

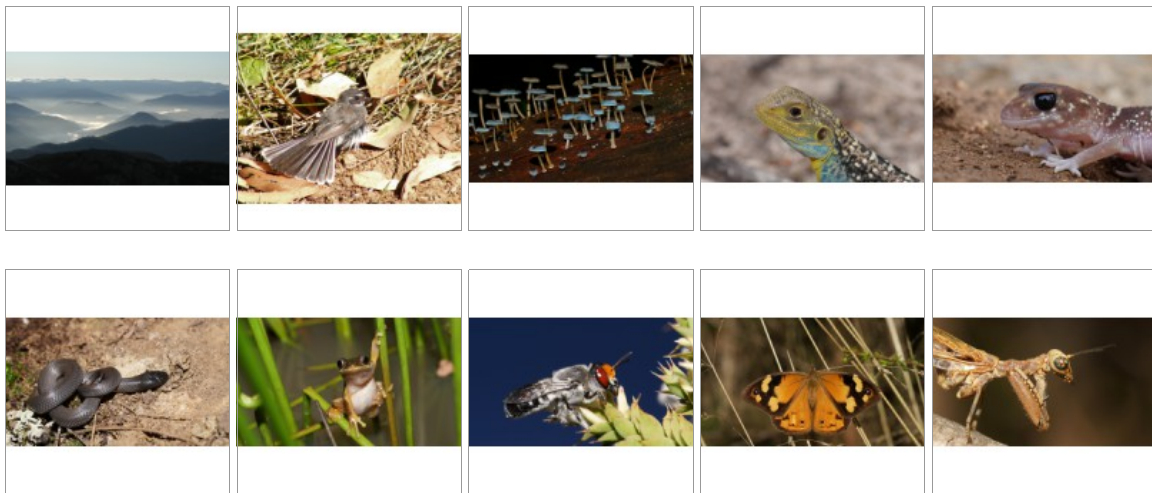
Photographing and Identifying Dragonflies in Central Victoria

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Notes from the presentation for the Bendigo Field Naturalists Club, August 2014.

Introduction

I had always enjoyed photography, had a disposable camera as a child and took photography classes in high school. It wasn't until I got my first digital camera in late 2001 that I started taking lots of photos. I photograph anything in nature that I find interesting, including dragonflies, which is what I'll be covering here. These days I take mostly macro photos.



In the beginning I wasn't trying to identify much but after several years came in contact with a few people over the internet that had an interest in Victorian dragonflies in particular and they helped me out. It was good to start in a reduced region with limited species rather than, for example, having to sift through more than 300 species found throughout Australia. It however still took me another 5 years before I started confidently being able to identify most of Victoria's 75 or so species.

In this presentation I will discuss how I go about chasing them and detail some species found in central Victoria.

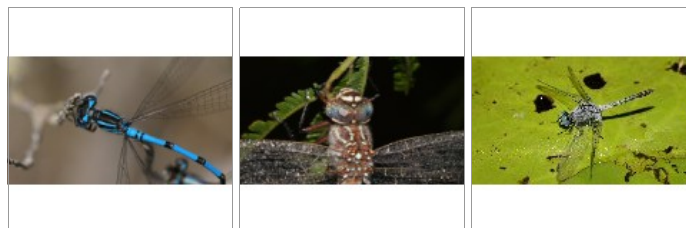
Photographing Odonata

Usually the first dragonfly I encounter each season is *Diplacodes bipunctata* (Wanderin percher), often while out looking at wildflowers in central Victoria in spring. Photographing dragonflies is a lot easier when the insect is perched so this species is quite accommodating.



I almost always take photos free-hand as stalking small animals with a tripod is just too impracticable. I also use flash most of the time, except sometimes when the dragonfly is perched in direct sunlight. Odonata do not seem to react to the flash, unlike butterflies.

Usually I will first take an “ID” photo, just to record the species. I will take a few more photos while gradually moving closer. If it is one that I want to get a good shot of I can spend more than 10 minutes with it (and often get frustrated if they are too active).



