

A NEW SPECIES OF *SMICROMYRME* FROM  
THE CYCLADES ISLANDS  
(Hymenoptera, Mutillidae)

PIETRO LO CASCIO (\*)

The Mutillidae from the Eastern Mediterranean islands can be considered scarcely known. In fact, only Crete and Cyprus have been the subject of several studies (Deschamps 1898; Bischoff 1928; Mellor 1932; Bischoff 1933; Invrea 1940; Hammer 1950; Invrea 1953; Nagy 1972; Nonveiller 1972; Petersen 1988) and have at present a sufficient faunistic knowledge. For most of the small islands in the Aegean Sea there are only few and scattered data, thanks to the papers of Schulthess (1929), Invrea (1941, 1942), Bischoff & Nonveiller (1965), Nonveiller (1979) and Petersen (1988). During a short staying in Pano Koufonissi Island (Cyclades Archipelago) in September 1997, I collected a female of a new species of the genus *Smicromyrme* Thomson, 1870, whose description is the subject of the present work together with distributional and ecological remarks.

***Smicromyrme cristinae* n. sp.**

DIAGNOSIS. A female of *Smicromyrme* belonging to the "group" of species characterized by the presence of three white spots on tergum 2 (T2). The new species is distinguished mainly by the shape of the central spot and by the extension of that one and the two other lateral spots, that together cover almost half of T2; by the proportions between metasoma and thorax; and by the red colour of thorax and legs, without darkish parts on them (fig. 1).

MATERIAL EXAMINED. Holotypus ♀: Greece, Pano Koufonissi Island (Cyclades), dunes of Italida beach, 15.IX.1997, legit P. Lo Cascio, deposited in the Museo di Storia Naturale, Sezione di Zoologia "La Specola", University of Florence (Italy).

(\*) Museo di Storia Naturale dell'Università di Firenze, Sezione di Zoologia "La Specola", Via Romana, 17 - 50125 Firenze, Italy.

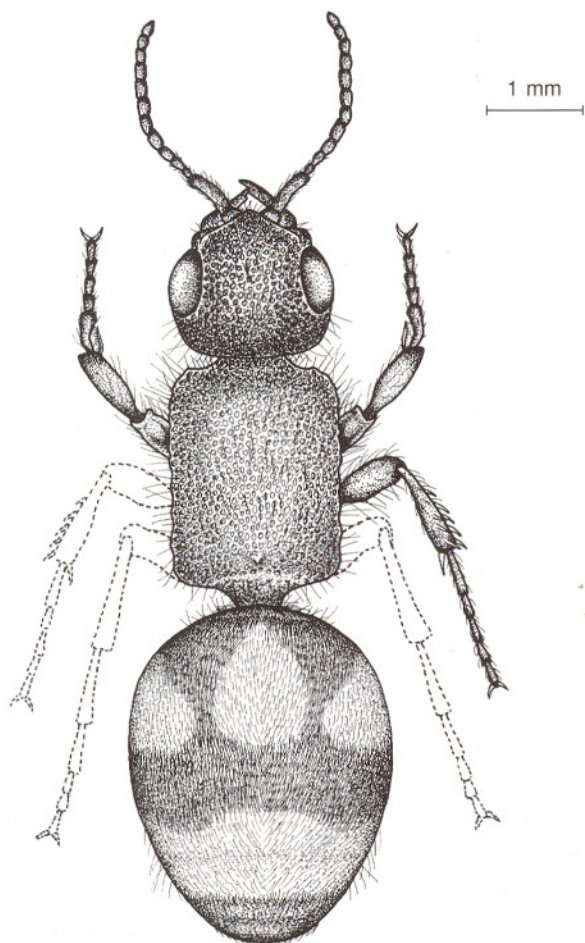


Fig. 1 – Habitus: *Smicromyrme cristinae* n. sp. (♀, Holotypus).

DESCRIPTION OF THE HOLOTYPE. Length: 5.9 mm. Black except antennae, clypeus, spot on mandibles, thorax and legs.

Head roundish, broader than long (25: 21), with surface densely punctuated, punctures deep with irregular shape, interpunctual spaces shining, large only 0.2-0.4 of the diameter of a puncture. Distance between the eyes 1.4 of the maximum orbital diameter. The occiput behind eyes broadly rounded; relative length of malar space, eye and occiput in a ratio as 5: 10: 6. Dark hairs covering all the surface of the head, more densely on the occipital area, where some of

these are turned frontwards. Clypeus ferrugineous, with straight transverse carina, slightly depressed in the middle and with a prominent tubercle in the centre of the upper triangle.

Mandibles unidentate, with a weak inner preapical teeth.

