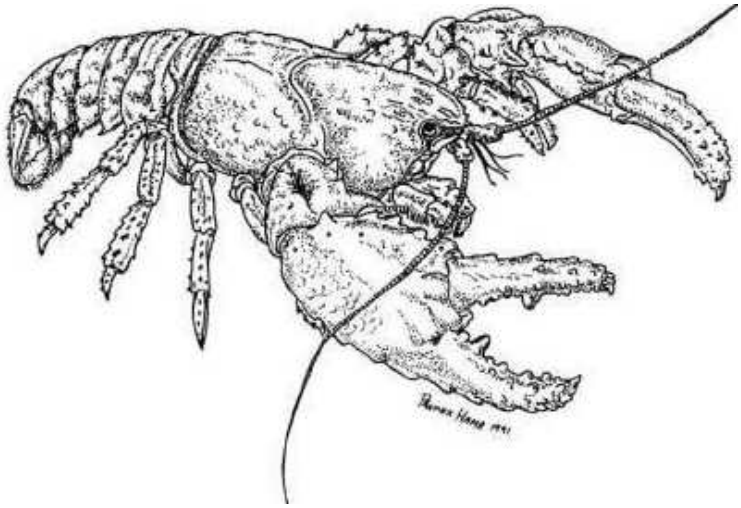
Disjunct Naturalists

WEBSITE OF THE CENTRAL NORTH FIELD NATURALISTS



# *Keeping up the good work: CNFN contributions as Citizen Scientists*

by **Ron Nagorcka**

*Elaeomyxa cerifera*: rare wax-producing oily slime mould

The natural world has inevitably been of interest to human beings ever since they gained the ability of conjecture; there have been 'amateur naturalists' since the dawn of time as it was obviously necessary for hunter-gatherers to have a thorough understanding of the animals and plants on which they relied. But until the European Enlightenment, the assumptions made about the natural world were often severely wide of the mark. Since that time, science has become more and more specialised and reliant on the expertise of trained professionals; nonetheless – especially in the field of natural history - the role of the amateur remains important and quite often crucial in the advancement

of knowledge.

In the USA the term 'citizen scientists' is gaining currency. In a 2008 paper by Jeffrey P. Cohn from Maryland USA 'Citizen Scientists' are defined as 'volunteers who participate as field assistants in scientific studies'. The term seems to have originated at Cornell University in the 1990s. Cornell has been using such volunteers since the 1960s and declares that many of the advances they have made - for instance in completing accurate maps of the breeding ranges of every North American bird – would have been quite impossible without the contributions of an army of volunteers. They have also established that the data collected this way is very scientifically accurate. In one study which necessitated the accurate identification of crabs, third graders were right 80% of the time!

CNFN has a proud record of contributions by citizen scientists. The Deloraine Field Naturalists (later to become CNFN) was originally formed in 1989 partly because of the concerns of a small group of people about ongoing forestry operations on the Gog range – and in particular the effects this was having on species such as the Wedge-tailed Eagle and the giant freshwater crayfish (*Astacopsis gouldi*). After many years of dedicated work by Jim Nelson, Bill Thomas and others not only collecting data and studying this species, but negotiating with governments and bureaucracies, *A. gouldi* was finally listed as an endangered species in 1994. This was one of the first invertebrates to make the list, but it still took CNFN's threat of legal action in the Supreme Court to convince the government to make it illegal to capture and eat this amazing creature. Despite the strenuous efforts by Bill Thomas in the ensuing years, the current 'recovery plan' still does not properly protect the stream habitat of *A. gouldi* from forestry clear-felling (see Jim's article). The task of the amateur naturalist in this case (as in many others where the professional scientist can be thoroughly inhibited) includes ongoing political pressure and action.

Not long after moving to Black Sugarloaf, Sarah and I were aware of the burrowing crayfish (*Engaeus* species) that inhabited our swamp. On an early excursion of the Deloraine Field Naturalists Jim Nelson captured one of these for identification, and discovered it to be *E. disjuncticus* – a species which up till then was known from only 3 other locations in northwest Tasmania. Jim has since then found it in several other locations. His work in mapping the distribution of Northern Tasmania's many *Engaeus* species and the discovery of at least one new species has been extremely important to the understanding of these unique invertebrates.

Soon after the establishment of the Deloraine Field Naturalists, concern was raised about the fungal lesions affecting the populations of platypus in Tasmania. A dedicated group of volunteers assisted scientists to monitor the platypus population of Brumbys creek. Since then this disease has spread widely and is still little understood.