Checklist of Odonata Species in Central and Western Victoria

About half the species found in the state can be observed in the region. Below is a table listing the species I have observed west of Melbourne from the coast to the Murray River. There are some historical records of a few more species that I have not encountered here and they may be locally extinct. I have included abundance as the likelihood of encountering them at their preferred habitat in central and western Victoria and indicated by the letters: **c**=common, **m**=moderately common, **u**=uncommon, **r**=rare.

Damselflies		Dragonflies	
Austroagrion cyane	r	Adversaeschna brevistyla	c
Austroagrion watsoni	c	Austroaeschna atrata	u
Austroargiolestes icteromelas	m	Austroaeschna ingrid	m
Austrolestes analis	c	Austroaeschna multipunctata	m
Austrolestes annulosus	m	Austroaeschna parvistigma	r
Austrolestes aridus	u	Austroaeschna pulchra	m
Austrolestes cingulatus	r	Austroaeschna subapicalis	u
Austrolestes io	r	Austroaeschna unicornis	u
Austrolestes leda	c	Austrogomphus australis	r
Austrolestes psyche	m	Austrogomphus cornutus	r
Coenagrion lyelli	r	Austrogomphus guerini	c
Hemiphlebia mirabilis	u	Austrothemis nigrescens	r
Ischnura aurora	c	Diplacodes bipunctata	c
Ischnura heterosticta	c	Diplacodes haematodes	u
Nososticta solida	u	Diplacodes melanopsis	r
Pseudagrion aureofrons	u	Eusynthemis brevistyla	u
Synlestes weyersii	m	Eusynthemis guttata	m
Xanthagrion erythroneurum	m	Hemianax papuensis	c
		Hemicordulia australiae	u
		Hemicordulia tau	c
		Nannophya dalei	r
		Orthetrum caledonicum	c
		Procordulia jacksoniensis	r
		Synthemis eustalacta	m
		Telephlebia brevicauda	m
		Tramea loewii	r

Classification

Modern damselflies and dragonflies belong to the order *odonata* and their ancestors (*Odonatoptera*) can be found in fossils from the late carboniferous over 300-million years ago. Depending on species and environment, larvae can mature from eggs after several weeks or until the next season and adults can live from a week to several months.

They usually lay their eggs directly in water or plants near or in water, with the females of some species submerging themselves while ovipositing. They have several aquatic larval stages before finally emerging as adults for the last phase of their life out of water. As larvae they require water to live in but this may be ephemeral (some species live in temporary pools).

Although often leaving the immediate area from where they hatched (distances vary per species) to feed and mature, they will return to wetland habitats to breed. Males then tend to stay at such sites and wait for females.

Damselflies belong to the suborder *Zygoptera* (from Greek *zugos*, “even” and *ptera*, plural of “wing”). They commonly (though not exclusively) hold their wings closed when at rest, their eyes are hemispherical and well separated and the larvae have external gills at the end of their body. Their forewings and hindwings are similar in shape and size.



Although often used for for both, true dragonflies belong to the infraorder *Anisoptera* (from Greek *anisos* “unequal” + *ptera* plural of “wing”) in the suborder *Anisozygoptera*. These usually hold their wings spread out fairly flat at rest, often their eyes meet at the top of the head and the larvae have internal gills. The scientific name is derived from the fact their forewings and hindwings are noticeably different from each other, particularly noticeable in males.



Identification

I found it easiest to separate dragonflies from damselflies by their eyes, the differences being visible from most angles. Narrowing down further to just a few possibilities readily be done, particularly when species list is know for a restricted region.

