



NEWSLETTER

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GLOW WORMS ATTACKING SNAILS ON CAPE YORK

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Some years ago, March 1982 to be precise, I was part of a biological survey team for a mining company south of Aurukun, on the western side of Cape York. It was at the end of the wet season, when the soil was damp, there were still occasional showers and snails were active. One night when two of us were spotlighting in eucalyptus woodland with an ironstone soil substrate (rather than bauxite), we ran out of petrol and had to walk about 6 km back to camp in the darkness. As a result some match-head sized greenish-yellow spots of light glowing in the roadside grasses became very obvious. Closer investigation revealed them to be the tail ends of rather large glow-worms - the larvae of one of the firefly beetles of the family Lampyridae. Several of these were in the process of attacking or feeding on some medium sized land snails of the genus *Xanthomelon*. (probably *Xanthomelon jannellei* (Le Guillou, 1842)). The glow-worms were around 2-3 cm long, while the *Xanthomelon* were up to 3.5 cm diameter and considerably larger in overall bulk than their attackers.

Lampyrid beetles are common in tropical Queensland. They have a life cycle of four stages. Eggs laid by female adults hatch into active, crawl-

ing, feeding larvae. The larval stage lasts for several months, during which diet is usually small molluscs, in Australian species. Larvae change into pupae which develop into non-feeding adult beetles in most species, or in a few species, into predatory, flightless female adults of similar form to the larvae. Both the larvae and the adult beetles are light emitting, commonly recognised as glow-worms and firefly beetles. They are not to be confused with the luminous fungus gnats of the genus *Arachnocampa* which also are called 'glow-worms'.

Both snails and glow-worms were readily observed and the glow-worms' method of hunting was interesting to watch. They would encounter a snail trail - presumably by accident while foraging - and would then follow the trail in the direction the snail was travelling. When they reached the snail at the end of the trail the most common method of attack seemed to be to crawl up over the shell. This caused the snail to extend itself further in front of the shell in an effort to get more purchase on the ground to compensate for the extra weight or friction caused by the glow-worm. The glow-worm continued its forward motion until it encountered the dorsal sur-



A typical lampyrid larva (Photo Paul Zborowski)



Shell of Xanthomelon jannellei

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NSW Branch meetings are held at 2 pm on the fourth Saturday of each month at the Ryde-Eastwood Leagues Club, 117 Ryedale Rd, West Ryde, Sydney. Contact Steve Dean, email steve@easy.com.au

Newsletter

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This publication is not deemed to be valid for taxonomic purposes (See article 8b in International Code of Zoological Nomenclature 3rd Edition (1985).

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Glow-worms attacking snails (Cont.)

face of the anterior part of the snail where it would clamp its forceps-like jaws into the snail's flesh. The snail would immediately retract into its shell dragging the anterior end of the glow-worm with it, and usually begin producing bubbles at this point. This did not seem to dissuade the glow-worm which then began to glow more brightly.

Sometimes other glow-worms would join the original attacker, particularly if the snail was large or the attacker was small, whereupon the original glow-worm would wave its glowing tail around, possibly in an attempt to ward off the competitor. There was also a medium sized carabid beetle in the area that occasionally tried to feed on snails which the glow-worms had caught, and in this case the bright glow-

ing and tail waving became particularly noticeable.

The glow-worms were very persistent in their hunts and more than one was observed up a plant stem or tree trunk in pursuit of a snail which had climbed there. However it was not known if the snails had managed to escape an attack and climbed to avoid the glow-worm or if they had merely climbed in search of food.

Specimens of both snails and glow-worm larvae were collected for the Australian Museum's collection. The glow-worms did not pupate although they readily fed on the introduced garden snail (*Cantareus aspersus*). In the latter case however recent information suggests that they may have already been adult females of larviform appearance.

The Wentletrap Book - A Review

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The Wentletrap Book. Guide to the Recent Epitoniidae of the world. 1999. Art Weil, Leonard Brown, Bruce Neville. Evolver: Rome

