

**A PRELIMINARY LIST OF OLD COWRY NAMES
RECYCLED BY THE SCHILDERS. VERSION 01****E.L. Heiman**

Abstract: The Schilders' practice of recycling old cowry names is shortly discussed. 132 recycled names are listed in this work; 31 of these names are relevant to the valid species or subspecies; the taxonomic identity of 31 other taxa is not yet checked, and the remaining 70 taxa cannot be recognized as valid species or subspecies according to the results of a statistical conchological study.

Key words: Mollusca, Gastropoda, Cypraeidae, intraspecific variation, nomenclature.

During almost fifty years from the 20's of the 20th Century onwards F.A. Schilder and M. Schilder (the Schilders) studied the family Cypraeidae. As a result the contemporary zoological nomenclature of that family was on the whole established.

The Schilders described many species and subspecies of Cypraeidae; 165 species are mentioned in their work "Prodrome of a monograph of living Cypraeidae." Most of these species were divided into, as they wrote, "subspecies in the sense of the International Rules of Zoological Nomenclature, i.e. they are to be named, and their names are co-ordinate with the specific names with regards to the laws of priority and homonymy."

Even then the problem of an increasing number in mollusc names became an actual burden. In order "to avoid establishing too many new sub-specific names" the Schilders used old available cowry names; in other words they recycled the old cowry names using them in a new application: as new specific and subspecific names.

The Schilders clearly expressed this procedure in Schilder & Schilder (1938) but often their explanations were ignored by many contemporary students of cowries and some of them even currently affirm that the Schilders never used such a practice.

Problems

The recycled cowry names used by the Schilders are available according to the International Code of Zoological Nomenclature but a real chance exists that some students of cowries can suppose that always the descriptions and type specimens of those old taxa are relevant also to the new taxa that now carried these names. Such an approach is confusing because often only names of the old taxa are used. Besides, the type material of the old taxa bearing the names recycled is sometimes lost or incorrect, their original descriptions are too short, and as a whole not relevant to the new taxa introduced in the Prodrome.

There is also another problem: the Schilders were about to revise in the future many descriptions of the cowry subspecies given in Schilder & Schilder (1938) but this mostly did not happen.

In their works, the Schilders separated subspecies based on the four statistical shell characteristics of cowry populations: the average shell length and relative width, and normalized count of labial and columellar teeth (the so called 'formula'). It turned out that the 'formula' alone may be not sufficient for separating between subspecies due to a substantial intraspecific variation.

If one is not apriori convinced of the correct taxonomic identity of a taxon described in the Prodrome and wants to check its true taxonomic identity, the correct procedure is first to study its original description and the type material. Following this straight-forward diagnostic exercise, one can run into a double problem: a) the original description and the type material (if still existing) are simply meaningless to the shells being investigated, and b) the 'formulas' of the compared populations are too close i.e. these diagnostic characteristics overlap.

An imprudent attitude to recycled cowry names in regular taxonomic practice has already led to confusion; many examples are given in Heiman (2002-2008).

Hence in order not to be confused it may be useful to students of cowries to be warned and to have a list of the cowry names recycled by the Schilders, in other words it is worth to know beforehand whether a cowry taxon bears a recycled name.

A possible solution

My first attempts to check the taxonomic identity of several taxa described in the Prodrôme (especially bearing the recycled names) revealed considerable difficulties and a need to reconsider the Schilders' approach; this task is currently being inspected in a project "Intraspecific variation in living cowries" (the project).

It is assumed in the project that shells of a mollusc species differ from shells of all the other species by at least one substantial shell character without intermediates, and a subspecies is a geographically separated group of populations in which the majority (70% or more) of shells differs from shells of the other populations of the same species by at least one substantial shell character. Such shell character may be: the shell shape, profile, size and relative width, the number of teeth, the presence of dorsal or basal blotches, and so forth. That difference in shell characters can be interpreted as a diagnostic statistical shell characteristic of a subspecies. So subspecies should only be characterized by statistical characteristics; one specimen cannot characterize a subspecies.

The taxonomic identity of hundreds of cowry populations is already checked in the project. As already mentioned, the 'formula' given in the Prodrôme is not always allows to separate cowry populations at a subspecific or a specific level. In this case counting and comparing shell characters in representative batches of shells allowed clarifying a situation.

As a result it is now possible to decide, which taxa described by the Schilders can be considered valid. This information is added to "A preliminary list of old cowry names recycled by the Schilders" containing 132 recycled names.

31 of these names are relevant to the valid species or subspecies; the taxonomic identity of 31 other taxa is not yet checked, and the remaining 70 taxa cannot be recognized as valid species or subspecies according to the results of a statistical conchological study.

The followings should be considered:

1. The genera in the list below are given according to Schilder & Schilder (1971); subgenera are ignored.
2. Several taxa marked below by the sign * are not yet studied due to the absence of the authentic conchological material.
3. All the recycled names are written without brackets (as in the Prodrôme).
4. The valid taxa are given in the shaded blocks; their main diagnostic shell characteristics are given in Heiman (2002-2007).

