

NOTE ON THE CORRECT YEAR OF PUBLICATION OF DESHAYES' *SCALARIA CRASSICOSTATA (CIRSOTREMA CRASSICOSTATUM)* (GASTROPODA: EPITONIIDAE), AND ITS PRECISE BIBLIOGRAPHIC REFERENCE

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ABSTRACT

The year of publication and bibliographic reference of *Scalaria crassicosata* has often been quoted incorrectly. It is herein concluded that the name was published in DESHAYES' *Traité élémentaire de conchyliologie avec les applications de cette science à la Géologie*, and that the correct year is 1850. It is also noted that assumed dates of publication of other species described by DESHAYES in the *Traité élémentaire* should be checked against the publication dates given by COX (1942).

Keywords: chresonymy, authorship, Miocene

SINTEŻI

[Nota dwar is-sena korretta tal-pubblikazzjoni minn Deshayes ta' *Scalaria crassicosata (Cirsotrema crassicostatum)* (Gastropoda: Epitoniidae), bir-referenza biblijografika preċiża.] Is-sena ta' publikazzjoni u r-referenza biblijografika ta' *Scalaria crassicosata* kemm-il darba ġew ikkwotati hażin. Hawnhekk tintlaħaq il-konklużjoni li l-isem ġie ippublikat fit-*Traité élémentaire de conchyliologie avec les applications de cette science à la Géologie* ta' DESHAYES, u li s-sena korretta hija 1850. Is-snin preżunti ta' speċi oħrajn li ddeskriva DESHAYES fit- *Traité élémentaire* għandhom jiġu mqabblin mad-dati mogħtija minn COX (1942).

Kliem muftieħ: kreżonimija, awtorità, Mijocenu

INTRODUCTION

The epitoniid species *Cirsotrema crassicostatum* was originally described by Gérard Paul DESHAYES (**Pl. 1 Fig. G**) under the name *Scalaria crassicosata*. There is no doubt whatsoever about this fact, but there is a great degree of confusion about the exact year of publication (cited by various authors anywhere between 1839 and 1858), and about the exact publication in which the new species was validly described.

MATERIALS AND METHODS

The compilation of a chresonymy for *Scalaria crassicosata* from 1839 onwards (reproduced in this paper) resulted in an array of dates and references, only one of which can be correct. In this chresonymy, the quoted date of publication is given first, followed by the species name and quoted author, and (if applicable) a further reference to the record.

Symbols and abbreviations:

°: references only mentioned somewhere in a text or in a table;

*: references found only in synonym or chresonym lists;

ICZN: International Commission for Zoological Nomenclature.

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RESULTS

So far, the following references referring to *crassicostatum/crassicostata* were found, irrespective of having been attributed generically to *Cirsotrema* Mörch, 1852, *Scalaria* Lamarck, 1801, or *Scala* Mörch, 1852. This overview encompasses publications in which the taxon was either described systematically or publications which, at least, contain a mention in a text, a table, or a plate explanation.

The presence in the list below does not mean that the reference as such is correct, nor that these authors also included these publications in their literature reference lists, if such a bibliography was provided at all.

Finally, this reference list does not include possible synonyms under different species names as listed by various authors.

All references to synonym lists are represented *verbatim* as published by the author.