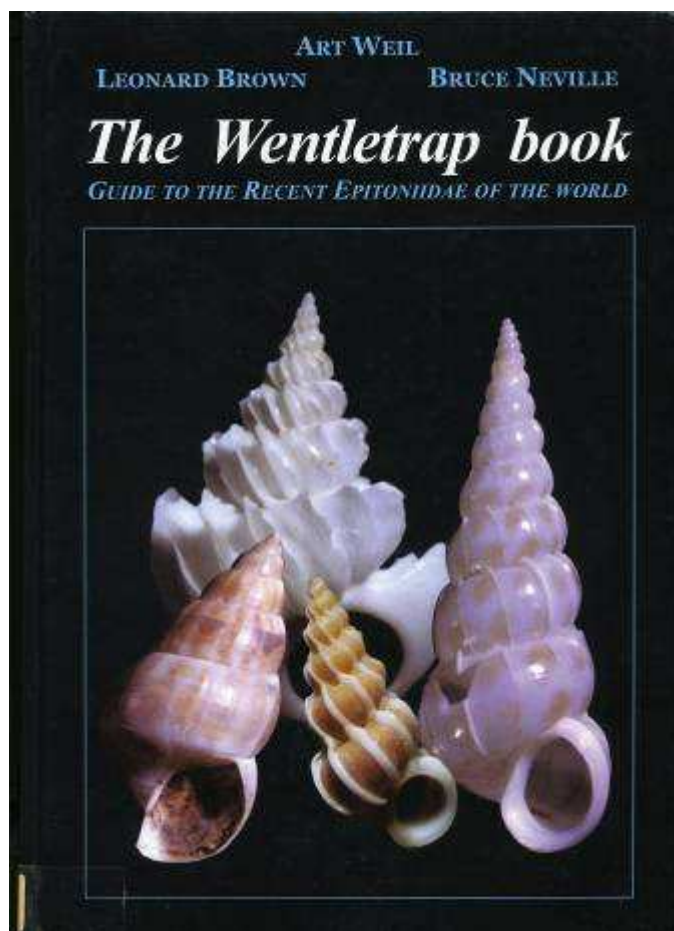
Editor's note: Although published in 1999, it was not until 2008, when preparing the section on Epitoniidae for the *Seashells of NSW* website, that the present author became familiar with the book. Soon afterwards, Richard Petit drew the Editor's attention to taxonomic problems created by the work. Although some years have passed since publication, it was still considered useful to make some comments and taxonomic corrections.

In undertaking a monograph of the family Epitoniidae the authors took on an impossible task, and, regrettably but predictably, failed. But worse, the extent of their failure is such that they introduced confusion and misinformation that will have to be straightened out by later workers.

The Epitoniidae is recognised as a difficult group of molluscs taxonomically. The Australian Museum collection, one of the half dozen largest mollusc collections in the world, contains many thousands of lots of epitoniids. The mollusc collection as a whole is in an excellent state of curation, developed over nearly 200 years in the care of naturalists, researchers and more lately, collection managers. Most of the collection has been sorted and identified to species level by local staff or by the stream of visiting specialists who use and improve on the collection. But the epitoniid collection remains largely unsorted, resistant to sensible identification, despite attention from amateur and professional malacologists over the years.

The problem with the Epitoniidae has been, until the last few years, the almost complete reliance on shell characters for taxonomic work. With the exception of some North American species, there has been limited anatomical information, even of the external characters such as colour and shape of foot, tentacles, and less for internal anatomy and radula. There has been little ecological information, beyond recognition of the associations between epitoniids and the anemones and corals on which they feed.

But epitoniid shells provide a suite of characters that go a long way towards enabling species separation. Apart from shell size and shape, the obvious shell character in epitoniids is the number of axial ribs (or costae, if you prefer that term). The difficulty is that the extent of variation in the number of ribs within a species is not well known, resulting in confusion when trying to use this character as a basis for



species definition. In 30 of the 31 species of epitoniids known from NSW, Australia, the number of ribs varies by about 20%. But in the single remaining species, which is by far the most common, the rib count varies from 9-28 per whorl. However the details of rib structure - whether they are erect or rolled back, thick or thin, low or high, peaked or not - are more constant within a species. Allied with the details of sculpture on the shell between the ribs and on the ribs themselves, these are useful specific characters. Another useful shell character is the degree of separation of the whorls, a character which requires close microscopic examination.

All this was recognised by the Belgian worker Eugene Aubourg de Boury (1856-1920), who published extensively on the family during the late 19th and early 20th century. He published at least 35 papers, often illustrated with exquisite engravings detailing shell form and sculpture. The work of de Boury is not very accessible, being in French and only held in specialist libraries, but it formed a sound basis for classification of the shells. I regret that the present volume has not kept up the excellence in analysis and illustration achieved by de Boury.

The Wentletrap Book (Cont.)