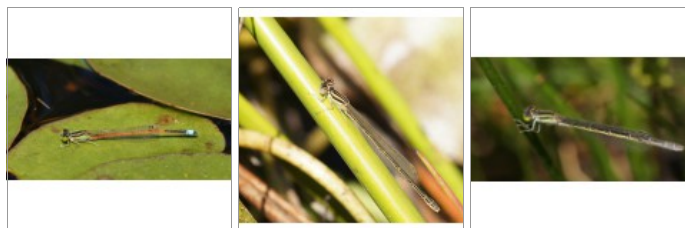
Coloration can be used with caution. In most cases mature males are easiest to identify by color but *teneral* individuals are often quite pale. Females are usually less brightly adorned. Males have appendages at the end of their tails to help them grasp females while mating. Females usually have blunt ends and often a thickening for extra muscles for species that lay their eggs in to vegetation or other material.



Below are descriptions of a selection of the most common species to be found in central Victoria. Sizes given are a general indication only as individuals can vary by as much as 20% within the same species.

Ischnura aurora

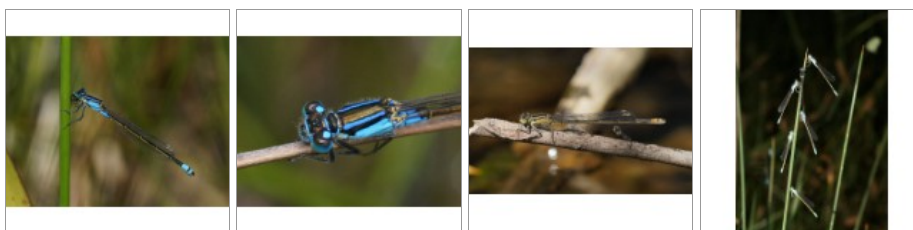
The Aurora Bluetail *Ischnura aurora* is found throughout Australia at all altitudes and is one of the most common damselflies. Mature males are distinctive with bright green, red and blue. Immature individuals and females just have the black markings with pale brown or green. A diagnostic feature for these two pale spots on the back of the head behind the eyes.



These are one of Victoria's smallest damselfly at just over 20mm long and one of only two with diagnostic spots behind the eyes. They occur in most habitats from temporary pools to slow sections of rivers and usually perch low to the ground or near the water surface on vegetation.

Ischnura heterosticta

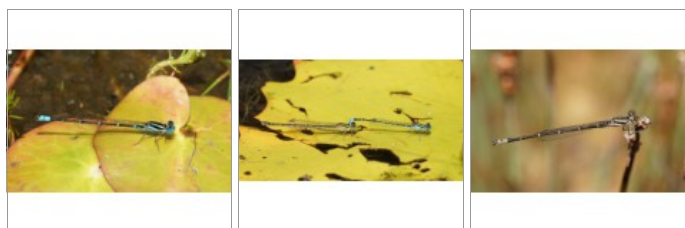
This is also a very common species and is also distinguished by two pale spots behind the eyes. It is considerably larger than *I. aurora* and mature males are usually bright blue with black. Apart from size, females of *I. heterosticta* can be separated from *I. aurora* by two segments near the end of the tail being pale above.



These can be found around most still and sluggish water and are amongst the hardiest in terms of surviving in poor water quality.

Austroagrion watsoni

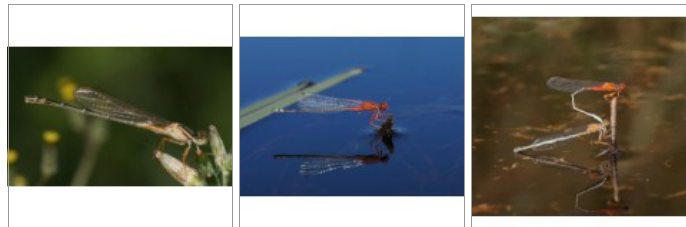
This is a small damselfly (around 25mm long) with mature males being black with bright blue markings. Diagnostic for these are a pale blue line crossing behind the eyes.



Xanthagrion erythroneurum also have a pale line but are larger and turn orange to red when mature. *Austroagrion cyane* are very similar to *A. watsoni* but are very rare in Victoria.

