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Book Review “Cowries...” in *American Conchologist* 46(2): 43 by Richard Kent

A response by Felix Lorenz

On reading Richard Kent's detailed review of my Cowrie Book Volume 1 (2017), it becomes apparent that a lot of collectors would have preferred a smaller book with more pictures and less text, and in this particular case, an illustrated dealer's price list.

Fair enough, but it was not my intention to write a best-seller, but a comprehensive treatise portraying where we stand in the research of cowries, from my “splitter” standpoint. The beauty of this standpoint is that now there is a lot of material on the table that we can discuss, dismiss, synonymize, and eventually drag back for discussion when new information becomes available or alternative views take over once again. The Introduction of Volume 1 goes into detail on this subject.

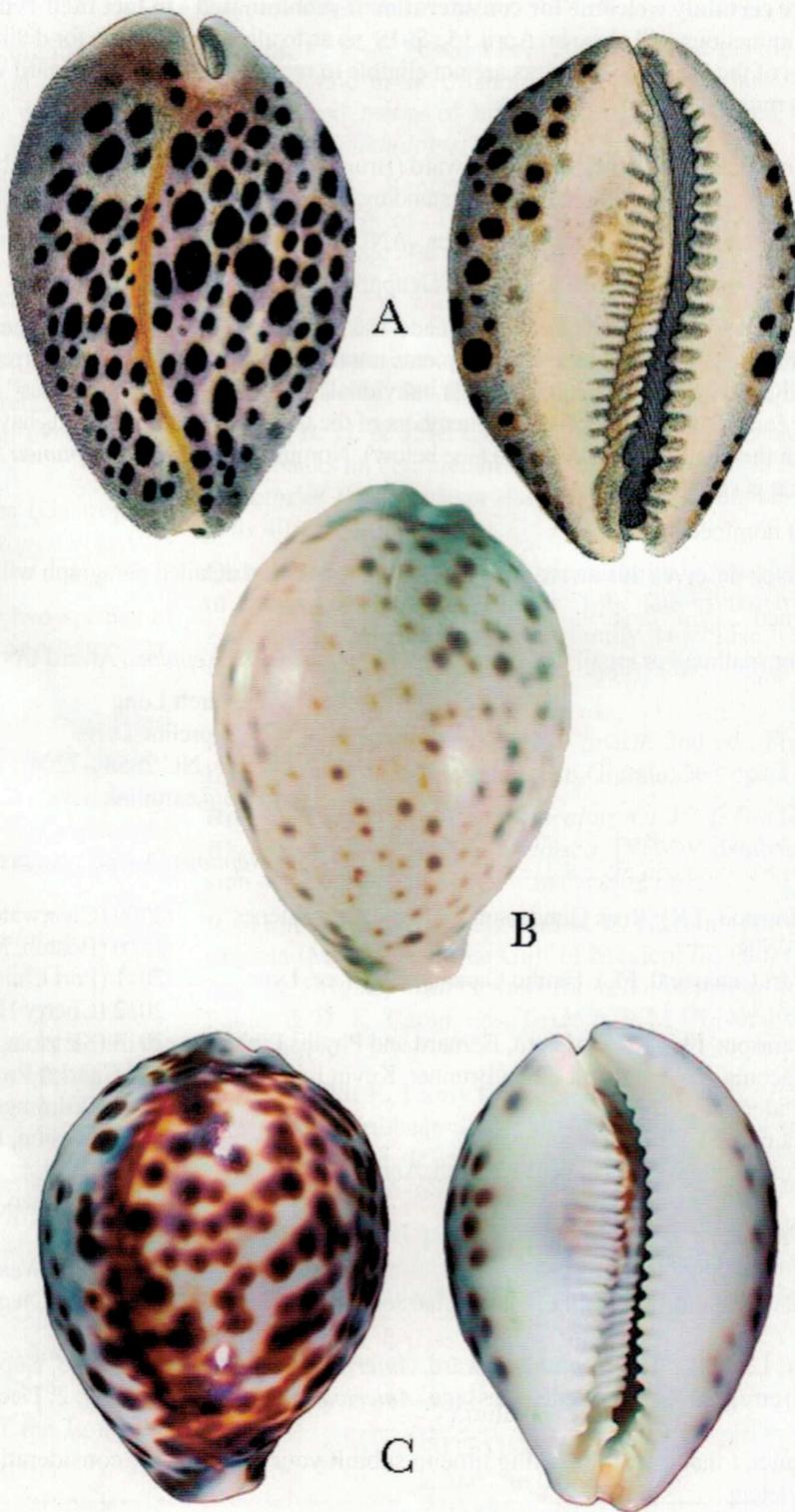
This is an ongoing process and also, this is what makes the whole issue so exciting. Therefore, I am taking this occasion to address a delicate subject that I am aware must have puzzled many collectors: the treatment of *tigris*. I do have my “favorites,” as Kent correctly noticed, and I had to cut back on them, simply because a lot of research on the four subspecies was published by Meyer and Tweedt (2017) and there were other groups that needed more attention.

