

A new subgenus, new species and new subspecies of *Elseya* Gray, 1867 (Testudinata: Pleurodira: Chelidae) from Eastern Australia.

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ABSTRACT

The taxonomy and nomenclature of the Australian freshwater turtles has been in a state of flux for many years, with a steady flow of new species and genera being formally named and described.

At times several species and genera have even been "redescribed" in reckless and culpable acts of taxonomic vandalism as detailed by Hoser (2015a-f)!

This paper formally names a new subgenus, new species and new subspecies of *Elseya* Gray, 1867 from Eastern Australia. All three taxonomic entities have been known for some time and should have been named far sooner.

It is important that significant potentially threatened biological entities be named sooner, rather than later and preferably before "official" government indifference leads to otherwise avoidable extinctions.

Keywords: Taxonomy; Nomenclature; *Elseya*; *Myuchelys*; *Wollumbinia*; *dentata*; *irwini*; *stirlingi*; *albagula*; Wells and Wellington; Thomson, Georges; Taxonomic Vandalism; Daintree River; subgenus; new subgenus; *Fitzroychelys*; new species; *shreenhoserae*; new subspecies; *fitzroyi*.

INTRODUCTION

The taxonomy and nomenclature of the Australian freshwater turtles has been in a state of flux for many years, with a steady flow of new species and genera being formally named and described. Cann and Sadler (2017) give a fairly accurate and up to date overview of the taxonomy and nomenclature of Australian Freshwater Turtles, using correct ICZN compliant nomenclature for the relevant biological entities.

The only obvious defect in their work was the following:

The authors, while recognizing more than one species within the *Chelodina expansa* (Gray, 1856) group, failed to note the relevant scientific descriptions of forms by Hoser (2014).

A number of well-known, but currently unnamed entities within the Australian Freshwater Turtles remain unnamed, including as identified by Todd (2013) and Todd *et al.* (2013).

While the provisions of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) allow workers on a group to monopolize name authority rights over potential new taxa for up to a year, any such right certainly evaporates after four years and so it is on this basis that I have decided to name unnamed entities.

This paper formally names a new subgenus, new species and new subspecies of *Elseya* Gray, 1867 from Eastern Australia. All three taxonomic entities have been known for some time and should have been named far sooner. It is important that significant potentially threatened biological entities be named sooner, rather than later and preferably before "official" government indifference leads to otherwise avoidable extinctions.

All three entities have until recent years been treated as eastern variants of *Elseya dentata* (Gray, 1863). More recently, all have been treated as other species within the same genus, albeit a different subgenus.

Todd (2013) identified a lineage in the Daintree River area as an unnamed species. This is formally named for the first time herein as *Elseya shreenhoserae* sp. nov.. The northern population of *E. albagula* Thomson, Georges and Limpus, 2006 from the Fitzroy River system is formally named as a subspecies *fitzroyi*.

Finally, *E. albagula* is placed in a regionally divergent subgenus *Fitzroychelys* subgen. nov., separate from congeners found in northern Queensland.

I also note that for some taxa of Australian Freshwater Turtles, an illegal dual nomenclature has been created by Scott Thomson and other members of the so-called Wolfgang Wüster gang of thieves, as detailed by Hoser (2015a-f).

In order to comply with the rules of the ICZN as set out in the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), their illegal names, created in acts of taxonomic vandalism are not used herein as correct.

MATERIALS AND METHODS

These are not formally explained in a number of my recent papers under the heading "Materials and methods" or similar, on the basis they are self evident to any vaguely perceptive reader.

However, the process by which the following taxonomy and nomenclature in this and other recent papers by myself of similar form (in *Australasian Journal of Herpetology* issues 1-36), has been arrived at, is explained herein for the benefit of people who have recently published so-called "criticisms" online of some of my recent papers, or others who may be misled by these online rants. The posters have alleged a serious "defect" by myself not formally explaining "Materials and Methods" under such a heading.

The process involved in creating the final product for this and other relevant papers has been via a combination of the following:

Genera and component species have been audited to see if their classifications are correct on the basis of known type specimens, locations and the like when compared with known phylogenies and obvious morphological differences between relevant specimens and similar putative species.

Original descriptions and contemporary concepts of the species are matched with available specimens from across the ranges of the species to see if all conform to accepted norms.

These may include those held in museums, private collections, collected in the field, photographed, posted on the internet in various locations or held by individuals, and only when the location data is good and any other relevant and verifiable data is available.