Xanthagrion erythroneurum

These are most often found around lakes and ponds with open water. Immature females have very similar markings to *Austroagrion sp* but are larger.



Austrolestes species

There are several similarly marked and sized damselflies in this group. They can also all be found in the same habitats, particularly swamps and dams, and often two or three species are present simultaneously. Initially they can be confusing but they all have diagnostic features that allow them to be narrowed down to at least the nearest two species.

The antehumeral stripe is the pale section on the “shoulder” of these damselflies. If this is a solid line then the species will be either *Austrolestes annulosus*, *Austrolestes cingulatus* or *Austrolestes psyche*.



If the stripe has a small additional mark then it will probably be the common *Austrolestes leda* (or possibly the rare *Austrolestes io*).



If there is a large mark to the rear and below the antehumeral stripe then it will most likely be the common *Austrolestes analis* (or possibly the rare *Austrolestes aridus*).



Diplacodes bipunctata

Diplacodes bipunctata is a very widespread species (in Victoria and Australia) and the one I see most often in the wild. They can be found in a wide variety of habitats, including farm dams, all through the dragonfly season (about October–April in Victoria).

They emerge pale yellow and mature to orange or brown (females) or red (males). Two much less common species in the area are *Diplacodes haematodes* and *Diplacodes melanopsis*. The former has less dark markings on the body (although female of *D. haematodes* and *D. bipunctata* are hard to tell apart) while *D. melanopsis* doesn't have two spots on the side of the thorax.



D. bipunctata and *D. haematodes* can be found along rivers, swamps or ponds. *D. bipunctata* perch on the ground or on surface aquatic vegetation and *D. haematodes* like to perch on exposed soil or rocks. *D. melanopsis* like to perch on vegetation near water but are more likely to be slightly elevated.

Orthetrum caledonicum

This is another widespread and common species, found along slow moving rivers and the edges of lakes where the males will perch low to or on the ground waiting for females to arrive. The coloration and behaviour of mature males give rise to the common name “Blue Skimmer” but immature specimens and most females are largely yellow with black markings.



Austrogomphus guerini

The Yellow-striped Hunter is the most likely encountered species of the this family in central Victoria. A diagnostic feature is that the pale on top of the tail extends its entire length. These are mostly found around rivers and usually perch on open ground. Unlike *Orthetrum*, the striping on the thorax of *Austrogomphus* is clear and bold.



Hemicordulia tau

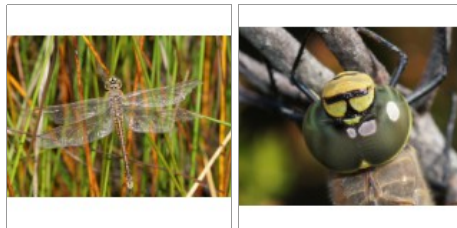
This dragonfly is widespread and common in Victoria and can often be found flying about in large numbers in open woodland away from water. They can spend a lot of their time on the wing but perch on elevated vegetation. This species features a distinct mark, like a Greek tau, on its frons (nose) and yellow pterostigma and veins on the leading edge of the wings.

Uncommonly sighted in the area is *H. australiae*, which is quite similar to *H. tau* in appearance and behaviour. *H. australiae* however has dark leading edges to the wings and just a dark patch on the nose. It is more likely to be found around swamps of forested areas.



Hemianax papuensis

The Australian Emperor is one of the largest dragonflies found around the inland plains and also feature a “T” like marking on the nose. Their abdomen contain squarish black lines on yellow. On warm summer afternoon they can often be found hunting over roads for flying insects and I have accidentally caught a few in my grill while driving.



Adversaeschna brevistyla

These are also quite large but a medium brown (darker than *Hemianax papuensis*). For males, the pale markings around the head and thorax turn blue once mature. They can often be seen flying a metre or two above lakes, swamps or along forest tracks and they perch hanging from vegetation. Their distinctive pale, diagonal lines on the side of the thorax can even be seen in flight.

