

## On the exact state of *Helix lineata* OLIVI 1792

(Pulmonata: Helicidae).

By

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With 5 figures.

### Introduction.

This paper means to rise objections against a recent work of GITTENBERGER (1978) in which either not considering or misinterpreting the opinions of earlier authors (principally POLLONERA 1888, see GIUSTI 1976) the author forces scientists to accept *Helix lineata* OLIVI 1792 as a junior synonym of *Helix virgata* DA COSTA 1778 in order "to prevent a future revival of the ambiguous name *H. lineata*"

This action seems to me untimely and unalleged as I shall try to demonstrate.

### Historical news.

*Helix lineata* OLIVI 1792 was first described on the basis of shell material collected by the author himself in the Lagoon of Venice and in other places all around the Venetian Gulf. OLIVI's extremely brief description

"*lineata* nobis H. Cochlea terrestris, umbilicata ec. ec., Gual. Test. tab. 2, fig. L, M, N, O, P (sono tutte varietà della stessa specie la quale affetta altre modificazioni). Abita sopra gli alberi, nei terreni secchi ed abbonda nei siti arenosi del litorale. Le spoglie si trovano alla spiaggia" [... (All these are varieties of the same species which shows other modifications). It lives on trees, in dry places and is common near the sea. The shells are frequent on the shore"]

might have had no value if his reference to GUALTIERI's drawings (Fig. 1) had not given us a valid possibility to identify the species. Nevertheless, two different groups of phenotypes are identifiable in the L-P series of GUALTIERI's table 2.

The shells marked L can be ascribed to many helicoid species and also to the "big *Cernuella*" group of forms, usually known as *Helix virgata* DA COSTA; the shells marked M, N, O, P<sup>1</sup>) instead are referable to the "small *Cernuella*" group of forms usually known in Italy under the false name "*profuga*" or alternatively ascribed to *lineata* OLIVI (POLLONERA 1888, 1905, BISACCHI 1929,

<sup>1</sup>) The big shell marked M is evidently the enlargement of one of the smaller M shells.

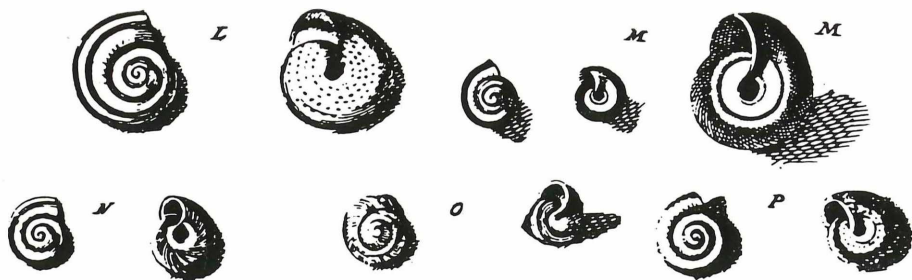


Fig. 1. Figures L-P from table 2 of GUALTIERI (1742) (from GITTENBERGER 1978).

GIUSTI 1976), or to *subprofuga* STABILE (PAULUCCI 1878, 1886, DEGNER 1927, HESSE 1934, SACCHI 1955, PAGET 1962, FORCART 1965), and even to *jonica* MOUSSON (FORCART 1965, GRIGNANI 1972). Of course this gave rise to a series of discordant interpretations favoured by the chaos existing in the systematics of the *Cerneuella* species because of a study simply based on shell structure.

On the basis of presumed relationships, without proper critical analysis, MOQUIN-TANDON (1855) gave the name *lineata* OLIVI to the French *Cerneuella* of the *maritima* DRAPARNAUD group after having distinguished the latter from *variabilis* DRAPARNAUD (1801) (this species is now considered as a junior synonym of *virgata* DA COSTA 1778).

In the same way, without a critical analysis, KOBELT (1881) referred *lineata* OLIVI to *virgata* DA COSTA (and consequently to *variabilis* DRAPARNAUD) as a junior synonym.