The Wentletrap Book is nicely produced, book-wise. A hardcover volume, well bound and printed on quality paper, it looks attractive. But the organization is unorthodox, and not at all successful. It seems that the authors were aiming for an uncomplicated identification guide, leaving the complexities of synonymy and definition of genera to appendixes at the back of the book. But this aim was just not achievable in this complex family. It would have been better to give the genus and subgenus definitions in systematic sequence, and a traditional synonymy with each species, rather than in the cumbersome lists at the back of the book. The allocation of species to geographical area is also problematic. The authors do explain that this is done for convenience, and that species may spread across several geographical area, but they do not seem to recognise the extent to which this occurs. In the NSW fauna of 31 species about 10 are widespread in the tropical Indo-West Pacific, some are restricted to a temperate zone in southern Australia, a few also occur in New Zealand, and a few deep-water species are now recognised from off Japan!

The quality book production is not supported by the quality of the shell photographs. These vary from adequate to abysmal. One would have thought that even if all of the three authors were of poor eyesight, someone in the layout and printing process would have realised the photos were not up to scratch. Many are out of focus, exposure is often over or under, and poor lighting sometimes obscures part of the shells. I know it's trivial, but couldn't they get the shells lined up straight?

Unfortunately, the problems of book organization and photographs are outweighed by problems with the assessment of species and the lack of synthesis of information. Much of the information on epitoniids which the authors relied upon is quite old. For example, the last documentation of the NSW epitoniids was by Iredale in 1936, but to attempt an

overview of the family without attempting to update this from collections in Australian museums was foolhardy. The validation of some of Iredale's obscure species by describing them and assigning ranges, but without figures or attempting to update his information is not useful. If it were necessary to rely on this old work, at least it could have been done accurately; somehow, the range of *Epitonium barissum*, which Iredale recorded only from Sydney Harbour, and is still not known south of this location, was extended several thousand kilometres southwards to South Australia. Accepting Iredale's species at face value perpetuated Iredale's errors and excessive splitting. For example, *Epitonium christyi* (Iredale, 1936) was described by Iredale as having the whorls "not separate", but this is a case of failing to use even a basic microscope.

In attempting to document the Epitoniidae, the authors were about a decade too early, as the problems of lack of anatomical and ecological data on which to base species are now being remedied. As part of his Ph. D. studies, Arjan Gittenberger spent the three years 2001-2003 scuba diving in Indonesia and Palau, and turned over 60,000 stony corals searching for epitoniids. He published a series of papers describing many new species, detailing the relationship between hosts and epitoniid species, and produced a phylogenetic classification of the family (Gittenberger, 2006). At last there is a basis for sound taxonomy in the family, so the authors of *The Wentletrap Book* may consider a severely revised edition in 10 years time.

Reference:

Gittenberger, A. 2006. The evolutionary history of parasitic gastropods and their coral hosts in the Indo-Pacific. Ph.D. thesis, Leiden University. <https://openaccess.leidenuniv.nl/handle/1887/5415>, accessed 30 May 2008.



The Wentletrap Book - a partial review.

Richard E. Petit

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The Wentletrap Book. Guide to the Recent Epitoniidae of the world. 1999. Art Weil, Leonard Brown, Bruce Neville. Evolver: Rome

The only review of this book I have seen is a rather favorable one by Henry Chaney (2000) which he opens by stating that "this is a book for collectors by collectors." The book is not so presented by the authors and due to its numerous nomenclatural actions as well as illustrations of type material, it will have to be studied and cited in future systematic work on the family.

The work gets off to an inauspicious start with the

second sentence of the Introduction that starts: "Carolus Linnaeus [sic] described several ...". The name of the founder of our system of nomenclature is misspelled throughout the book except in the Bibliography [sic; = References Cited] where it is correctly spelled as Linnaeus. However the title given there, more or less that of the 10th Edition, is dated 1894, with publisher as "Lipsiae: Guilelmi Engelmann." This seems an unlikely error for Linnaeus, 1758 that was not printed in Leipzig by Engelmann. However, Engelmann did issue a reprint of Linnaeus' 10th in 1894. That does not change the date of publication!

From that introduction, it goes downhill. The first

The Wentletrap Book (Cont')

species listed in *Acirsa eschrichtii* (Hölboll [sic; = Holböll] in Möller, 1842). The first sentence for that species starts “First described as a *Turritella*...”. It was originally described by Möller, with an attribution to “Holb.”, as *Scalaria eschrichti* [one i]. It is not surprising that Möller’s 1842 paper is not listed in the “Bibliography” as the authors obviously never saw it, but why add an erroneous original combination when the correct one is easily found?

