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## Two New species of *Mitrella* (Mollusca: Gastropoda: Columbellidae) from the Philippines

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**Keywords:** GASTROPODA, COLUMBELLIDAE, *Mitrella*, new species, Philippines.

**Abstract:** Two new species of **Columbellidae**: *Mitrella chinoi* sp. nov. and *Mitrella confusa* sp. nov. are introduced as new to science. Both species originate from deep water in the central Philippines. They are compared with their closest congeners.

**Introduction:** The central Philippines are well-known for their commercial tangle net fisheries. This method is effective in collecting many molluscan species. The deeper placed tangle nets are a regular source for discoveries, and many new species are described yearly. In the family **Columbellidae** at least 7 species have been described coming from these sources (see: Monsecour & Monsecour, 2009 & 2011; Poppe & Tagaro, 2010). In the present article two supplementary species from this source are described. They have both already been known for some years, but were incorrectly identified as discussed below.

The first new species *Mitrella chinoi* sp. nov. is often called *Mitrella semiconvexa* (Lamarck, 1822), a species belonging to the Australian fauna, or *Sulcomitrella circumstriata* (Schepman, 1911), a sympatric species; both identifications made by commercial shell dealers and never published. Poppe & Tagaro (2011) figured this species as *Mitrella albofulvata* Drivas & Jay, 1990. After studying and comparing this species we have to conclude that it has nothing in common with the three species mentioned above or any other *Mitrella* (s.l.), it is therefore hereby described as *Mitrella chinoi* sp.nov.

The second new species was already figured and erroneously identified as *Mitrella alabastrum* (Reeve, 1859) by Springsteen & Leobrera (1986). This taxon is a synonym of *Indomitrella conspersa* (Gaskoin, 1851), a non-related species. As no other available name could be traced for this species it is hereby described as *Mitrella confusa* sp. nov.

**Abbreviations:**

MNHN: Muséum National d'Histoire Naturelle, Paris, France

OSUM: Ohio State University Museum of Biological Diversity, Columbus, Ohio USA

CAD: collection Aart M. Dekkers, The Netherlands

CJP: collection Jacques Pelorce, France

CKM: collection Kevin Monsecour, Belgium

CMC: collection Mitsuo Chino, Japan

CGTW: collection G. Thomas Watters, Ohio, USA

**Systematic account:**

Family COLUMBELLIDAE Swainson, 1840

Subfamily *Atiliinae* Cossmann, 1901

Genus *Mitrella* Risso, 1826

***Mitrella chinoi* sp. nov.**

2011 "*Mitrella albofulvata* Drivas & Jay, 1990" – Poppe & Tagaro *in* Poppe, G.T.  
Plate 1269 figs. 6-7.

**Type material:** Holotype MNHN 25796, 2 paratypes MNHN 25797, 3 paratypes CAD, 3 paratypes CMC, 1 paratype CJP, 3 paratypes CKM.

**Type locality:** Philippines, Bohol, Balicasag Island, 50-150 m deep.

**Material examined:** Philippines, Balicasag Island, 50-150 m deep: 17 specimens, 7.8-10.1 mm (Holotype MNHN, 2 paratypes MNHN, 3 paratypes CAD, 3 paratypes CKM, 1 paratype CJP, 4 specimens CAD, 3 specimens CKM); Philippines Mactan Island, 220 m deep: 3 specimens, 9.4-9.8 mm (3 paratypes CMC); Philippines, Mactan Island, Punta Engaño, 50-100 m deep: 8 specimens, 8.4-9.5 mm (8 specimens CKM).

**Distribution:** Until now only known from Cebu Strait in the central Philippines.

**Description:** Shell of medium size for the genus, adult size up to 10.1 mm (height of holotype: 9.6 mm); biconical. Suture slightly impressed and whorls slightly shouldered. Protoconch multispiral, consisting of 2.5 smooth whorls. Transition to teleoconch clearly visible. Teleoconch consisting of about 5 whorls, without any spiral or axial sculpture apart from the basal cords, which are clearly present on the last whorl. These cords ventrally range as far as the adapical edge of the columella. Outer lip thickened with a clearly present axial rim, bearing the continuations of the basal cords at the abapical end. Inner lip denticulate, with 9-11 denticles. Columellar callus clearly thickened. Parietal callus very thin, or absent. Columella denticulate, with 4-5 denticles, the abapical ones stronger. Siphonal canal short, open, slightly recurved.

