

ON THE IDENTITY OF *SCUTIGERA VESUVIANA* [O. G. COSTA], 1839
(Chilopoda)

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Scutigera vesuviana [O. G. Costa], 1839 is a little known species of centipede from Italy whose identity seems misinterpreted and has never been definitively stated. This name has “disappeared” from modern literature and has been completely ignored in the current checklists of the Italian fauna (Minelli 1978, Foddai et al. 1995, Zapparoli & Minelli 2005). Aim of the present note is to finally assess the identity of this species.

“*Scutigera Vesuviana*” has been described in a paper formally anonymous but usually attributed to the renowned Italian naturalist Oronzio Gabriele Costa (1787-1868) (e. g. see A. Costa 1857: 39, Horn & Schenkling 1928: 215). The paper was published in the fourth volume of the “Atti della Reale Accademia delle Scienze di Napoli” ([O. G. Costa] 1839a: 52) and the description was presumably based on just one specimen collected by O. G. Costa himself “nel fumajolo ... del nostro Vesuvio”, near Naples (Campania, Southern Italy), the only one locality known to-date. In that paper, where the results of a research on insects of the Italian volcano are presented, no other species of centipedes was discussed.

The original material of “*Scutigera Vesuviana*” is not present in the collections of the Museo Zoologico of the Università di Napoli “Federico II” (Italy), where the zoological material collected by O. G. Costa and his son Achille was usually stored (Maio et al. 1995), and it has presumably been lost (N. Maio in verbis 2006).

In the same volume of the journal where the above mentioned work was published, a second paper immediately follows, also anonymous but attributed to O. G. Costa as well ([O. G. Costa] 1839b) (e. g. see Horn & Schenkling 1928: 215). It deals also with insects from the Vesuvius, but does not include any reference to centipedes.

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Again in the same volume, this second paper is immediately followed by two full-page plates, with seven and four numbered black/white figures respectively, all drawn by Antonio Siesto and engraved by Filippo Imperato, both of them active in Naples in the middle of the 19th century. Although such plates have no captions and are usually related to [Costa O. G.] (1839b) (e. g. see Horn & Schenkling 1928: 215), on the basis of the correspondence of the numbers to the references in the text, it is possible to state with confidence that these illustrations refer to species described or discussed in either of the two above mentioned papers of [O. G. Costa] (1839a, 1839b).

Concerning "*Scutigera Vesuviana*", even though no reference to illustrations is present in the original description, in fig. 7 of the first of the two plates is depicted, although in a very inaccurate way, the habitus of a centipede whose features fit well with those described in [O. G. Costa] (1839a: 52). Perhaps unexpectedly, this drawing does not show a scutigeromorph but a lithobiomorph, likely a *Lithobius* s. str., recognizable after the shape of head, trunk, antennae and legs. Particularly, the number of pairs of legs figured (14) points to a mutilated specimen; moreover, the reduced number of tergites (9) seems related to the low fidelity of the drawing (or the engraving) to the model, of which are figured only the large tergites (TT. 1, 3, 5, 7, 8, 10, 12, 14 and 16), whereas the small ones (TT. 2, 4, 6, 9, 11, 13 and 15) are omitted.

A few years later, in his monograph on the centipedes then known, Newport (1845: 358) referred "*Scutigera Vesuviana*" to *Cermatia* Illiger, 1807, a genus of Scutigeromorpha synonymized with *Scutigera* Lamarck, 1801 (cf. Latreille 1819: 443), and identified as "*Cermatia Vesuviana*" specimen/s of the Hope Department of Zoology (Oxford) from "Regno Neapolitano", also giving a short description of it.

However, although he was "...greatly inclined to believe that this is the *Scutigera Vesuviana* of Costa" (Newport 1845: 358), in the same paper G. Newport doubts that his material really belongs to the species described by [O. G. Costa] (1839a), as in his opinion the original description is not "sufficiently precise to identify it".

The doubt of Newport (1845) is in effect well-grounded but, comparing both descriptions, it is quite clear that "*Cermatia Vesuviana*" of Newport (1845) belongs to a species different from "*Scutigera Vesuviana*" of [O. G. Costa] (1839a). Moreover, the material examined by Newport (1845) must likely be referred to *Scutigera coleoptrata*

(Linnaeus, 1758), the only scutigeromorph species known from Italy (Foddai et al. 1995, Zapparoli & Minelli 2005), especially for the general shape of the body and the length of the antennae.

Newport (1845: 370), some pages after discussing "*Cermatia Vesuviana*", described a new species of *Lithobius*, *L. brevicornis*, on specimen/s from "prope Neapolin", stored in the Hope Department of Zoology (Oxford). The identity of this species was revised many years later by Eason (1972), who synonymized it with *Lithobius forficatus* (Linnaeus, 1758). Eason (1972) also stated that "Newport [1845] equated *L. brevicornis* with *L. vesuvianus* Costa, but no account of the latter appears ever to have been published."

However, Newport (1845) himself brought into question the identity of *L. brevicornis* affirming "I have named this species with doubt, because I am unable to ascertain whether it may not be the species named, but not yet described, by Signor Achille Costa as *Lithobius Vesuvianus*, and of which only a very imperfect delineation has been given. Signor Costa's specimen was a young and immature one.". In this sentence G. Newport evidently referred to fig. 7 of plate 1 following the two papers of [O. G. Costa] (1839a, 1839b), not realizing that it was intended to show the habitus of "*Scutigera Vesuviana*" [O. G. Costa], 1839 (actually a *Lithobius*), not that of a species of centipede named but still unpublished. He also misunderstood the name of the author, mistaking Oronzio Gabriele Costa for his son Achille, then assistant to the father, professor of zoology at the University of Naples (Maio et al. 1995).

