

On the synonymy of a species from the Mediterranean Neogene and the Recent fauna from Angola

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Introduction: Rolán & Fernandes (1990) described some African species which they considered as belonging to the genus *Manzonia*, amongst which *Manzonia fariai*, a species dredged at a depth of 100 metres at about 5 kilometres off Luanda, Angola.

Gofas (1999) commented on the African species and considered *Alvania fariai* the correct name for this species.

Landau et al. (2004) accepted this taxon, which they mention from Estepona, Spain, but incorrectly use the name as *Alvania fariae* Rolán & Fernandes, 1990.

In more recent publications, Garilli (2008) and Garilli & Parrinello (2014) make some considerations on the species within the genus *Galeodinopsis* Sacco, 1895 considering them as intermediates between *Alvinia Monterosato*, 1891 and *Manzonia Brusina*, 1870. In the references to the four studied species belonging to this genus, *Galeodinopsis tiberiana* (Coppi, 1876) is mentioned and discussed, thereby placing *Manzonia fariai* Rolán & Fernandes, 1990 in synonymy with this species.

The fossil species *Galeodinopsis tiberiana* was collected from Neogene, La Tagliata, Maranello, Modena, northern Italy (type locality) and MGUP Mio-Pliocene of northern Italy, the Pliocene of Emilia Romana, northern Italy, Pliocene of Altavilla Milicia, Palermo, Sicily, as the collecting places mentioned in Garilli & Parrinello (2014).

Discussion: It is really very surprising that a species like *G. tiberiana*, known from Italy and Sicily is considered the same species as a Recent one collected at 100 metres deep in Angola, thereby rendering the latter's name a synonym of the first one.

For this reason we have revised the photographs provided in the original description and added new photographs from the type material in the Museo de Historia Natural of the University of Santiago (MHNS) and we come to the following conclusions:

1. The species *Manzonia fariai* Rolán & Fernandes, 1990 obviously does not belong to the genus *Manzonia*, due to the fact its peristome is not double. So, it could perfectly be a species belonging to the genus *Galeodinopsis*.

2. The protoconch of *G. tiberiana* is mentioned as having 2-2.2 whorls. In some photographs in the paper by Garilli & Parrinello (2014: 14D4, 14G), we can see that the microsculpture at the end of the protoconch is very irregular without defined cords; in the shell of *G. fariai* which we could photograph this part of, there were about 10-12 irregular cordlets.

3. The spiral cords shown in the first whorl of the teleoconch of *G. tiberiana* in Garilli & Parrinello (2012: fig. 14, about 10 photographs) almost all have 3 spiral cords on the first whorl and 3 on the second whorl (exceptionally 4 in two cases). In *G. fariai* there are 4-5 cords on the first whorl and 6 on the second whorl.

4. The shells of *G. tiberiana* shown in this paper have 3-3.5 convex teleoconch whorls. Our material of *G. fariai* does not have three whorls, but usually just 2-2.2 whorls.

5. *G. tiberiana* bears 11-14 spiral cords present on the last whorl (the third one), while *G. fariai* has 13-14 spiral

cords on the last whorl (which in this species is the second one), which are also wider.

6. In *G. tiberiana* the subsutural cord is described as much weaker and in the photographs it can be seen it is far from the suture; in *G. fariyai*, the upper spiral cord is normal (like the following ones) and at a normal distance from the suture.

7. The persistence of the older thick external lip, which seems frequent in *G. tiberiana* (see Garilli & Parrinello (2014: figs. 2A, 2B, 14A, 14C₁ and 15A), was not found in our material of *G. fariyai*.

8. The axial ribs described in *G. tiberiana* are mentioned as opisthocline and almost straight; while these ribs are also opisthocline, but a little sigmoid in *G. fariyai*.

9. In some photographs of the microsculpture shown by Garilli & Parrinello (2014: fig. 2C₁, 14F, 15B₄ and 15B₅), 10-12 spiral threads and no axial striae can be counted between the cords. In contrast, we have found up to 16 threads always crossed by axial growth lines in *G. fariyai* (Fig. E).

Conclusions: For all the reasons mentioned above, we conclude that there is a species of *Galeodinopsis* from deep water in Angola whose name is *G. fariyai* (Rolán & Fernandes, 1990) and that this taxon must not be considered a junior synonym of *G. tiberiana* (Coppi, 1876), but a valid species.

The species recorded by Landau et al. (2004) is more likely conspecific with *G. tiberiana* because of its narrower cords and ribs, persistence of the previous thick borders and geographic distribution.

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PLATE

A-E: Paratypes of *Galeodinopsis fariyai* (Rolán & Fernandes, 1990).

- A:** paratype in apical view, 1.32 mm in diameter (MHNS)
B: paratype, 2.58 mm (MNCN)
C: transition from protoconch to teleoconch
D: protoconch and first teleoconch whorls
E: microsculpture