Although there is no mention of new taxa in the introductory material, there is at least one new species that is listed so as to be attributed to two of the three co-authors. This new species will have to be cited as *Epitonium (Sodaliscala) inexpertum* Brown & Weil in Weil, Brown & Neville. This species name is a remarkable one word review of the book.

Opalia tortipunctata and *Opalia gruveli* are both attributed to “(de Boury, mss.)”. Unfortunately the names are accompanied by figures and brief descriptions. Under the Code in effect in 1999, these names are available and must be attributed to Weil, Brown & Neville.

I have only inspected the Japanese species in any detail and these comments are offered:

Acirsa chitaniana (Yokoyama, 1926). It is stated that *S. martensi* de Boury, 1913, is considered to be a synonym. It should be obvious that de Boury’s name has priority.

Alora annulata (Kuroda & Ito, 1961). This is the type species of *Teramachiacirsa*. This placement is dismissed with the statement that “we consider *Teramachiacirsa* to be a synonym of *Alora*.” This statement is repeated in the list of genus-group taxa in the rear of the book, but no reason is given. “We consider” is hardly sufficient justification for synonymising the genera.

Amaea inwaotakii Azuma, 1961. After stating that “a fine photograph ... can be found in the *Compendium of Seashells* under the name *Epitonium annulatum* Kuroda & Ito, 1961” the authors state that “this name has been synonymized with *A. inwaotakii*.” The latter part of this statement is simply not so (see previous listing for *A. annulata*). In the “Japanese edition” of the *Compendium*, edited by Habe & Okutani the figure referenced is correctly identified. Of course, the Japanese “edition” of the *Compendium* must be treated as a separate work but that story will take another article.

Amaea ogaitoi Masahito & Habe, 1975. The authors figure and list as a synonym *S. tenuicancellata* de Boury, mss. If this name ever appeared in print anywhere a reference should be given. If it was never printed, why introduce another *nomen nudum*?

Amaea teramachii Kuroda. No date is given for Kuroda’s taxon which immediately causes suspicion. It was never described by Kuroda.

Kaicher (1980) published this name with a figure and short description. The Weil *et al.* treatment is placed in the synonymy of *Amaea (Scalina) gazzeoides* Kuroda & Habe, 1961 by Nakayama, 2003. The latter species is also listed by Weil *et al.*, but misdated as 1950. Weil *et al.* list, on page 187, *Am. teramachii* Kuroda & Habe, 1955.

Amaea (Clathroscala) species (p. 116, fig. 364). Weil *et al.* stated that this species appeared under the name *Clathroscala tosaensis* Kuroda, mss., and further that “it would be a secondary homonym of *Fragiliscala tosaensis* [Azuma, 1962] and we consider *Clathroscala* and *Fragiliscala* to both be subgenera of *Amaea*.” First, the species was described as *Clathroscala tosaensis* Habe & Masuda, 1990. Second, secondary homonymy would have to be justified by more than the statement “we consider both ... to be subgenera of *Amaea*.” Based on figures 364 and 367 the two species involved do not appear to be congeneric. The work by Habe & Masuda, 1990, is listed in the references on page 182 as “Habe, T. & Osamu, M.” Mr. Masuda’s first name is Osamu. The only species listed on page 182 for this pair of authors is *Am. noguchii* which does not appear to be treated elsewhere in the book.

Cirsotrema (Elegantiscala) varicosum Kuroda. No date is given for this species which is understandable as Kuroda never described an epitonid with this name.

Cycloscala laxatoides “(Kuroda in Nakayama, 1995).” Name should be credited to Nakayama. Nakayama actually described it and showed that it was a Kuroda MS name.

Cylindriscala enamelis “(Kuroda in Nakayama, 1995).” This species should also be credited to Nakayama.

Cylindriscala nitida (Kuroda & Ito, 1961). Although this is the type species of *Lampropropalia* Weil *et al.* have placed it in *Cylindriscala* with no explanation other than that is what they are calling it. *Lampropropalia* is not treated in the brief discussions of genera which begin on page 205.

Epitonium obliquum (Sowerby, 1847). Correct date is 1844. The Bibliography correctly shows date of the *Scalaria* part of the *Thesaurus* where this species was described.

Epitonium (M.) sakuraii “Kuroda & Habe, 1961.” Authorship and date is: Kuroda & Habe in Habe, 1962.