Where specimens do not appear to comply with the described species or genera (and accepted concept of each), this non-conformation is looked at with a view to ascertaining if it is worthy of taxonomic recognition or other relevant considerations on the

basis of differences that can be tested for antiquity or deduced from earlier studies. When this is the case (non-conformation), the potential target or candidate taxon is inspected as closely as practicable with a view to comparing it with the nominate form or forms if other similar taxa have been previously named.

Other relevant data is also reviewed, including any available molecular studies which may indicate likely divergence of populations. Where molecular studies are unavailable for the relevant taxon or group, other studies involving species and groups constrained by the same geographical or geological barriers, or with like distribution patterns are inspected as they give reasonable indications of the likely divergences of the taxa being studied herein.

Additionally other studies involving geological history, sea level and habitat changes, ocean currents and other factors, including those affected or changed by long-term climate change, including recent ice age changes in sea levels, versus known sea depths, plate tectonics and other factors are utilized to predict past movements of species and genus groups in order to further ascertain likely divergences between extant populations (as done in this very paper), while also assessing likely habitat boundaries for given populations.

When all available information checks out to show taxonomically distinct populations worthy of recognition, they are then recognized herein according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

This means that if a name has been properly proposed in the past (even if in the absence of sound scientific data), it is used as is done in this paper. Alternatively, if no name is available, one is proposed according to the rules of the *International Code of Zoological Nomenclature* as is done in this paper.

As a matter of trite I mention that if a target taxon or group does check out as being "in order" or properly classified, a paper is usually not published unless some other related taxon is named for the first time.

The published literature relevant to the subject taxa within *Euseya* as defined in texts such as Cann and Sadlier (2017), or Cogger (2014) and the taxonomic and nomenclatural judgements made within this paper includes the following: Artner (2008), Cann (1997), Cann and Sadlier (2017), Cogger (2014), Georges and Thomson (2010), Hamann *et al.* (2008), Hoser (1989, 2014, 2015a-f), Meyer (1874), Ride *et al.* (1999), Thomson and Georges (2016), Thomson *et al.* (2006, 2015), Todd (2013), Todd *et al.* (2013), Vogt (1911), Wells (2002, 2007), Wells and Wellington (1983, 1985), Wilson and Swan (2017) and sources cited therein.

Some material within descriptions below may be repeated for different described taxa and this is in accordance with the provisions of the *International Code of Zoological Nomenclature* and the legal requirements for each description. I make no apologies for this.

I also note that, notwithstanding the theft of relevant materials from this author in an illegal armed raid on 17 August 2011, which were not returned in breach of undertakings by the thieves to the court (Court of Appeal Victoria 2014 and Victorian Civil and Administrative Tribunal (VCAT) 2015), I have made a decision to publish this paper.

This is in view of the conservation significance attached to the formal recognition of unnamed taxa at all levels and on the basis that further delays may in fact put these presently unnamed or potentially improperly assigned taxa at greater risk of extinction. This comment is made noting the extensive increase in human population in the north of Australia, which is where the relevant species occur and the general environmental destruction across the planet as documented by Hoser (1991), including low density areas without a large permanent human population.

These areas still remain heavily impacted by non-residential human activities, including the flow of toxic wastes into the relevant river systems that these species live in.

I also note the abysmal environmental record of various National, State and Local governments in all parts of the world in terms of wildlife conservation in the past 200 years as detailed by Hoser (1989, 1991, 1993 and 1996).

NOTES ON THE DESCRIPTIONS FOR ANY POTENTIAL REVISORS

Unless mandated by the rules of the *International Code of Zoological Nomenclature*, none of the spellings of the newly proposed names should be altered in any way.

I also note that an attempted illegal hegemony of taxonomy involving herpetology and the turtles in particular by serial liars and thieves Wolfgang Wüster, Anders Rhodin, Scott Thomson and Arthur Georges should be rejected (VCAT 2015).

It is likely that members of their gang of thieves will unlawfully rename the relevant taxa and then use unethical and illegal means to force or induce others to use their non-ICZN compliant nomenclature.

This will no doubt include unlawful edits of websites like "Wikipedia" and "The Reptile Database".

Their actions should be totally rejected by all scientists and other users of the relevant taxonomy and nomenclature.

In passing I note that the name *Myuchelys* Thomson and Georges (2009) should not be used for the relevant group of turtles. The correct ICZN name is *Wollumbina* Wells, 2007, which has date priority for the same species.

Thomson and Georges engaged in an act of gross taxonomic vandalism, described by themselves once as "Taxonomic terrorism" in illegally renaming the genus *Wollumbinia*.

Their culpability has increased over the following decade as they have improperly urged others to use their illegally coined name, including via despotic control of use on the internet, including on hate-pages they control like "Wikipedia" which they use to peddle their warped world view.