- *1839 *Scalaria crassicostata* – Deshayes, Bull. Soc. Geol. France, 11: 76.
Reference in synonym list in ANDERSON (1964) with an asterisk indicating: ‘*die für den Namen er Art maßgebende Originalveröffentlichung*’ [the original publication relevant for the name of the taxon].
- *1839 *Scalaria crassicostata* Desh. *B.S.G.F.* t. XI, p.76.
Reference in synonym list COSSMANN & PEYROT (1922).
- *1839 *Scalaria crassicostata* – Deshayes in de Verneuil, Bull. Soc. Géol. de France, XI, p. 76, Note Pliocène algérien.
Reference in synonym list DOLLFUS et al. (1904).
- *1839 *Scalaria crassicostata* – Deshayes, *Traité élément. Conchyl. Atlas*, pl. 70, fig. 1–3 (*bene*).
Reference in synonym list DOLLFUS et al. (1904).
- °1839 *Scalaria crassicostata* – Deshayes, *Traité élém. Conch. Tome 2*, p. 41.
Text section in CARONE & ARDOVINI (2008: 617) with wrong p. 41 instead of p. 42.
- *1839 *Scalaria crassicostata* Deshayes in Verneuil : 76 (nom. nudum).
Reference in synonym list LOZOUET et al. (2001).
- *1840 *Scalaria crassicostata* – Deshayes, *Traité élém. Conch. pl. LXX*, fig. 1–2.
Reference in synonym list COSSMANN & PEYROT (1922) and copied by ANDERSON (1964) in his synonym list. However, no part of the *Traité* was published in 1840. (Possibly *lapsus calami* in COSSMANN & PEYROT (1922) for the correct year 1850?).
- *1840 *Scalaria crassicosta* [*sic*] Desh. 1839, Bull. Soc. Geol. France Tome XI, p. 76 et Atlas du *Traité élém. Conch. pl. 70*, fig. 1,2,3.
Reference in synonym list BENOIST (1873).
- °1844 *Scalaria crassicosta* [*sic*] DESH. – DE VERNEUIL in LEONHARD & BRONN (p. 218).
- °1850 *Cirsotrema crassicostatum* (Deshayes, 1850). Text reference and fig. in DUERR (2004).
- °1852 *Scalaria crassicostata* Desh. – D’ORBIGNY (p. 30, reference nr. 396 in species list).
- *1853 *Scalaria crassicostata* Deshayes - Deshayes : pl. 70, figs 1-3.
Reference in synonym list LOZOUET et al. (2001).
- °1873 *Scalaria crassicosta* [*sic*] Desh. 1839 – BENOIST (p. 283).
- *1874 *Scalaria crassicostata* Desh. Benoist, *Cat. Syn. Test. fossiles*, p. 99.
Reference in synonym list DOLLFUS [PEREIRA DA COSTA] with incorrect year 1874 instead of 1873.
- 1891 *Cirsotrema crassicostatum* (Desh.) – SACCO (p. 45).
- 1895 *Scalaria (Cirsotrema) Cf. crassicostata* Deshayes – DEGRANGE-TOUZIN (p. 315).
- °1896 *Cirsotrema crassicostatum* Deshayes – COOKE (p. 510).
- °1896 *Cirsotrema crassicostatum* Deshayes var. – COOKE (p. 510).
- 1904 *Scalaria crassicostata* Deshayes – DOLLFUS [PEREIRA DA COSTA] (p. 11, pl. XXXIII figs. 16a, 16b).
- °1912 *Sc. crassicostata* Desh. – COSSMANN (p. 52, pl. III figs. 1–3).
- °1912 *Cirsotrema crassicostatum* Desh. – COSSMANN (p. 179, pl. III figs 1–3).

- 1922 *Cirsotrema crassicoatum* Desh. – COSSMANN & PEYROT (pp. 151–153, pl. 4 figs 79, 80, 85, 97, 98).
- 1925 *Cirsotrema crassicoatum* Desm. [sic] – KAUTSKY (p. 80, pl. 7 fig. 1).
- 1952 *Scala (Cirsotrema) crassicoata* Deshayes, sp. 1839 – GLIBERT (pp. 40–42, pl. 3 figs. 8a–d).
- 1964 *Cirsotrema (Cirsotrema) crassicoatum* (Deshayes 1839) – ANDERSON (p. 217, pl. 16 fig. 137).
- 1967 *Cirsotrema (Cirsotrema) crassicoatum* – JANSSEN (p. 141).
- °1972 *Cirsotrema (Cirsotrema) crassicoatum* (Deshayes, 1839) – JANSSEN (p. 9).
- 1984 *Cirsotrema (Cirsotrema) crassicoatum* (Deshayes, 1839) – JANSSEN (p. 166, pl. 50 fig. 15).
- 2001 *Cirsotrema (Cirsotrema) crassicoatum* (Deshayes, 1839) – WIENRICH (p. 450, pl. 73 figs 1–3, pl. 91 fig. 7).
- 2001 *Cirsotrema crassicoatum* (Deshayes, 1853) – LOZOUET et al. (p. 51, pl. 19 fig. 6).
- 2002 *Cirsotrema* aff. *crassicoatum* (Deshayes, 1839) – HARZHAUSER (pp. 65, 93, pl. 12 fig. 6).
- 2004 *Cirsotrema crassicoatum* (Deshayes, 1850) – DUERR (pp. 152, 155, fig. 10).
- 2008 *Cirsotrema crassicoata* (Deshayes, 1839) – CARONE & ARDOVINI (pp. 609–620, 611 fig. 1 [map], 612 fig. 2 [diagram], 613 fig. 3, 616 fig. 4, 616 tab. 1, 614 pl. 1, 615 pl. 2).
- °2012 *Cirsotrema crassicoatum* (Deshayes, 1839) – JANSSEN (pp. 218, 224, 226, 234).
- °2012 *Cirsotrema crassicoata* (Deshayes, 1839) – JANSSEN (p. 514).
- °2014 *Cirsotrema crassicoatum* (Deshayes, 1853) – HARZHAUSER et al. (p. 93).

