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On the identity of *Julus rimosus* Karsch, 1881 (Diplopoda, Julida, Julidae), the only schizophylline known from Libya (North Africa) and notes on Libyan millipedes

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The first millipede recorded from Libya was a male julid, described by Karsch (1881) from Jebel Tarrhuna, Bir Milrba as *Julus rimosus* Karsch, 1881. The original description of *rimosus* was mainly based on coloration. The gonopods were however briefly described as brown, with a long yellow curved thread (“corpore genital fusco, filo flavo, curvato, longo”). Karsch (1881) additionally provided two figures illustrating the telson and gonopods (figs 4, 4b) with a remark stating that the species is similar to *Julus lapidarius*, 1846 (now *Ommatoiulus lapidarius*) of which only females were hitherto described by Lucas (1846). Subsequently, Silvestri (1896) providing a comprehensive list of all myriapods of Tunisia, presented an overview of North African fauna and proposed new synonymies for several species. Among these, Silvestri (1896) considered *Julus rimosus* as a junior synonym of *Julus lapidarius* Lucas, 1846 (now *Ommatoiulus lapidarius*). Silvestri (1896: 160) was obviously not sure about the identity of *rimosus*, except that he was convinced that the gonopods, as illustrated by Karsch (1881), definitely were not representative of an ‘*Julus*’ species: “Karsch described *J. rimosus* and provided at the same time an illustration of the male copulatory organ, but what the devil he mistook for this organ I cannot say. It is certain that that figure cannot even be remotely representative of *Julus*. Fortunately I was able to examine the individuals of *Julus* he determined as *J. rimosus* and I found that this species is none other than *J. lapidarius* Lucas” (translated from Italian).

In his list of North African Myriapoda, Brolemann (1921) disregarded several synonymies made by Silvestri (1896), recording *Iulus rimosus* as a valid species from Libya and at the same time, *Ommatoiulus punicus* (Brölemann, 1894) and *O. fuscoulineatus* (Lucas, 1846) also synonymised with *O. lapidarius* by Silvestri (1896), as valid species from Tunisia. Manfredi (1939) was among the rare authors to study Libyan millipedes, describing two new species of the orders Polydesmida and Julida, respectively *Strongylosoma festai* Manfredi 1939 and *Macheiroiulus libicus* Manfredi, 1939, and doubtfully recording the order Callipodida with a female identified as *Lysiopetalum?* sp?. In the same work, she also recorded Karsh’s species as a synonym of *O. lapidarius*, referring to Silvestri (1896). This synonymy was subsequently repeated by Schubart (1952) in his updated list of North African millipedes and by Akkari *et al.* (2009) in their annotated list of North African Julida.

The millipedes of Libya are still very poorly studied and constitute a gap in the knowledge of the North African fauna. In fact, apart from the dubious record of the order Callipodida (Manfredi 1939), the total millipede fauna hitherto described for the area amounts to the three species mentioned above *viz.* *Macheiroiulus libicus*, *Ommatoiulus rimosus*, *Strongylosoma festai* in addition to a troglobitic glomerid, *Glomeris monostriata* Golovatch & Mauriès, 2009, recently described from a cave in Cyrenaica (Golovatch *et al.* 2009).

The study of a few undetermined *Ommatoiulus* specimens collected in northern Libya triggered my curiosity about the identity of ‘*Julus rimosus*’. The holotype of *Julus rimosus* Karsch, 1881 (Zoological Museum Berlin, ? ZMB) and nontype material (Museo Civico di Storia Naturale ‘Enrico Caffi’, Bergamo, Italy, ? MSNB) were obtained from the respective repositories for study. The material, preserved in 70 % alcohol, was studied using a Leica Wild M10 equipped with *camera lucida*. Photographs were prepared using a Leica digital camera M205 mounted on a Leica stereomicroscope DFC 420. Image stacking was performed with Helicon Focus 4.60.2 Prosoftware. Images were processed using Adobe Lightroom 4.3 and Adobe Photoshop CS.5.

The study of the holotype has revealed that *Julus rimosus* is a valid species of the genus *Ommatoiulus* Latzel, 1881. In contrast to Silvestri’s (1896) presumption, it is a species completely different from the Moroccan species *Ommatoiulus lapidarius*, known also from Western Algeria (Lucas 1846, Brölemann 1897) but never recorded with certainty further east in North Africa; hence we consider its occurrence in Libya as highly doubtful.