This is a preliminary list because there are still many taxa the taxonomic identity of which is not yet checked. But I hope it may be useful to students of cowries as a warning preventing possible confusion.

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A preliminary list of old cowry names recycled by the Schilders. Version 01

genus	species	subspecies	authors and date	notes
<i>Mauritia</i>	<i>arabica</i>	<i>gibba</i>	Coen, 1949	*
		<i>niger</i>	Roberts, 1885	
		<i>westralis</i>	Iredale, 1935	*
	<i>eglantina</i>	<i>couturieri</i>	Vayssière, 1905	
	<i>mappa</i>	<i>alga</i>	Perry, 1811	*
		<i>viridis</i>	Kenyon, 1902	*
	<i>mauritiana</i>	<i>calxequina</i>	Melviil & Standen, 1899	
		<i>regina</i>	Gmelin, 1791	
	<i>scurra</i>	<i>retifera</i>	Menke, 1829	
		<i>indica</i>	Gmelin, 1791	
<i>Talparia</i>	<i>talpa</i>	<i>saturata</i>	Dautzenberg, 1903	*
<i>Cypraea</i>	<i>tigris</i>	<i>lyncichroa</i>	Melvill, 1888	
		<i>pardalis</i>	Shaw, 1795	
<i>Lyncina</i>	<i>argus</i>	<i>contrastriata</i>	Perry, 1811	*
		<i>ventricosa</i>	Gray, 1824	*
	<i>carneola</i>	<i>crassa</i>	Gmelin, 1791	
		<i>propinqua</i>	Garrett, 1879	
		<i>sowerbyi</i>	Anton, 1839	
	<i>lynx</i>	<i>caledonica</i>	Crosse, 1869	
		<i>vanelli</i>	Linnaeus, 1758	
		<i>williamsi</i>	Melvill, 1888	
	<i>vitellus</i>	<i>dama</i>	Perry, 1811	
		<i>orcina</i>	Iredale, 1931	
<i>sarcodes</i>		Melvill, 1888		
<i>Chelycypraea</i>	<i>testudinaria</i>	<i>testudinosa</i>	Perry, 1811	*
<i>Luria</i>	<i>isabella</i>	<i>lekalekana</i>	Ladd, 1934	
	<i>lurida</i>	<i>minima</i>	Dunker, 1853	
<i>Zonaria</i>	<i>pyrum</i>	<i>maculosa</i>	Gmelin, 1791	
<i>Schilderia</i>	<i>achatidea</i>	<i>oranica</i>	Crosse, 1896	
<i>Umbilia</i>	<i>hesitata</i>	<i>howelli</i>	Iredale, 1931	*
<i>Erronea</i>	<i>caurica</i>	<i>corrosa</i>	Gronow, 1781	
		<i>dracaena</i>	Born, 1778	
		<i>elongata</i>	Perry, 1811	
		<i>longior</i>	Iredale, 1935	
		<i>obscura</i>	Rossiter, 1882	
		<i>quinquefasciata</i>	Roeding, 1798	
	<i>clandestina</i>	<i>candida</i>	Pease, 1865	
		<i>passerine</i>	Melvill, 1888	
		<i>moniliaris</i>	Lamarck, 1810	
	<i>errones</i>	<i>bimaculata</i>	Gray, 1824	
		<i>coerulescens</i>	Schröter, 1804	
		<i>coxi</i>	Brazier, 1872	