After the papers of these last two authors, well known and generally imitated in French and German speaking countries, the choice of the name for OLIVI's species became extremely problematic. In fact, many authors respected MOQUIN-TANDON's and KOBELT's opinions even though not seriously supported.

POLLONERA (1888) became aware of the problem and tried to establish the exact identity of *Helix lineata* OLIVI. After a critical study of GUALTIERI's drawings he attempted to establish which species OLIVI really meant to refer to. Doing a first revision POLLONERA identified in *Helix lineata* and in drawings M, N, P<sup>2</sup>) of GUALTIERI's table 2, the "small *Cerneuella*" so common in the Lagoon of Venice and generally known at those times as *profuga* by Italian authors.

#### Critical remarks.

In reply to GITTENBERGER's observations (1978) it seems advisable to stress the following points:

a) POLLONERA did not identify fig. L of GUALTIERI's table 2 with *variabilis* DRAPARNAUD. Rejecting the synonymy between *lineata* and *virgata*, as proposed

<sup>2</sup>) POLLONERA took no notice of figs. L and O, because, as he wrote, they were not clear enough to be identifiable.

by KOBELT (1881), POLLONERA maintains verbatim: "among GUALTIERI's drawings only the very bad fig. L can possibly correspond to a shell form of the *H. variabilis* DRAP. group, whilst the better figs. M, N, and P surely reproduce different colour types of one of the Italian forms of the *H. profuga* (auct. ital.) group."

Practically POLLONERA, with justified care, avoids giving a definition to GUALTIERI's fig. L and limits himself to say that such a drawing is the only one that can possibly correspond to DRAPARNAUD's species (and thus to *virgata* DA COSTA). It is quite impossible even to day to identify fig. L. In fact that drawing seems to represent a giant specimen of *profuga* (auct. ital.) (see *Helicella profuga torcellensis* SACCHI 1957) or a *Theba pisana* (MÜLLER) (see GIUSTI 1976), besides a "big *Cernuella*" of the *virgata* group.

For this reason POLLONERA rejects figs. L and O, and in his revision chooses figs. M, N and P for the redescription of *lineata* OLIVI, thus fixing a "typical series".

b) POLLONERA's action is in agreement with article 74 of the International Code of Nomenclature. Realizing that in the "original typical series" of *lineata* OLIVI (drawings L-P of GUALTIERI's table 2) some "specimens" are not identifiable, POLLONERA acts in the following way:

1) He analyses the distribution of *Cernuella*s in the Lagoon of Venice, demonstrates the rarity of *virgata* DA COSTA and the extreme abundance of the "small *Cernuella*" better known in Italy under the improper name *profuga*.

2) He fixes a "typical series" for *lineata* OLIVI identifying it with figures M, N and P of GUALTIERI's table 2 (see POLLONERA 1888: 13, lines 16-18, 27-30).

3) He gives a new description of the species (1888: 14) based on figs. M, N and P and on corresponding material from the Lagoon of Venice (Fig. 4-5).