Epitonium (N.) perangustum (de Boury, 1913). This name was proposed by de Boury to replace *Scalaria angusta* Deshayes, 1861 (November), which is preoccupied by *S. angusta* Dunker, 1861 (pre-August, 1861). Even if this dating is incorrect the nomina of de Boury and Deshayes are synonyms and there is no way that de Boury’s replacement name can be attached to the Recent

The Wentletrap Book (Cont')

species which is properly *Epitonium angustum* (Dunker, 1861). The rendering as *angustatum* on page 180 is incorrect.

Opalia (N.) *monovaricosa* "(Kuroda & Habe)." This is a curious citation (page 124) as no date is given, and on page 187 where it is listed as a "mss name" under Kuroda & Habe. On page 124 it is stated that it "was described based on a specimen ..." If they saw a description, why is the date not given here and on page 187? Correct authorship and date is "Kuroda & Habe in Habe, 1961".

Aside from the above comments on the Japanese section of the book, there are several other items that are so obvious that they cannot be passed over. Pages 169 to 202 are devoted to "Authors in Epitoniidae" which lists authors, their taxa, current generic placement, date of publication, and synonyms. This would be an excellent tool if more complete and much more accurate.

The first two pages are devoted to a list of genera in the Epitoniidae. The list includes only the genus-group name (without authorship or date) and the type species (without authorship, date or mode of designation. It has not been checked but *Scala* and *Scalaria*, widely used for many years, are conspicuously absent. They cannot have been omitted due to synonymy as several listed genera are listed as being synonyms.

The next part of this section lists the authors, below whose names appear the names of species they introduced. Life dates are given after only a few persons. Under the names are four columns, the first being the species-group name, an acronym for the genus in which it is placed by Weil *et al.*, the year of publication and an indication of synonymy or size. No source is given for the names.

There are many authors listed in this section who are not listed in the Bibliography as well as some who are listed only for certain dates. Some data is incorrect. After many authors there is the name of an institution which could be presumed to be the repository for the taxa listed but that is not stated. If this is the intent, those searching for types will not find them in the institutions listed in many instances. It is quite unlikely that any de Boury types are to be found in the British Museum [sic; = The Natural History Museum, London].

Under Azuma is listed *nebulodermata* with date of 1972; on page 189 this species is listed as a synonym of *bitanieta* and dated 1976. Among authors not listed is T. Nakayama although two of his papers are listed

in the "Bibliography." It is distressing to see the late Axel A. Olsson twice listed as "Alex." Also, Xavier Montrouzier is given the ecclesiastic R.P. (= Reverend Father) instead of his first name.

Under the heading "Sowerby, George Brettingham (I, II, & III)" is a list of many of the epitoniids described by them, but they are not assigned to any particular one of the G.B. Sowerbys. The life dates of the three are given to the right of the names on page 196 without any indication that they are indeed birth and death dates. Two nomina listed, *undosia* and *pulchra*, were introduced by James de Carle Sowerby. The 1846 *undata* is not a Sowerby name. Five names are attributed to Sowerby 1847 that are correctly 1844. There is no *moerchi* Sowerby, 1874; Sowerby misidentified *moerchi* Angas, an act that cannot produce a new name.

On page 200 there is a list of 12 names under the heading "Turton, William H." These names are not in the index, except for reference to page 200, and Turton is not in the Bibliography.

An explanation of why certain authors, and only certain of their taxa, are listed would have been helpful. Weisbord's 1962 *E. venezuelense* is the only species attributed to him on page 201 although he described two other epitoniids at the same time. The name is not in the index and Weisbord's work is not in the "Bibliography."

To me the "References Cited" is, after new factual material presented, the most important part of a book. There are several reasons for this. First, the completeness and accuracy (or lack of these qualities) of the references gives an immediate indication of the depth of the work and the author(s)' familiarity with the molluscan literature. A second reason is to become aware of the existence of literature which is unfamiliar. In the work under discussion the "Bibliography" occupies pages 225-230. It is not only incomplete (not every citation in the book has a source) but is in many places inaccurate. The pagination of most books is omitted. For example, a 1980 paper by R. J. Cleavelly is listed but none of the taxa therein are treated by Weil *et al.* The genus *Crossotrema* first appears therein but on page 205 it is stated that genera that are exclusively fossil are not included. Why list a work to which there is no mention in the book?

Reference:

Chaney, H.W. 2000. [review] *The Wentletrap Book: Guide to the Recent Epitoniidae of the World. The Festivus* 32(2): 24.