The criticism concerning my treatment of *tigris pardalis*, therefore, is a welcome opportunity to briefly clarify my standpoints, or in other words, talk facts and correct some of the statements Kent made.

Figure A: The type figure of *pardalis* from Shaw (1794) (mirrored).

Figure B: The shell that is supposedly a typical *pardalis* depicted in Burgess (1970) pl. 22, fig. B, that Kent refers to.

Figure C: My interpretation of what a typical *pardalis* should look like (Cowries p. 283).



Kent quotes me as follows: “according to Lorenz... *Cypraea tigris pardalis* is the Philippine variety.” This is untrue. I never wrote, said, or thought that. What I did was simply use *pardalis* as the name for the Western to Central Pacific subspecies in general (in accordance with Schilder (1965) and all later authors, except Burgess, who incorrectly used *pardalis* as varietal name for very pale and sparsely spotted shells, in the case of his 1970 book for a shell from New Hebrides and not The Philippines (see Figure B).

Furthermore, Kent states: “...but he fails [sic!] to quote the original descriptions and type specimens to back this up.” Also this statement of his is simply untrue! As for all taxa, I do quote the original reference for *pardalis* and where its type figure can be found (see Figure A).

My approach is the same as in all monographs: if readers want to gain a deeper understanding of all the facts that led to the presentation of taxa, they will have to refer to the information offered, such as the original reference, further references on a particular subject (which are also listed in my book), and then do their homework by looking up the source itself, which is usually available online. In the case of *tigris* and *pardalis*, I did not have to “back up” my point any further, as my assignments of names agreed with those done by authors in the past, e.g. F. A. & M. Schilder (1952), Steadman & Cotton (1946), and C. N. Cate (1960).

Finally, Kent states: “Having dealt with shell dealers for years, *pardalis* is an all white tiger with minimal black spotting and no dorsal line, just like the one illustrated in the groundbreaking Burgess book.” Well, after dealing with shells and shell dealers for decades myself, I would never question their competence when it comes to interpreting names. Jokes aside: the original illustration of *pardalis* shows a shell that has dense, large spots and a distinct reddish dorsal line. The concept of the name is based on this picture. Neither “years of shell dealer’s experience,” nor the illustration in Burgess can alter these facts.

The molecular analysis is the modern approach to taxonomy and a universally accepted tool for differentiating between species. For the cowries, it was conducted by Dr. Christopher P. Meyer (2003, 2004, and numerous personal communications). His studies revealed that the populations of *tigris* from the Western to the Central Pacific should be distinguished from Indian Ocean ones on subspecific level, as they represent separate, evolutionary significant units. The same is true for the subspecies of *Zoila marginata*, and many other seemingly “polymorphic” species, to suggest for readers the interesting articles by Mr. Okon and Mr. Weir in the same issue of *American Conchologists*. In my Cowrie book, Volume 1, there is a long chapter on how molecular data can be aligned with traditional taxonomy, and I provide numerous examples.

In my discussion of the taxa of the *tigris*-group, I explicitly state that: “This variable and widespread species is split into four subspecies, of which three are supported genetically, but difficult to distinguish conchologically. The Indian Ocean is inhabited by the nominate *tigris*. Along the border between the Eastern Indian Ocean and the Pacific, interbreeding with the Pacific *pardalis* takes place. There is no way to safely distinguish shells from the Indian Ocean and the western Pacific...” And in another instance: “The individual variability of the tiger cowrie shell makes it impossible to determine features that safely distinguish individual specimens from the Indian Ocean and the Pacific. This characterization is based on comparisons of many specimens from different populations. The genetic distance between them is considerable, and the data suggests that *tigris* and *pardalis* split at approximately the same time that *pantherina* split from *tigris*.” I outline the general morphological trends that can be observed, however, even if they do not show up in every individual specimen (see table below).