DISCUSSION & CONCLUSIONS

A closer look at the above overview reveals some surprising facts. GLIBERT (1952), ANDERSON (1964), JANSSEN (1976, 1984), WIENRICH (2001), HARZHAUSER (2002) and CARONE & ARDOVINI (2008) were the only ones who cited in their captions DESHAYES' authorship of the taxon with the year of publication as 1839. Nearly all others referred to DESHAYES without mentioning any publication year, except in their list of synonyms, if such a list was published.

One author (KAUTSKY, 1925) mentioned an incorrect author *Desm.*, which, however, may have been a *lapsus calami* for *Desh.*

The only two authors who referred to DESHAYES with a year other than 1839 were DUERR (2004), who gave 1850 as the date, and LOZOUET et al. (2001), who gave it as 1853.

Also surprising is the fact that, of all the above-mentioned authors, only ANDERSON (1964), CARONE & ARDOVINI (2008), and LOZOUET et al. (2001) included the relevant DESHAYES publication (with the years 1839–1858, 1839–1853, and 1857 respectively) in their literature reference list. All other authors who in some way or other described or mentioned *crassicoatum* refrained from including DESHAYES in their reference lists, which casts some doubt as to whether they had actually studied DESHAYES' papers, or just copied their references from previous authors.

The main two questions that need to be answered are:

- 1: in which publication did DESHAYES validly describe his new species *Scalaria crassicoata* (= *Cirsotrema crassicoatum*)?
- 2: in what year was this published?

In the references and synonym lists the earliest mention of *Scalaria crassicoata* is page 76 in Volume XI of the *Bulletin de la Société Géologique de France* (abbreviated as '*Bull. Soc. Geol. France*' or '*B.S.G.F.*'), with the year 1839.

ANDERSON (1964: 123) explicitly states, by adding an asterisk to the citation in his synonym list, that this is the '*für den Namen der Art maßgebende Originalveröffentlichung*' [*the original publication relevant for the name of the taxon*]. However, this *Tôme onzième* [Volume eleven] was, according to its title page, the volume for the years '1839 à 1840' and the title page is consequently dated 1840, and not 1839.

Volume XI of the *Bulletin* begins with reports on the sessions of the *Société Géologique de France* on 4 November, 18 November, and 2 December of the year 1839. On page 69 the report on the meeting of 16 December 1839, under the presidency of Constant PREVOST, is found. After some preliminaries, pages 74 to 82 contain a report written and read by DE VERNEUIL. The *Bulletin* text reads: ‘*M. de Verneuil présente quelques fossiles tertiaires, recueillis par lui en Algérie, et lit à cette occasion la note suivante. Note sur les environs d’Alger.*’ [Mr. de Verneuil presents some tertiary fossils, found by himself in Algeria, and on this occasion reads the following report, Notice about the surroundings of Algiers].

Édouard DE VERNEUIL (1805–1873) gives a detailed account of the geology of this part of Algeria and describes where and how he collected fossil molluscs in the hills around the city of Algiers. On pages 75–76, he publishes a list of the fossil shells, and states that DESHAYES assisted him with their determination: ‘*Voici la liste des espèces que j’ai trouvées tant dans cette localité que dans les calcaires des collines qui avoisinent la ville d’Alger, et que M. Deshayes a bien voulu m’aider à déterminer.*’ DESHAYES’ help is not surprising, as in 1839, the French government sent him to Algeria, where he spent three years involved in geological explorations.