Protoconch beige. Teleoconch whorls off-white to beige, often off-white at the adapical side of the whorls and beige at the abapical side. On the body whorl this continues in a beige spiral band. The shell of some specimens shows a band of brown flecks just above the suture and few also show such bands at midwhorl. The shell is slightly translucent.

Operculum and radula not studied.

**Remarks:** This species is close to the swollen form of *Mitrella nympha* (Kiener, 1841), formerly called *Mitrella venulata* (Sowerby, 1844). Yet, *Mitrella chinoi* sp. nov. can easily be distinguished from this species by its more swollen apex, its denticles on the columella (smooth in *M. nympha*), the lower number of teleoconch whorls (6.5 -7 in *M. nympha*) and the different colour pattern (*M. nympha* has many morphs, mostly a brownish orange or white base colour, and a pattern of brown spots and/or thin brown lines).

The clearly denticulate columella is a feature also present in *Mitrella moleculina* (Duclos, 1840). The new species stands out from *M. moleculina* by its bigger size, its different protoconch, the opercular canal and the completely different colour pattern (*M. moleculina* has a typical pattern of white spots on a brownish orange background with a dark brown spiral band just below the suture).

*Mitrella chinoi* is most often labelled *Sulcomitrella circumstriata* (Schepman, 1911), a sympatric species. *Sulcomitrella circumstriata* is easily distinguishable by its spiral grooves, a feature typical of *Sulcomitrella* Kuroda, Habe & Oyama, 1971 and lacking in *Mitrella chinoi*. Therefore the new species should not be placed in *Sulcomitrella* but in *Mitrella*. It is closest to the *Mitrella moleculina* -group.

*Mitrella semiconvexa* (Lamarck, 1822), a species only occurring in the Australian Province and belonging to the subgenus *Dentimitrella* Ludbrook, 1958, can immediately be distinguished by its much bigger size, different shell shape and completely different colour pattern.

Poppe & Tagaro (2011) figured this species as *Mitrella albofulvata* Drivas & Jay, 1990, a species only known from Reunion and Mauritius. After studying the original description of Drivas & Jay (1990) and the holotype in the MNHN we come to the following conclusion: *M. albofulvata* is of the same size and has an equal number of teleoconch whorls and the same number of columellar teeth, but clearly differs in the presence of a subsutural spiral groove, a deep suture, only 2 protoconch whorls, 14 lirae inside the aperture and a completely different colour pattern. All these differences make clear that we are dealing with two separate species. *Mitrella albofulvata* remains only known from Mauritius and Reunion, and is most probably endemic to this region.

**Etymology:** Named after Mr Mitsuo Chino, Japan.

***Mitrella confusa* sp. nov.**

1986 “*Mitrella alabastrum* (Reeve, 1859)” – Springsteen & Leobrera. Plate. 46, fig 11.

**Type material:** Holotype MNHN 25794, 2 paratypes MNHN 25795, 1 paratype OSUM 37274, 3 paratypes CAD, 1 paratype CJP, 3 paratypes CKM, 2 paratypes CMC, 1 paratype CGTW 10928a.

**Type locality:** Philippines, off Dipolog, Aliguay Island, 50-150 m deep.

**Material examined:** Philippines, off Dipolog, Aliguay Island 50-150 m deep: 9 specimens, 13.6 -15.4mm (Holotype MNHN, 2 paratypes MNHN, 1 paratype OSUM, 1 paratype CAD, 1 paratype CGTW, 3 paratypes CKM); Philippines, Mactan Island, 50-250 m deep: 16 adult specimens, 8.4-9.5 mm (2 paratypes CAD, 2 paratypes CMC, 1 paratype CJP, 5 specimens CAD, 6 specimens CKM) and 11 juvenile specimens, 3.7-13.7 mm (all CKM); Philippines, Balicasag Island, 140-250 m deep: 3 specimens 15.1-16.4 mm (2 specimens CAD, 1 specimen CKM).

**Distribution:** Until now only known from the central Philippines. Apart from the type locality, specimens have been reported [not published, observations on commercially obtained material] from Mactan Island, Cebu and from Balicasag Island, Bohol at depths from 50 to 250 m.