In passing I also note that the species *Euseya flaviventralis* Thomson and Georges, 2016 is an unlawful junior synonym of *E. jukesi* Wells, 2002 and so that latter name only should be used.

SUBGENUS FITZROYCHELYS SUBGEN. NOV.

Type species: *Euseya albagula* Thomson, Georges and Limpus, 2006.

Diagnosis: This subgenus is separated from all other *Euseya* species by the following unique suite of characters: Anterior edges of the first and second marginal shields are equally forward and adult head shields are very deeply furrowed or wrinkled.

Distribution: Fitzroy, Burnett and Mary River drainages in Eastern Queensland.

Content: *Euseya albagula* Thomson, Georges and Limpus, 2006.

Etimology: Named after the river system it is found.

ELSEYA SHIREENHOSERAE SP. NOV.

Holotype: A preserved female specimen in the National Museum of Victoria Museum of Victoria, Melbourne, Victoria, Australia, collected by Charlie Tanner, specimen number: D11946, collected from near Bloomfield in far north Queensland, Latitude -15.80 S, Longitude 145.30 E.

This is a facility that allows access to its holdings.

The Museum database lists this specimen as being (erroneously) identified as "*Euseya irwini* Cann, 1997" by Arthur Georges and Scott Thomson in January of 2015.

Diagnosis: *Euseya shireenhoserae* sp. nov. is similar in most respects to *Euseya irwini* Cann, 1997 and *E. stirlingi* Wells and Wellington, 1985 and separated from both by the fact that the gular shields are triangular and of similar width to the shield between them, versus significantly wider than that shield in the other two species (most extreme in *E. stirlingi*).

In *E. irwini*, the gular shields are of similar length to that between them, versus much shorter in *Euseya shireenhoserae* sp. nov..

Adult female *Euseya shireenhoserae* sp. nov. are also characterised by a significant upwards curling of the carapace on the front sides (seen also in *E. irwini*), but unlike in *E. irwini*, the rear of the carapace in *Euseya shireenhoserae* sp. nov. also inflects upwards.

Cogger (2014) provides a key to separate *E. irwini* (and by default this species as well) from all other recognized species in the genus as of that date.

The genetic data of Todd (2013) at page 82 implies that *E. irwini* and *E. stirlingi* are conspecific (which contradicts the position of Cann and Sadlier (2017). If this is the case (both conspecific), then the correct species name for the taxon would be *E. stirlingi* as this name has priority under the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

In passing I note that the original description of *E. stirlingi* by Wells and Wellington, was a lousy piece of writing, but notwithstanding this, it conforms with the written requirements of the second, third and fourth editions of the *International Code of Zoological Nomenclature* (Ride *et al.* 1985, 1999, Stoll *et al.* 1964), and therefore the name is available for purposes of zoological

nomenclature under ICZN rules.

Distribution: Known only from the Daintree River and adjacent watercourses in far north Queensland.

Etymology: Named in honour of my magnificent wife Shireen Hoser in recognition of her significant contributions to herpetology in Australia over some decades.

ELSEYA ALBAGULA FITZROYI SUBSP. NOV.

Holotype: A preserved specimen in the Queensland Museum, Brisbane, Queensland, Australia, specimen number: J28449 collected at the Emerald town weir on the Nogoia River, Latitude - 23.52 S.

Longitude 148.17 E. This specimen was listed as a paratype for *E. albagula* Thomson, Georges and Limpus, 2006.

This is a facility that allows access to its holdings.

Diagnosis: *Elseya albagula* Thomson, Georges and Limpus, 2006 of the subgenus *Fitzroychelys* subgen. nov. are separated from all other *Elseya* species by the following unique suite of characters: Anterior edges of the first and second marginal shields are equally forward and adult head shields are deeply furrowed or wrinkled.

Adult *Elseya albagula fitzroyi* subsp. nov. are readily separated from *E. albagula albagula* by the fact that the whitish pigment underneath and behind the eye is generally broken, versus more-or-less continuous in *E. albagula albagula*.

The rear flanks of the shell in *E. albagula albagula* are slightly raised in a manner not seen in *Elseya albagula fitzroyi* subsp. nov..

The large female specimen identified as "*Elseya dentata*" at the bottom of page 53 in Hoser (1989) is believed to be of the taxon *Elseya albagula fitzroyi* subsp. nov..

Note: Previous authors, including Todd (2013) and Todd *et al.* (2013) found that this population unit (*Elseya albagula fitzroyi* subsp. nov.) should be managed separately to that from further south, for wildlife conservation purposes.

Distribution: The Fitzroy River drainage in eastern Queensland.

Etymology: Named after the river system it is found.

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