On top of the left column of this list, on page 76 of this *Bulletin* of 1840, one finds the name *Scalaria crassicostata* (Deshayes). This is the page reference given by authors from COSSMANN & PEYROT (1922) onwards, and assumed by many to be the first valid reference. However, only the name is given here – a brief mention with neither a description nor any figure, nor any further reference whatsoever. Therefore, DE VERNEUIL’s report and fossil list, even if presented in 1839, does not constitute a valid description, and DESHAYES was not even author of the meeting report – as first (and so far, only) noted by LOZOUET et al. (2001: 51), this is a *nomen nudum* (ICZN Article 9, 9.10).

The second reference, cited by many authors, is the *Traité élémentaire de Conchyliologie avec les applications de cette science à la Géologie*, by DESHAYES (**Pl. 1 Fig. H**). Both text and plates were published in instalments between 1839 and 1857. In these references, text page 42 of the ‘*Explication des Planches*’ and Plate 70 figs. 1–3 of the ‘*Atlas*’ are unanimously cited.

In Article 12.1, the ICZN states: ‘*To be available, every new name published before 1931 must satisfy the provisions of Article 11 and must be accompanied by a description or a definition of the taxon that it denotes, or by an indication*’. The ‘*indication*’ is defined in Article 12.2 as ‘*the proposal of a new genus-group name or of a new species-group name in association with an illustration of the taxon being named*’.

The publication of three unmistakable figures in the ‘*Atlas*’, combined with a description - however short - on page 42 of the ‘*Explication des Planches*’, as ‘*Scalaire à côtes épaisses*’ [*Scalaria with thick ribs*] satisfies the ICZN rules to validate the new species name: *Scalaria crassicostata*.

Here, COX’s publication of 1942 is of great importance, as it clearly defines that Plate 70 was published in 1850, as was page 42 of the ‘*Explication des Planches*’ (pages 1–24 in 1839, pages 25–48 in 1850, and pages 49–80 in 1853). This publication can also be accessed online as a schematic overview in *2,400 Years of Malacology* by COAN & KABAT (2024), on pages 34–35 of the ‘*Annex 1: Collations of Books of Malacological Significance*’ (latest version of 2 February 2024).

It is quite surprising that till today, only one author, Richard DUERR, in his paper of 2004, mentioned and figured the species with the correct year of 1850, although he did not include DESHAYES in his literature reference list. In LOZOUET et al. (2001), a paper apparently overlooked by most later authors, the authors confirmed the *nomen nudum* status of 1839, but related page 42 of the ‘*Explication des Planches*’ to the year 1853, instead of the correct publication year 1850.

No doubt the correct publication dates in COX (1942) may also have an impact on the hitherto assumed publication dates of other new species described by DESHAYES in the *Traité élémentaire*. This, however, is beyond the scope of this note on *Cirsotrema crassicostatum* (Deshayes, 1850) (**Pl. 1 Figs. A–C, D–F**).



Pl. 1 Figs. A–H: Gérard Paul DESHAYES (1795–1875), the frontispiece of his publication *Traité élémentaire de conchyliologie avec les applications de cette science à la Géologie*, and *Cirsootrema crassicostatum* (Deshayes, 1850), described therein as *Scalaria crassicostata*. A–C: Apertural, lateral, and dorsal views of *Cirsootrema crassicostatum*

(Deshayes, 1850) from Winterswijk-Miste bed, Gelderland, The Netherlands; Breda Formation; Miocene (Late Burdigalian to Early Langhian) (Hemmoorian); J. VAN DER VOORT leg.; coll. J. VAN DER VOORT; height 55.8 mm. **D–F**: Apertural, lateral, and dorsal views of *Cirsotrema crassicostatum* (Deshayes, 1850) from Twistringen, Niedersachsen, Germany; Twistringer Schichten (Upper Mica Clay); Miocene (Langhian to Early Serravallian) (Reinbekian); J. VAN DER VOORT leg.; coll. J. VAN DER VOORT; height 63 mm. **G**: Bust of Gérard Paul DESHAYES (1795-1875) from MERLE (ed.) (2008), courtesy of D. MERLE (Muséum national d'Histoire naturelle, Paris, France). **H**: Frontispiece of DESHAYES' publication *Traité élémentaire de conchyliologie avec les applications de cette science à la Géologie*.

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