the absence of any new information regarding the missing species we still needed we headed for Serpentine NP and the promise of a new river. We perhaps did not give this site the attention it deserved but it was very busy with people swimming on a very hot day. In the short time we spent here we failed to find any damselflies but did connect with another single male *Austroaeschna anacantha* and our last *Austrogomphus collaris*.

Next up was a very hot and sweaty session at Kogolup. No sign of *stenoloba* here (still needed by half the team...) but there were some *Austrothemis* perched high in trees rather interestingly. We saw at least two *Archaeosynthemis occidentalis* here but again we could not get near them.

Last stop of the trip was a last visit to Manning Lake, where the heat blasted both us and the odos into submission. Paul managed one *parvulus* but plenty of *Austrolestes analis* were present here as usual.

Odonata recorded in south-west Australia between November 28th and December 21st

The abbreviations NWA and SWA correspond with the geographical areas detailed in Thieschinger and Hawking (2006).

<i>Austrolestes aleison</i>	Western ringtail	Phil had at least one male at Lake Leschenaultia before the team arrived. Common in the Meyer Rd and Fisheries Rd roadside wetlands (near Esperance) and recorded in variable numbers in the Cheynes Beach wetlands the next day. Endemic to SWA.
<i>Austrolestes analis</i>	Slender ringtail	Widespread and noted at many sites in SWA, eg Lake Leschenaultia, Araluen Botanic Park, roadside puddles in Mount Frankland NP, huge emergences noted at Fisheries Rd roadside wetlands and Manning Lake.
<i>Austrolestes annulosus</i>	Blue ringtail	Widespread and noted at many sites in SWA.
<i>Austrolestes io</i>	Iota ringtail	Scarce, only recorded in small numbers at Pinjarra and Fernhook Falls (Mt Frankland NP). A rather variable species.
<i>Archiargiolestes parvulus</i>	Midget flatwing	Only recorded at Manning Lake (near Fremantle). The species, and indeed genus, is endemic to SWA.
<i>Archiargiolestes pusillissimus</i>	Tiny flatwing	Plenty in roadside puddles in Mount Frankland NP and also two males at the fantastic swamp in Waychinicup NP (Cheynes Beach). Endemic to SWA.
<i>Archiargiolestes pusillus</i>	Little flatwing	The most widespread <i>Archiargiolestes</i> and frequently encountered. Recorded flying together with <i>pusillissimus</i> at Waychinicup NP, the only time we saw two species of <i>Archiargiolestes</i> flying together. Endemic to SWA.
<i>Miniargiolestes minimus</i>	Stream flatwing	Widespread, encountered on most running waterbodies in SWA. Endemic to that region and a monotypic genus.
<i>Nososticta liveringa</i>	Malachite threadtail	Only in the Pilbara; Weeli Wolli Spring and Dale's Gorge (Karijini NP).
<i>Nososticta pilbara</i>	Pilbara threadtail	Endemic to the Pilbara. Seen in good numbers at Jirndawurrunha Pool and Fortescue Crossing (Millstream