More recently there has been considerable activity by various CNFN members:

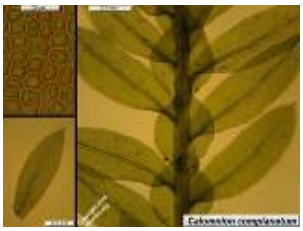
In late 2004 the survey work of the CNFN amphibian group confirmed the presence and prevalence of the chytrid fungus (*Batrachochytrium dendrobaditis*) in Tasmanian frogs. Subsequent work by Lisa Clarkson has provided valuable data about the extent and significance of this threat to our frog populations.

Numerous records have been contributed by some dedicated CNFN members to the nationwide Fungimap project which is run from the botanical gardens in Melbourne. This project uses volunteers to map the distribution of selected fungal species across Australia. CNFN subsidised a Fungimap conference in 2007, and earlier this year, we organised 'Hidden Treasures – discovering the fungi of the Blue Tier' which allowed a team of mainland mycologists associated with Fungimap to study the fungi of the area and then to spend a

weekend sharing their knowledge and results with Tasmanian field naturalists and interested local residents. All agreed that it was a highly successful scientific, educational and social event. And congratulations are in order to one of our most diligent 'fungimappers', Patricia Harrisson from Stanley, who has recently collected *Ramaria watlingii* in Tasmania - a species previously known only from a single Victorian collection (*Australasian Mycologist* (2010) 29, 1-3).

Sarah Lloyd's ongoing 'A Sound Idea' project monitors Tasmania's bush birds with the aid of digital audio recorders and an army of volunteers. Chirp4 describes this project and its progress. This is an intriguing example as it does not require the participants to have any ornithological knowledge as all the data is sent to Sarah who listens to and interprets it. On the other hand, a significant number of participants have become both more interested and more knowledgeable about the birds they are recording.

Sarah has also been collecting and identifying slime moulds (myxomycetes) at Black Sugarloaf, recently identifying the very rare *Elaeomyxa cerifea* – a first for Tasmania and only the third record in the southern hemisphere. She has also noted that there are often species of Collembola (springtails) feeding on myxomycetes. One of these has been identified by an expert as possibly a new genus. She has discovered that a French Collembola expert not only was unaware that they fed on myxomycetes – he had never heard of myxomycetes!



*Calomnion complanatum*

Tom Thekathyl, with the aid of CNFNs microscopes, has been making important contributions to the understanding of Tasmanian bryophytes. Tom lives at Lottah on the Blue Tier and is well placed to research these understudied organisms which he has been collecting for the herbarium in Hobart. His last communication was about finding *Calomnion complanatum*, a species of moss considered 'very rare'. This is only the third record for Tasmania and a first for the northeast.

Considering all these examples, the definition given above for the 'citizen scientist' seems somewhat limited, as the contributions made go well beyond the collection of data. The lesson is that the more closely we observe nature, the more likely we are to make discoveries. In fact interested and observant amateur naturalists can make important discoveries about the connections between things as their interests may be broader than those of the scientific specialist.

Additionally, we amateurs need not feel inhibited when it becomes necessary to take political action, or to alert bureaucratic authorities about our concerns. When undertaking such exercises it is preferable and often essential to be armed with solid scientific knowledge and data. In this regard we have established a solid reputation and continue to play an important role.

Some field naturalist groups are fortunate to have scientists as active members and/or to be based in university cities where access to expertise is reasonably easy. While CNFN does not have this advantage we have been assisted in our endeavours by many helpful scientists – either in person or increasingly through internet communication. Acknowledgement in particular should go to David Obendorf who is such a strong advocate for community involvement. There are many others far too numerous to mention here without missing somebody! We fervently thank you all.

Added to all the systematic studies mentioned above are the many ongoing observations made by our members about common and rare Tasmanian species alike (and I do apologise to anybody who feels they may have been

overlooked.) I also should mention three young people - Micah Visoiu, Sarah Tassell and Andrew Hingston - who began their 'scientific' careers as teenage members of CNFN and have gone on to make valuable contributions in their various areas of expertise.

An important part of all this work is letting people know about the results obtained. And this is where our newsletter has always played a valuable role. These days 'The Natural News' is printed by Sarah Lloyd on her home office colour laser printer with the associated 'consumables' (paper, ink and repairs) subsidised by CNFN. This not only enables the cheaper production of a very professional newsletter, but of Sarah's various books and pamphlets on natural history.

As a final comment I would observe that while some of us occasionally bemoan our lack of young recruits into the organisation (a phenomena with all community groups these days), this area of 'citizen science' is one to which us more mature or retired citizens can make really valuable contributions.

Page URL: https://www.disjunctnaturalists.com/articles2/keeping-up-the-good-work.htm

**Back to top**

**Home**

**Why 'disjunct'?**

**Membership**

**CDs & Books**

**Contact Us**

**Articles**

**Acoustic Bird Monitoring**

**Walks & events**

**Links**