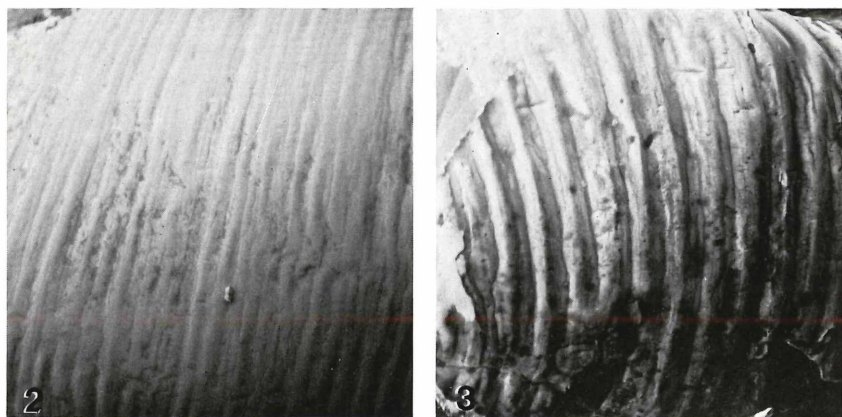


Fig. 2-3. Scanning photos of the shell surface from the last whorl of *Cernuella*. — 2) "big *Cernuella*" (= *virgata* group), collected near Alberoni (Lido di Venezia) [leg. P. CESARI 2. 10. 1975],  $\times 21$ . — 3) "small *Cernuella*" (= *lineata* group), collected near Torcello (Lagoon of Venice) [leg. M. VEGNI TALLURI 8. 5. 1975],  $\times 25$ . — The first figure shows simple stripes of growth whilst the second shows deeply engraved lines.

Acting also as “first reviser”<sup>3)</sup> POLLONERA correctly chooses a typical series (see Art. 74b, c IRZN) validly fixing *Helix lineata* OLIVI 1792.

c) The presuppositions concerning the choice of a type for *Helix lineata*, not included in the “typical series” fixed by POLLONERA in 1888, and the establishment of synonymy between *lineata* OLIVI and *virgata* DA COSTA are missing (see Art. 74a IRZN).

d) POLLONERA’s choice fully agrees with OLIVI’s description of *lineata*. The exactness of his critical investigation is confirmed by the actual rarity in the Lagoon of Venice of “big *Cernuella*” ascribable to the *Cernuella* (s. s.) *virgata* (DA COSTA) group, and also by the abundance in the same region of “small *Cernuella*” identifiable with the species known as “*profuga*”, *lineata*, *subprofuga* or *jonica*<sup>4)</sup>. Another point to be stressed comes from the analyses of the term “*lineata*” used by OLIVI.

Some of the better known books on conchyliological nomenclature, in fact, give the term “*lineata*” to shells with deeply engraved rough transversal or longitudinal lines on their whorl surface (see BURROW 1828, ROSSMÄSSLER 1835). This term is very seldom applied to shells with coloured stripes.

The coloured stripes being extremely common on the shells of many *Cernuella* species lead us to suppose that OLIVI’s definition “*lineata*” is meant for a species with deep lines on the whorl surface.

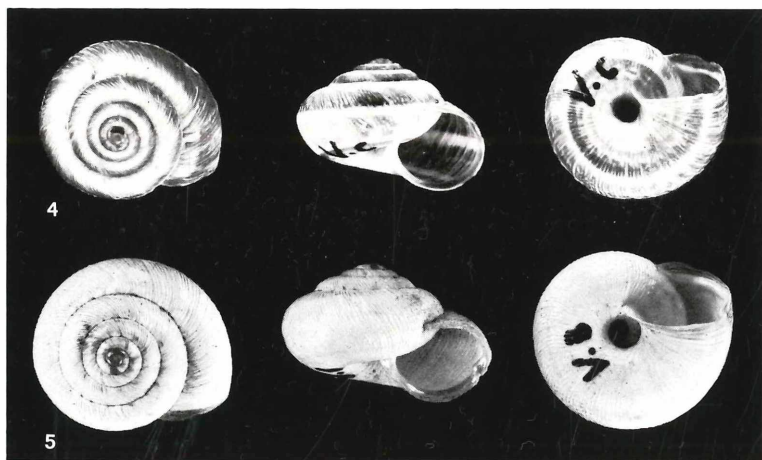


Fig. 4-5. *Cernuella lineata* (OLIVI). Torcello (Lagoon of Venice) [SMF 252040a-b].

<sup>3)</sup> The term “first reviser” is limited by the Code to who chooses the name for a species from two contemporary synonyms (art. 24). Nevertheless this definition is often used also for authors who for the first time interpret an old name, define it making it possible to recognise it in a precise species (just what POLLONERA did !).

<sup>4)</sup> Many thanks to Mr. PAOLO CESARI from Mestre (Venezia) for the news about the distribution of *Cernuella*s in the Venetian Lagoon and for the alcohol material of “big *Cernuella*” from Alberoni (Lido of Venice).

