

Hybrids in the Cypraeidae (Gastropoda)

By FELIX LORENZ, Buseck-Beuern (Germany) and MARCO CHIAPPONI, Lecco (Italy)

Figs 1-3

So far, hybrids in Cypraeidae are known mainly of the species of genus *Cypraeovula* from South Africa. Nearly all species of this endemic genus have produced occasional hybrids wherever their distributions overlap, some of which have been named either as separate species or formae. DNA analysis of species of this genus and the genus *Macrocypraea* has shown that its species are young (MEYER 2004), which is likely the reason why reproductive boundaries are not well established.

It is not easy to give a complete overview of those cowry-hybrids as sometimes shells announced to be hybrids are actually aberrant freaks. True hybrids between Cowry-species are amazing in usually representing an exact 50/50 mix between the parent-species. The rarities given are relative to the fact that hybrids as such are exceptional and a rarity. A reference for an illustration of hybrid specimens is given (number in straight brackets referring to the authors cited below):

- Cypraea tigris* LINNAEUS, 1758 x *pantherina* SOLANDER, 1786 (very common) [5]
Cypraeovula capensis J. E. GRAY, 1828 x *edentula* J. E. GRAY, 1825 (very common) [1]
Cypraeovula edentula J. E. GRAY, 1825 x *fuscodentata* J. E. GRAY, 1825 (rather common) [1]
Cypraeovula fuscorubra SHAW, 1909 x *algoensis* J. E. GRAY, 1825 (rare) [1]
Cypraeovula mikharti LORENZ, 1985 x *fuscodentata* J. E. GRAY, 1825 (rare) [1]
Cypraeovula alfredensis F. A. SCHILDER & M. SCHILDER, 1929 x *capensis* J. E. GRAY, 1828 (rare) [1]
Cypraeovula capensis J. E. GRAY, 1828 x *iutsui* SHIKAMA, 1974 (unique) [4]
Cypraeovula capensis J. E. GRAY, 1828 x *fuscodentata* J. E. GRAY, 1828 (unique) [4]
Erronea caurica LINNAEUS, 1758 x *errones* LINNAEUS, 1758 (very common) [2]
Erronea cylindrica BORN, 1778 x *errones* LINNAEUS, 1758 (very rare) [2]
Erosaria erosa LINNAEUS, 1758 x *boivinii* KIENER, 1843 (very rare) [2]
Erosaria lamarckii J. E. GRAY, 1825 x *ocellata* LINNAEUS, 1758 (very rare) [2]
Lyncina sulcidentata J. E. GRAY, 1824 x *schilderorum* IREDALE, 1939 (rather rare) [2]
Lyncina lynx LINNAEUS, 1758 x *vitellus* LINNAEUS, 1758 (unique) [herein]
Macrocypraea cervus LINNAEUS, 1771 x *zebra* LINNAEUS, 1758 (very common) [3]
Monetaria moneta LINNAEUS, 1758 x *caputserpentis* LINNAEUS, 1758 (moderately common) [2]
Monetaria annulus LINNAEUS, 1758 x *moneta* LINNAEUS, 1758 (very rare) [2]
Nucleolaria nucleus LINNAEUS, 1758 x *granulata* PEASE, 1862 (less rare) [2]
Palmadusta diluculum REEVE, 1845 x *clandestina* LINNAEUS, 1771 (rather rare) [2]
Pseudozonaria robertsi HIDALGO, 1906 x *nigropunctata* J. E. GRAY, 1828 (unique) [herein]
Zonaria petitiana CROSSE, 1872 x *zonaria* GMELIN, 1791 (unique) [herein]

The hybrid between *Lyncina lynx* and *L. vitellus* shown here is an astonishing result of interbreeding between two conchologically distinct species. As in similar extreme cases

(e. g. *M. moneta* x *M. caputserpentis*) the outcome is a mixture between the parent-species in every conchological aspect. This may not be apparent on first sight as the spotting

of the *vitellus* mixes with that of *lynx* to form paler spots and a generally paler dorsal colour, but on closer inspection there are faint white spots along the margins (never found in typical *lynx*), and the distribution of the grey spots (mixed white and black) is perfectly intermediate between *lynx* and *vitellus*. The morphological features such as fossula, dentition and shape are more obviously a mix between the two.

The other two shells shown here are the first examples known to me from their respective genus: *Pseudozonaria robertsi* x *nigropunctata*: The hybrid was collected intertidally on Fernandina Is., Galapagos in 1969 and was recently discovered in a collection of shells from Galapagos. It is notable how every conchological aspect is intermediate between the parent species: the dorsal banding, the teeth and shape, as well as the position of the spotting. The same applies to a specimen of *Zonaria petitiana* x *zonaria* from Almadies, Senegal, spotted in a bag of freshly collected *petitiana* and *zonaria*.

Literature

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- [4] RAYBAUDI, L. (1995): Two new great rarities among South African endemics. — *World Shells*, **14**: 68-72.
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Fig. 1: Left: *Pseudozonaria robertsi* (20.5 mm), middle: *P. robertsi* x *nigropunctata* 22.9 mm), right: *nigropunctata* (21.5 mm). All from Puerto Espinoza, Fernandina Is., Galapagos, intertidally under rocks.

Addresses of the authors:

Dr. FELIX LORENZ, Friedrich-Ebert-Str. 12, D-35418 Buseck-Beuern, Germany, E-Mail: Felix.Lorenz@t-online.de
 Dr. MARCO CHIAPPONI, Via Aspromonte 22, I-23900 Lecco (CO), Italy, E-Mail: chiapponim@stelvio.it



Fig. 2: Left: *Zonaria petittiana* (28.1 mm), middle: *Z. petittiana x zonaria* (27.6 mm), right: *Z. zonaria* (27.4 mm). All Almadies, Senegal.



Fig 3: Left: *Lyncina lynx* (45.1 mm), middle: *Lyncina lynx* x *vitellus* (40.9 mm), right: *Lyncina vitellus* (47 mm). All Cebu, Philippines.