**Description:** Shell of large size for the genus, adult size up to 16.4 mm (height of holotype: 13.6 mm); biconical. Suture slightly impressed and whorls not shouldered, almost straight. Protoconch multispiral, consisting of 2.5 smooth, rapidly broadening whorls. Transition to teleoconch weakly visible. Teleoconch consisting of about 7 whorls, without any spiral or axial sculpture apart from the basal cords, which are clearly present on the last whorl. In most specimens these cords ventrally range until just above the adapical edge of the columella; some specimens show very weak spiral cords until the adapical edge of the aperture. Outer lip thickened, bearing the continuations of the basal cords at the abapical end. Inner lip denticulate, with 8-9 denticles. Columellar callus clearly thickened. Parietal callus very thin, or absent. Columella denticulate, with 6-8 denticles, the abapical ones stronger. Siphonal canal short, open, slightly recurved.

Protoconch dark purple to black. Teleoconch whorls beige with a pattern of pale brown axial lines and an interrupted pale brown spiral band below the suture and one at midwhorl on the bodywhorl. Some specimens show an aberrant pattern of only brown flames on all teleoconch whorls.

Operculum and radula not studied.

**Remarks:** Many specimens belonging to this species have already been known for a long time, both in museum and private collections. They have always been identified as *Mitrella alabastrum* (Reeve, 1859), an erroneous identification which was first made by Springsteen & Leobrera (1986). *Mitrella alabastrum* (Reeve, 1859) was studied and placed in synonymy with *Indomitrella conspersa* (Gaskoin, 1851) by Monsecour & Köhler (2006). Moreover, the species currently described has nothing in common with *Indomitrella conspersa*. As it was not clear if another known taxon name could be available for this species when the first author contributed the **Columbellidae** part to Philippine Marine Mollusks (Monsecour in Poppe, 2008), the species was not mentioned in this work on the Philippine malacological fauna.

The new species is easily distinguishable from all other congeners by its size (bigger than most of the sympatric *Mitrella* species) and its exquisite pattern. Sympatric species which grow to the same size are *Sulcomitrella circumstriata* (Schepman, 1911) and *Sulcomitrella kanamaruana* (Kuroda, 1953). *Mitrella confusa* can easily be

distinguished from them by the absence of the spiral grooves which are typical of *Sulcomitrella*-species.

*Mitrella mindorensis* (Reeve, 1859) can also grow to about this size, but it differs from *M. confusa* by its incised suture, narrower shell shape, smooth columella, more closed canal and different shell colour.

**Etymology:** The species' name "confusa", meaning confused was selected due to the confusion with *Mitrella alabastrum*.

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## Plate 1

### 1-8: *Mitrella chinoi* sp. nov.

1-2: Holotype, 9.6 mm (MNHN)

3: Paratype, 9.7 mm, Philippines, Balicasag Island, taken with lumun lumun nets, 2005 (CKM).

4-8: Variation of the species, 9.5 mm; 8.3 mm; 7.6 mm; 9.7 mm; 9.4 mm, all: Philippines, Cebu, Mactan Island, Punta Engaño, at 50-80 m in tangle nets (all CKM).

9: *Mitrella nympha* (Kiener, 1841), 9.2 mm, Philippines, Mactan Island, Punta Engaño, from tangle nets, 1990 (CKM).

10: *Mitrella moleculina* (Duclos, 1840), 7.2 mm, Philippines, Cebu, Mactan Island, Punta Engaño, at 50-80 m in tangle nets (CKM).

11: *Sulcomitrella circumstriata* (Schepman, 1911), 11.4 mm, Philippines, Balicasag Island (CKM).

12: *Mitrella semiconvexa* (Lamarck, 1822), 16.5 mm, Australia, South Australia, Searcy Bay, under rocks on reef at low tide, 2001 (CKM).

## Plate 2

### 13-17: *Mitrella confusa* sp. nov.

13-14: Holotype, 13.6mm (MNHN)

15-16: Paratypes, 14.3 mm, 13.7 mm, Philippines, Aliguay Island, about 140 m deep. (CKM)

17: 15.1 mm, Philippines, Balicasag Island, 140m deep. (CKM)

18: *Sulcomitrella circumstriata* (Schepman, 1911), 11.4 mm, Philippines, Balicasag Island (CKM).

19: *Sulcomitrella kanamaruana* (Kuroda, 1953), 14.4 mm, East China Sea, trawled on and at 170 m, 2005 (CKM).

20: *Mitrella mindorensis* (Reeve, 1859), 14.4 mm, Philippines, Mactan Island, Punta Engaño, from tangle nets, 1990 (CKM).