Touch, naked eye and microscopic examinations (Fig. 2-3) of "small *Cernuella*" shells from the Lagoon of Venice reveal a rough whorl surface through the presence of evident transversal lines whilst the same examinations reveal that "big *Cernuella*" from the Lagoon of Venice have a smoother surface.

All this demonstrates that OLIVI's description corresponds only to figs. M, N and P of GUALTIERI's table 2 and that POLLONERA's "typical series" was well chosen.

e) It is hard to understand why GITTENBERGER (1978) wants "to prevent a future revival of the ambiguous name *H. lineata*, a name which is not in common use for any species at present"

As evidenced here above, after POLLONERA's paper *Helix lineata* OLIVI was no longer an ambiguous name, and certainly not a "nomen oblitum" Infact, before I pointed out *lineata* OLIVI and called the attention of European authors to POLLONERA's paper, the name was but seldom used in Italy at regular intervals (POLLONERA 1888, 1905, BISACCHI 1929).

### Conclusive remarks.

In consideration of all that has been expounded here above the demonstrations which have been produced against GITTENBERGER's opinion seem to me sufficiently in favour of POLLONERA (1888).

*H. lineata* OLIVI was a valid name which, owing to its age, was fit to resolve the many nomenclaturistic problems which complicate the position of "small *Cernuella*" in Italy.

Up to GITTENBERGER's paper *lineata* has been a valid species whose distinctive elements were detectable in OLIVI's description, in figs. M, N and P of GUALTIERI's table 2 chosen by POLLONERA and also in POLLONERA's redescription (1888).

It is really disturbing to be compelled to disregard all this by the necessity to be in line with the IRZN. Unfortunately the paragraph 74a of the Code ("Agreement with previous restrictions") is a recommendation only and not a rule. So that GITTENBERGER's action even if historically incorrect and surely untimely stands as a first selection of a lectotype for *Helix lineata* OLIVI. Such a situation forces us to accept *lineata* as a junior synonym of *virgata* or, as previously shown, as an unidentifiable species of the Helicidae.

Having premised this I wish to stress that a clear line between the "big *Cernuella*" of the *virgata* group and the "small *Cernuella*" of the *lineata* group (sensu POLLONERA and GIUSTI) has not yet been drawn (GIUSTI 1976: 257, figs. 34-40, tabs. 13-18) even though it is a matter of secondary importance in respect to the nomenclaturistic problem debated here above. The two species are generally considered good, nevertheless the main constant character which distinguishes them is represented by the different size of their shells (!).

The decisive composition of the debate has been postponed to the solution of this interesting and urgent problem. The composition, in fact, can not be based only on rules of professional ethics or on the rules of a code which, even fully valid at present, cannot consider nor provide for the extreme changeability of nature.

**Summary** The author has carried on a historical analysis of the state of *Helix lineata* OLIVI which has been recently complicated by GITTENBERGER's choice (1978) of a lectotype not in line with a previous revision by POLLONERA (1888). Even if incorrect this choice, according to the IRZN, forces us to consider *lineata* as a junior synonym of *Helix virgata* DA COSTA.

**Riassunto** L'autore svolge una indagine storica sullo status di *Helix lineata* OLIVI, complicato dalla scelta di un lectotipo (GITTENBERGER 1978) non in accordo con una precedente revisione di POLLONERA (1888). Pur erronea, tale scelta costringe, secondo il Codice Internazionale di Nomenclatura, a ritenere *lineata* come un sinonimo più giovane di *Helix virgata* DA COSTA.

**Acknowledgments** I thank A. ZILCH and R. JANSSEN for having suggested me to publish this paper and for critical reading of the manuscript. I thank also L. FORCART, J. J. M. BUTOT, H. W. WALDEN and A. RIEDEL for discussion.

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Jahr/Year: 1979

Band/Volume: [110](#)

Autor(en)/Author(s): Giusti Folco

Artikel/Article: [On the exact state of \*Helix lineata\* Olivi 1792  
\(\*Pulmonata\*: \*Helicidae\*\). 191-197](#)