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<i>Erronea</i>	<i>felina</i>	<i>fabula</i>	Kiener, 1843	
		<i>melvilli</i>	Hidalgo, 1906	
	<i>onyx</i>	<i>adusta</i>	Lamarck, 1810	
		<i>nymphae</i>	Jay, 1850	*
		<i>succincta</i>	Linnaeus, 1758	
	<i>pulchella</i>	<i>pericalles</i>	Melvill & Standen, 1904	*
	<i>subviridis</i>	<i>anceyi</i>	Vayssière, 1905	*
		<i>vaticina</i>	Iredale, 1931	*
	<i>bregeriana</i>		Crosse, 1868	
<i>walkeri</i>	<i>continens</i>	Iredale, 1935		
<i>Notadusta</i>	<i>punctata</i>	<i>atomaria</i>	Gmelin, 1791	
		<i>trizonata</i>	Sowerby, 1870	
<i>Palmadusta</i>	<i>asellus</i>	<i>bitaeniata</i>	Geret, 1903	*
		<i>vespacea</i>	Melvill, 1905	*
	<i>clandestina</i>	<i>candida</i>	Pease, 1865	
		<i>moniliaris</i>	Lamarck, 1810	
		<i>passerina</i>	Melvill, 1888	
	<i>fimbriata</i>	<i>marmorata</i>	Schröter, 1804	
		<i>unifasciata</i>	Mighels, 1845	
	<i>gracilis</i>	<i>macula</i>	Angus, 1867	
		<i>notata</i>	Gill, 1858	
	<i>lutea</i>	<i>bizonata</i>	Iredale, 1935	*
		<i>humphreysii</i>	Gray, 1825	
	<i>microdon</i>	<i>chrysalis</i>	Kiener, 1843	*
	<i>saulae</i>	<i>nugata</i>	Iredale, 1935	*
	<i>ziczac</i>	<i>misella</i>	Perry, 1811	
		<i>undata</i>	Lamarck, 1810	
<i>vittata</i>		Deshayes, 1831		
<i>Blasicrura</i>	<i>goodallii</i>	<i>fuscomaculata</i>	Pease, 1865	*
	<i>hirundo</i>	<i>neglecta</i>	Sowerby, 1837	*
		<i>rouxi</i>	Ancey, 1882	*
	<i>pallidula</i>	<i>pallidula</i>	Gaskoin, 1849	
		<i>rhinoceros</i>	Souverbie, 1865	*
	<i>rashleighana</i>	<i>eunota</i>	Taylor, 1916	
	<i>teres</i>	<i>alveolus</i>	Tapparone, 1882	
		<i>latior</i>	Melvill, 1888	
		<i>pellucens</i>	Melvill, 1888	
		<i>rashleighana</i>	Melvill, 1888	
<i>subfasciata</i>		Link, 1807		
	<i>subteres</i>	Weinkauff, 1881		
<i>Bistolida</i>	<i>stolida</i>	<i>brevidentata</i>	Sowerby, 1870	
		<i>diauges</i>	Melvill, 1888	
		<i>croseii</i>	Marie, 1869	
		<i>rubiginosa</i>	Gmelin, 1791	

genus	species	subspecies	authors and date	notes
<i>Ovatipsa</i>	<i>chinensis</i>	<i>variolaria</i>	Lamarck, 1810	
		<i>violacea</i>	Rous, 1905	
		<i>tortirostris</i>	Sowerby, 1906	
	<i>coloba</i>	<i>coloba</i>	Melvill, 1888	
		<i>gregori</i>	Ford, 1893	*
<i>Cribrarula</i>	<i>cribraria</i>	<i>comma</i>	Perry, 1811	
		<i>falax</i>	Smith, 1881	*
		<i>melwardi</i>	Iredale, 1930	*
<i>Pustularia</i>	<i>cicercula</i>	<i>lienardi</i>	Jousseume, 1874	
	<i>margarita</i>	<i>tricornis</i>	Jousseume, 1874	*
<i>Monetaria</i>	<i>annulus</i>	<i>camelorum</i>	Rochebrune, 1884	
	<i>moneta</i>	<i>nouméensis</i>	Marie, 1869	
		<i>barthélémyi</i>	Bernardi, 1861	
	<i>icterina</i>		Lamarck, 1810	
<i>Erosaria</i>	<i>caputserpentis</i>	<i>argentata</i>	Dautzenberg-Bouge, 1933	
		<i>caputanguis</i>	Philippi, 1849	
		<i>reticulum</i>	Gmelin, 1791	
	<i>erosa</i>	<i>chlorizans</i>	Melvill, 1888	
		<i>lactescens</i>	Dautzenberg-Bouge, 1933	
		<i>phagedaina</i>	Melvill, 1888	
		<i>pulchella</i>	Coen, 1949	
		<i>purissima</i>	Vredenburg, 1919	
		<i>similis</i>	Gmelin, 1791	
		<i>gangranosa</i>	<i>reentsii</i>	Dunker, 1852
	<i>helvola</i>	<i>argella</i>	Melvill, 1888	
		<i>callista</i>	Shaw, 1909	
		<i>citrinicolor</i>	Iredale, 1935	
		<i>hawaiiensis</i>	Melvill, 1888	
		<i>mascarena</i>	Melvill, 1888	
	<i>labrolineata</i>	<i>helenae</i>	Roberts, 1869	*
		<i>nashi</i>	Iredale, 1931	*
	<i>lamarckii</i>	<i>redimita</i>	Melvill, 1888	
	<i>miliaris</i>	<i>diversa</i>	Kenyon, 1902	
	<i>nebrites</i>		Melvill, 1888	
	<i>poraria</i>	<i>scarabaeus</i>	Bory, 1827	
	<i>spurca</i>	<i>atlantica</i>	Monterosato, 1897	
		<i>verdensium</i>	Melvill, 1888	
<i>turdus</i>	<i>pardalina</i>	Dunker, 1852		
	<i>zanzibarica</i>	Sullioti, 1911		
<i>Staphylaea</i>	<i>limacina</i>	<i>facifer</i>	Iredale, 1935	
		<i>interstincta</i>	Wood, 1828	
	<i>staphylaea</i>	<i>consobrina</i>	Garrett, 1879	
		<i>descripta</i>	Iredale, 1935	
		<i>laevigata</i>	Dautzenberg, 1932	
<i>Nuclealaria</i>	<i>nucleus</i>	<i>madagascariensis</i>	Gmelin, 1791	*
		<i>gemmosa</i>	Perry, 1811	*