Shaw’s name *pardalis* is the oldest available out of the long synonymy for *tigris* that most likely refers to a Pa-

<i>Cypraea</i>	<i>t. tigris</i>	<i>t. pardalis</i>	<i>t. lorentzi</i>	<i>t. schilderiana</i>
Distribution	Indian Ocean	Pacific except Marquesas and Hawaii	Marquesas	Hawaii
Shape	pyriform, slightly inflated		oval, depressed	pyriform, inflated
Columellar teeth	rather long		rather short	short!
Aperture	narrow		wider!	narrower
Base	rather convex		concavely sloping at aperture!	rather convex
Columellar ridge	less produced	slightly produced	well produced!	well produced
Fossula / denticles	steep / finer	less steep / coarser	sloping / coarse	less steep / coarser
Dorsal line	narrow, less distinct		broad, blurred	conspicuous, distinct!
Spotting	small, dense	larger, dense	larger, confluent	large, distinct, framed with blue!

cific specimen, and its illustration supports this. As Schilder (1965) has comprehensively dealt with the assignment of type localities to existing names, I did not see the necessity to defend using *pardalis* for Pacific populations.

The shell I chose to represent the name is certainly more adequate than the pale off-color one shown by Burgess (actually, the varietal name *chionia* Melville, 1888, can be used for such shells). Whether or not other authors or collectors agree with my concept of distinguishing a subspecies that cannot always be reliably characterized by shell features, but merely by DNA, is a totally different question and not part of the taxonomical issues addressed herein.

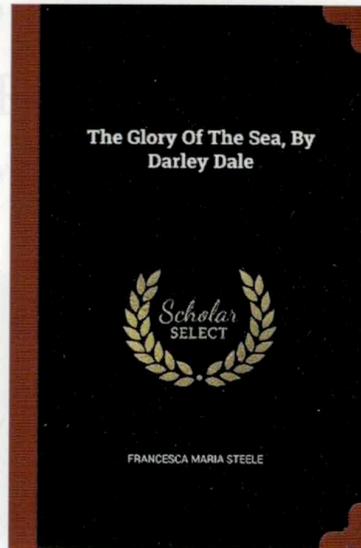
Concluding, I encourage collectors to get your *tigris* (with ascertained data) out and make four piles: separate Indian Ocean ones from those from Hawaii, the Marquesas, and the rest of the Pacific. Then, study the sets side by side, ignoring their variability, but focussing on those morphological features compared in the table. You will find that there are differences between these four groups that may not be well displayed by some individual shells, but they do exist when the populations are examined as a whole.

Many thanks to Michael A. Mont for proofreading, and to Richard Kent for starting what can become a lively discussion.

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The Glory of the Sea

by Darley Dale [pseudonym for Francesca Maria Steele]

1887 [reprinted 2015]

Paperback, Nabu Press

(December 8, 2013),

ISBN-10: 129338111X

ISBN-13: 978-

1293381113

Product Dimensions:

7.4 x 0.5 x 9.7 inches,

228 pages

This is not your standard shell book, but it is a gem nonetheless. A few months ago a shell friend (Bruce Neville) emailed and said he had just reread *The Glory of the Sea* and quite enjoyed it. Having benefited from other recommendations from Bruce, I checked Amazon.com and sure enough, there it was, \$14.95 softcover. I did not know quite what to expect from an 1887 (approximately) novel about shells, but thought I could devote a couple hours to it at least. It was not what I expected.

The story revolves around a young 'crippled' girl named Polly. Her affliction is a curved spine and back then that meant spending most of the day and night, painfully chained, yes chained, to a bed to try and straighten the spine. In the first couple pages you learn that Polly has inherited a rather extensive shell collection from a Miss Crabbe. **Unknown** to Polly, Miss Crabbe's will stipulates that if Polly keeps the collection intact and actually adds at least 20 specimens by her 21st birthday, she will also inherit the old lady's fortune. If Polly sells off the collection, she gets £500.

The rest of the book involves Polly slowly gaining an appreciation for conchology as she learns about various shells and families of shells in the collection. Of course, this means you as the reader also get a shell education. You will be amazed at how much they got right 131 years ago. There are also some interesting errors. Thus you will find *Ianthina* used instead of *Janthina*, a common misspelling of Röding's original genus. The section on the golden cowrie is also interesting.

The title comes from a missing *Conus gloriamaris*, which at that time would have been a big deal as it was an almost priceless shell in the 1800s. To find out what happened to the pricey cone and indeed, to Polly, you will have to read the book, also available as a free pdf at Google books: https://books.google.com/books?id=fWMUAAAAQAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

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