A report of *Dolomena boholensis* (Mühlhäusser, 1981) from the Solomon Islands

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In 1971 Walter Cernohorsky described a new species in the family Strombidae as *Strombus* (*Dolomena*) *kleckhamae* from Rabaul, Papua New Guinea. The initial specimens were 'semifossils' retrieved from a pumice bank 3 metres above high tide level, apparently deposited in a 1937 eruption of the Mutapi volcano. As predicted by Cernohorsky the species was subsequently collected alive, in Rabaul and also in the Solomon Islands. Later a population of quite different, though clearly related shells was discovered living in the central Philippines, Mühlhäusser describing these as *Strombus kleckhamae boholensis*. 'A Conchology Iconography: Family Strombidae' published in 1999 continued to regard these shells as a subspecies of *S. kleckhamae*. More recently in volume 1 of 'Philippine Marine Mollusks' Gijs Kronenberg reinterpreted *boholensis* as a full species, with *Dolomena* elevated to generic level. Differences between *boholensis* and *kleckhamae* are outlined by Mühlhäusser.

Several years ago a beautiful specimen (illustrated) of stromb was sent to me by Ron Moylan of Sydney which he had personally collected on a recent diving holiday to the Solomon Islands. The shell was found on the north-west side of Simuruka Island in Marau Sound, Guadalcanal. At the time I was impressed, though perplexed since I was not aware of *boholensis* occurring outside the Philippines. The Iconography gives its distribution as 'southern Bohol only'. Likewise 'Philippine Marine Mollusks' has it restricted to three islands in the Bohol Sea:

Balicasag, Pamilacan and Aliguay, at an average depth of 100 metres. Mühlhäusser, however, mentions Samar and Negros.

Shortly after receiving the shell I questioned Ron about the locality data and he was able to describe to me the precise circumstances of its collection, so I consider it a valid, though surprising, record. He found the specimen partially buried in fine sediment at a depth of 45 metres whilst looking for rare *Conus*. The date of collection is known though currently separated from the shell (circa 1999). Interestingly at 74.4mm the specimen is larger than any known so far from the Philippines, the current World Size Record being 72.0mm. Despite further enquiries this appears to be the first instance of *D. boholensis* outside of the Philippines, however there is an unconfirmed report of a shell from Manado, Sulawesi. Many species initially described from deep water off Japan, Taiwan and the Philippines have subsequently been collected in other regions and *D. boholensis* may be another example. It will be interesting to await further specimens however political circumstances in the Solomons have allowed little collecting in recent years. Unless intergrades are found the occurrence of *boholensis* sympatrically with *kleckhamae* would offer further support for the idea that they are separate at the species level. A live specimen of Cernohorsky's *D. kleckhamae* remains a great rarity, the 'Iconography' considers that most specimens in collections are subfossils from mountains in the Solomons.





MOLLUSCS 2009

Brisbane, Australia

25 to 27 November 2009

Save the dates!

The Malacological Society of Australasia (MSA) promotes the study of molluscs in the Australasian region and nearby areas of Asia. Molluscs are the second largest phylum of animals and comprise a quarter of all described marine organisms. Our members are scientists, students and amateurs. One of the key ways the MSA works to improve our understanding of molluscs is through conferences held every three years. Previous, very successful, conferences have been held at:

- Rottnest Island, Western Australia (1997)
- Sydney (2000),
- Perth (as part of the World Congress of Malacology, 2004)
- Wollongong, New South Wales (2006).

The MSA is pleased to announce that the next conference in the series

Molluscs 2009

will be held at the University of Queensland, Brisbane, from Wednesday 25 November through Friday 27 November 2009.

The conference will have several major symposia. Possible topics include:

- Molluscan fisheries and aquaculture
- Molluscs as pests (agricultural pests, biosecurity/invasive spp. etc.)
- Phylogeny and systematics
- Evolution and development
- Biogeography
- Chemical communication
- Molluscs as indicators of environmental change
- Tropical and subtropical molluscs

One-two day workshops will be held, possibly at an island laboratory, before and/or after the conference. Current suggestions include:

- Freshwater molluscs or Marine micromolluscs
- Bivalves
- Analysis of development

Further information will be provided as the program develops. If you are interested in organising or participating in a particular symposium or workshop, please contact

- Dr Bernie Degnan, (b.degnan@uq.edu.au), or
- Dr Winston Ponder (wponder@bigpond.net.au).

We look forward to seeing you in Brisbane in November.

<http://www.malsocaus.org>