

Fireflies of Townsville 2.

Atyphella ellioti Ballantyne.

This is a remarkable species of firefly in the Townsville area for two reasons – you may never have seen it before (nor known it even existed), and it is the very smallest of all our fireflies (at 3.6-3.9 mm long). It was first found in the Mt Elliot National Park in rainforest December 1986 by a team from the Queensland Museum who located 5 males. Subsequently six more males were found in rainforest at Pease's lookout at 900m near Eungella, this time using flight intercept traps and pitfall traps. It has never been located at less than 900 m.

We know almost nothing about it. It is one of only two species of the firefly genus *Atyphella* that occur both north and south of the dry barrier between Townsville and Mackay (the other is *Atyphella flammans*). The elytra are light brown with two paler stripes and the mouthparts are there but quite small and it is possible that this firefly could not feed even if it wanted to.

Sometimes what we don't find can tell us something about these fireflies. Because the method of finding these specimens relied on flight intercept traps (the adults fly right into them and are trapped) or pitfall traps (where they literally fall into them) then we surmise that the female might be flightless like the other species of *Atyphella* where we know about their females.



Australoluciola flavicollis (Macleay)

As I write this in April 2023 I am aware that this is the species still being sighted in small numbers around Townsville.

It was first described by an Australian entomologist Macleay who called it *Luciola flavicollis* (in Latin, which is the language all these older names were written in, the flavicollis means yellow neck) and it was first recorded from Gayndah and Wide Bay in Queensland.

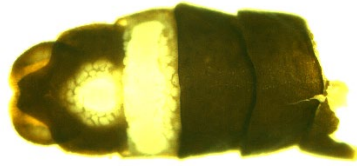
It is not a very large species (4.5-6.5 mm long usually) but it has a couple of interesting features. It occurs in more open forest areas in Queensland, across the NT and even into the Kimberley (our Firefly Facebook page this year had reports of large numbers on the Mitchell Plateau). The female is winged so we expect in that case to find a wide distribution.

That colour pattern on the elytra (front pair of wings) is very variable – it can be quite narrow along the margins of the elytra or extend across the base for a distance. I looked carefully at all these variations to see if I could correlate a particular pattern with any geographical area but I couldn't, but that doesn't mean there might not be more than one species here.

At the very end of the male abdomen you can see the pale colour of the light organs but they have a distinctive shape. The light organ of the males in the second last segment is full – it completely covers this segment, The light organ in the last segment is smaller and might only cover a small oval area in the middle of this segment.



These specimens are from the Northern Territory taken in May 1971 at light. They are showing the differences between males and females – from the left there is a female, then three males (the middle one is slightly obscured by the pin), then another male upside down, and at the far right a female upside down. There are two things that help you to tell male from female, one is the size of the heads – the males have huge heads and very large eyes), and the second is where the light organs are. In the female there is only one band of white in the abdomen. It is not unusual to find that the females are a bit bigger and heavier bodied than the males as we can see here.



This picture is of most of the abdomen of a male which I removed from the specimen. You can see the second last segment which is white and almost completely filled by the light organ. The next, and last segment (to your left) is largely black and has a distinctive shape, the middle portion of the left hand end projects a little. And the light organ is relatively small and is restricted to the middle of the segment.