<i>Agriocnemis argentea</i>	Silver wisp	Chichester NP). Only in the Pilbara; Weeli Wolli Spring, Dale's Gorge (Karijini NP) and Millstream Chichester NP.
<i>Agriocnemis kunjina</i>	Pilbara wisp	Endemic to the Pilbara; Weeli Wolli Spring, Dale's Gorge (Karijini NP) and Millstream Chichester NP.
<i>Austroagrion cyane</i>	South-western billabongfly	A widespread species in SWA, recorded on still and running water.
<i>Austroagrion pindrina</i>	Pilbara billabongfly	Endemic to the Pilbara; Weeli Wolli Creek, Karijini NP and Wittenoom Gorge.
<i>Ischnura aurora</i>	Aurora bluetail	Widespread, frequently recorded in NWA and SWA.
<i>Ischnura heterosticta</i>	Common bluetail	Widespread.
<i>Pseudagrion aureofrons</i>	Gold-fronted riverdamsel	Only in NWA; Dale's Gorge (Karijini NP), Wittenoom Gorge, Millstream Chichester NP and Kalbarri NP.
<i>Pseudagrion microcephalum</i>	Blue riverdamsel	Only in NWA; Weeli Wolli Spring, Dale's Gorge (Karijini NP) and Millstream Chichester NP.
<i>Xanthagrion erythroneurum</i>	Red-and-blue damsel	Frequently encountered on still water in SWA.
<i>Austroaeschna anacantha</i>	Western darner	Small numbers at Lefroy Brook (Pemberton), Fernhook Falls, Araluen Botanic Park, Gin Gin Brook and Serpentine NP. Endemic to SWA.
<i>Adversaeschna brevistyla</i>	Blue-spotted hawker	One in Dale's Gorge (Karijini NP) was our only record in NWA. Recorded at most sites in SWA. A monotypic genus.
<i>Hemianax papuensis</i>	Australian emperor	Small numbers almost daily in SWA.
<i>Austrogynacantha heterogena</i>	Australian duskhawker	Magnus had one, a sight record, on our first visit to Manning Lake (near Fremantle). A monotypic genus.
<i>Ictinogomphus dobsoni</i>	Pilbara tiger	Endemic to the Pilbara; Dale's Gorge (Karijini NP), Wittenoom Gorge and Millstream Chichester NP.
<i>Armogomphus armiger</i>	Armourtail	Two single males; one at Lefroy Brook and the other at Carey Brook (Beedelup NP). Endemic to SWA and a monotypic genus.
<i>Austroepigomphus gordoni</i>	Western red hunter	Small numbers only at Dale's Gorge (Karijini NP).
<i>Austrogomphus collaris</i>	Western inland hunter	Recorded in most good quality running water in SWA. Endemic to that region.
<i>Zephyrogomphus lateralis</i>	Lilac hunter	A good showing (8+) on our second visit to Araluen Botanical Park on 18/12. Endemic to SWA.
<i>Archaeosynthemis leachii</i>	Twinspot tigertail	Recorded at Lefroy Brook (Pemberton), Joondalup Lake and Gin Gin Brook. Endemic to SWA.
<i>Archaeosynthemis occidentalis</i>	Western brown tigertail	One sub-adult perched on roadside near the airport in Perth for Phil on the pick up day. Paul found an adult that was actually taking flies from our clothing at Waychinicup NP near Cheynes Beach. Several seen hunting over Lakes Joondalup and Kogolup on successive days at the end of the trip. Endemic to SWA.
<i>Austrosynthemis cyanitincta</i>	Turquoise tigertail	Ola found us a superb individual occasionally patrolling a shady logjam riffle on Carey Brook (Beedelup NP). A

<i>Lathrocordulia metallica</i>	Western swiftwing	monotypic genus and endemic to SWA. One for Phil on his first visit to Araluen Botanic Park (our only photo). Others seen there on subsequent visits there. Magnus found a feeding individual at Pinjarra. Paul had some at Lefroy Brook. Endemic to SWA.
<i>Hesperocordulia berthoudi</i>	Orange streamcruiser	At least three at Fernhook Falls (Mount Frankland NP). A monotypic genus and endemic to SWA.
<i>Hemicordulia australiae</i> <i>Hemicordulia koomina</i>	Australian emerald Pilbara emerald	Widespread in SWA. Endemic to NWA; Weeli Wolli Spring and Dale's Gorge (Karijini NP).
<i>Hemicordulia tau</i>	Tau emerald	Possibly overlooked, we only found photographs of this species in our files from Pinjarra.
<i>Austrothemis nigrescens</i>	Swamp flat-tail	A fantastic libelluid. Recorded at most still water habitats examined in SWA. A monotypic genus.
<i>Crocothemis nigrifrons</i>	Black-headed skimmer	Only in NWA; Dale's Gorge (Karijini NP), Wittenoom Gorge, Millstream Chichester NP and Robe River.
<i>Diplacodes bipunctata</i> <i>Diplacodes haematodes</i> <i>Macrodiplax cora</i>	Wandering percher Scarlet percher Wandering pennant	Widespread. Widespread. Two males at Ophthalmia Dam (near Newman) and one andromorphic female at Lake Joondalup constituted our only sightings.
<i>Nannophlebia injibandi</i>	Pilbara archtail	Just one at Weeli Wolli Creek in the Pilbara, thanks to Magnus. A taste of the tropics and a definite trip highlight.
<i>Orthetrum caledonicum</i> <i>Orthetrum migratum</i>	Blue skimmer Rosy skimmer	Widespread. Pilbara only, where it was reasonably common.
<i>Rhodothemis leiftincki</i>	Red arrow	Only in NWA; Weeli Wolli Spring and Dale's Gorge (Karijini NP).
<i>Rhyothemis graphiptera</i>	Graphic flutterer	A few at Fortescue Crossing (Millstream Chichester NP).
<i>Tamea loewii</i>	Common glider	Dale's Gorge (Karijini NP) produced a confirmed sighting. Others seen elsewhere in the Pilbara were probably this species too.
<i>Tamea stenoloba</i>	Narrow-lobed glider	Singles at Kogolup Lake, John Forrest NP and Manning Lake. Not seen by all.
<i>Zygomma elgneri</i>	Short-tailed duskdarter	Small numbers at Dale's Gorge (Karijini NP) and Millstream Chichester NP.