It is therefore clear that Newport (1845) interpreted the description of "*Scutigera Vesuviana*" given by [O. G. Costa] (1839a) and the above mentioned fig. 7 of plate 1 as referring to two distinct taxa, "*Scutigera Vesuviana*" and "*Lithobius Vesuvianus*" respectively. This deduction is also demonstrated by the fact that Newport (1845) dealt with "*Scutigera Vesuviana*" and "*Lithobius Vesuvianus*" separately and quoted the author and the original bibliographic reference as "Costa, Mem. Zool. i, p. 52" (on p. 358) and "Costa, Mem. Zool. i. p. 60. f. 7" (on p. 370) respectively.

In fact, these two citations refer to the same paper plus the accompanying plates. The abbreviation of the journal, "Mem. Zool.", likely comes from the acronym used for the section of the "Atti della Reale Accademia delle Scienze di Napoli" where the paper of [O. G. Costa] (1839a) was published: the "Mem[orie della Reale Accademia

delle Scienze, Classe di Fisica e Storia naturale], Zool[ogia]”. As it has never been published, almost obscure is still the source of the name “*Lithobius Vesuvianus*”, despite the supposed original reference quoted by Newport (1845) and afterwards copied by subsequent authors.

The citation of “*Scutigera Vesuviana*” and the possible identity of “*Lithobius Vesuvianus*” with *Lithobius brevicornis*, besides both being repeated in a posthumous paper of Newport (1856), were also copied by Gervais (1846), where the author of “*Scutigera Vesuviana*” and “*Lithobius Vesuvianus*” is quoted as Achille Costa, and by Fanzago (1874), who did not specify which one of the two Costa was the author of “*Scutigera Vesuviana*”. Moreover, whereas Gervais (1846) and Newport (1856) both supported the probable identity of “*Scutigera Vesuviana*” of [O. G. Costa] (1839a) with the record identified by Newport (1845) as “*Cermatia vesuviana*”, in Fanzago (1874) this uncertainty disappears. After these contributions, no author mentioned “*Scutigera Vesuviana*” or “*Lithobius Vesuvianus*” further, except for Manfredi (1956), who included with quotation mark “*Scutigera Vesuviana*” (sensu Newport 1845) in a list of centipedes of Campania (Italy), and Eason (1972).

In short, “*Scutigera Vesuviana*” [O. G. Costa], 1839 and “*Lithobius vesuvianus*”, must be referred both to the same taxon: “*Scutigera Vesuviana*” [O. G. Costa], 1839. According to the correspondence of the morphological characters, in my opinion, this taxon has to be considered as identical to *Lithobius forficatus* (Linnaeus, 1758), a very common species in mainland Italy. The rather wide geographic distribution and habitat preferences of this species are consistent with both site and habitat, the summit of the volcano Vesuvius, where the original specimen/s of “*Scutigera Vesuviana*” was/were collected. The records of “*Scutigera Vesuviana*” in Newport (1845, 1856 both under *Cermatia*) subsequently copied by other authors must be referred instead to *Scutigera coleoptrata* (Linnaeus, 1758).

Summing up, we obtain the following synonymic and bibliographic list:

***Lithobius forficatus* (Linnaeus, 1758)**

- Scutigera Vesuviana* [O. G. Costa], 1839a: 52 **syn. nov.**
- [*Scutigera Vesuviana* O. G. Costa]: [O. G. Costa], 1839b: pl. 1, fig. 7.
- Lithobius Vesuvianus* A. Costa [sic]: Newport, 1845: 370.
- Lithobius Vesuvianus* A. Costa [sic]: Gervais, 1846: 234.
- Lithobius vesuvianus* Costa: Eason, 1972: 303.

Scutigera coleoptrata (Linnaeus, 1758)

Cerm.[atia] Vesuviana Costa: Newport, 1844: 358.
Scutigera Vesuviana A. Costa [sic]: Gervais, 1846: 219.
Cermatia Vesuviana Costa: Newport, 1856: 12.
Scutigera Vesuviana Costa: Fanzago, 1874: 30.
Scutigera vesuviana Costa: Manfredi, 1956: 19.

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SUMMARY

The new synonymy “*Scutigera Vesuviana*” [O. G. Costa], 1839 = *Lithobius forficatus* (Linnaeus, 1758) **syn. nov.** is proposed. “*Lithobius vesuvianus*”, a name erroneously attributed to Achille instead of Oronzio Gabriele Costa and by the authors of a species named but never described different from “*Scutigera Vesuviana*” [O. G. Costa], 1839, is equated to this latter. The few records of “*Scutigera Vesuviana*” quoted by the authors after the original description, critically revised, must be referred to *Scutigera coleoptrata* (Linnaeus, 1758).

RIASSUNTO

Sulla identità di Scutigera Vesuviana [O. G. Costa], 1839 (*Chilopoda*).

Viene proposta la nuova sinonimia “*Scutigera Vesuviana*” [O. G. Costa], 1839 = *Lithobius forficatus* (Linnaeus, 1758) **syn. nov.** “*Lithobius vesuvianus*”, binomio erroneamente attribuito ad Achille anziché a Oronzio Gabriele Costa e ritenuto riferibile ad una specie mai descritta, corrisponde invece a “*Scutigera Vesuviana*” [O. G. Costa], 1839. I pochi riferimenti bibliografici relativi a “*Scutigera Vesuviana*” pubblicati dagli autori successivamente alla descrizione originale sono stati criticamente rivisti e devono essere attribuiti a *Scutigera coleoptrata* (Linnaeus, 1758).

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