Antennae red, darkish on the inferior side; relative length of the first four antennal joints in a ratio as 35: 7: 11: 13.

Thorax red, slightly broader than the head and longer than broad (14: 10), with parallel sides; surface with deep, dense, round punctures. Diameter of these variable between 0.015 and 0.050 mm; interpunctal spaces irregular and extremely variable, large 0.4-1.2 of the diameter of a puncture. Punctures on lateral and posterior sides more spacious and large.

Yellowish hairiness pressed close to the thorax surface, with rare scattered black hairs laterally and close to the scutellar scale. From a lateral view, the breadth of the thorax decreases noticeably in proximity of head.

Thorax transverse carina scarcely visible. Scutellar scale short, narrow, slightly darkish only on the apex; from a lateral view, it looks like a right-angled triangle, not too prominent, with the posterior side truncated perpendicularly to the thorax; its posterior border is slightly behind the scale.

Legs without salient characteristics; in the only specimen examined the two posteriors and the median one legs are missing.

Metasoma considerably broader than the thorax (43: 37); light pubescence with silvery colour and bright appearance. T1 approximately half as broad as the second (15: 28); T2 broader than long (11: 10), with surface densely but lightly punctuate, punctures small with regular shape, interpunctal spaces shining. Three wide spots on T2 with roundish-triangular shape, the lateral two very little stretched out than the central one, that however is slightly larger than broader; on the whole, the spots cover almost the upper half of the tergum and the distance between these is only 0.2 of the maximum diameter of the central. Posterior band of pubescence on tergal border dense, considerably dilated in the middle. Border of T3 also covered by a band of light pubescence; all the sterna show more or less scattered light hairs.

Tergal felt-line approximately in the middle of the segment, in a ratio of 20: 35: 40.

Pygidial area with more prominent border close by apex, diminishing in the upper part. Longitudinal striations on disc weakly divergent behind center; the intersection with more weak latitudinal



striations gives a reticulated appearance to the pygidium. Disc with a small, shiny area before apex.

Male. Unknown.

DERIVATIO NOMINIS. I am glad to dedicate this new species to Cristina Moreno Camacho, indefatigable "hunter" of velvet ants.

COMPARATIVE REMARKS. Among the palaearctic Mutillidae, the genus *Smicromyrme* presents several still unsolved taxonomical problems. Several contributions, most of which during the last half century, increased its careful knowledge, with descriptions of a large number of new taxa. Although, a modern and complete review of this group is missing. An important contribution was due to Petersen (1988), who studied the palaearctic species of Fabricius and some related taxa, but many species, described by numerous Authors during the last two centuries, were still excluded in that work. In general, that which renders difficult the identification of females of this genus is the absence of recognizable diagnostic characteristics. Nevertheless, for *Smicromyrme cristinae* n. sp. the characteristics given in the description allow it to be easily distinguished from all the females with three spots on T2 actually known for the Aegean area and the whole Mediterranean basin.

To that group, which counts also several species known only for the female sex, belong: *S. ferrugineiceps* (André, 1903), from Palestine, distinguished mainly for the entirely red head; *S. partita* (Klug, 1835), holomediterranean, with bands of clear pubescence in T2 and T3 interrupted in the middle; *S. quadripunctata* (Lepeletier, 1845), from Southern Europe, with thorax shorter and darker near the head, legs also darkish, distance between the eyes 1.6 of maximum orbital diameter; *S. lampedusia* Invrea, 1957, from Western Mediterranean countries, which has the lateral spots on T2 closer to the base, thorax considerably longer, narrower than the head, with lots of black hairs near it, and the head with the surface irregularly punctuated, vaguely pubescent. In the european *S. sicana* (De Stefani-Perez, 1887) the thorax is longer, covered by long black hairs, and the head vaguely pubescent, with the distance between the eyes 1.6 of maximum orbital diameter; *S. trioma* Invrea, 1955, from Corsica and Sardinia, presents the thorax darker near the head, with a slightly trapezoidal shape, and a large and evidenced scutellar scale darkish on its upper bordering, head with dense clear pubescence more prominent between eyes and

clypeus, lateral spots on T2 behind the central one; *S. ingauna* Invrea, 1958, from South-Western Europe, analogously to *S. trioma*, can be distinguished by the different shape of the thorax and the scutellar scale and by the pubescence on the head, which is less dense than in the corso-sardinian species; *S. pusilla* (Klug, 1835), probably widespread the Southern Europe, shows the thorax shorter with a "quadrangular" shape and colour darker, as well as the antennae and legs; the female of the european *S. ausonia* Invrea, 1950 (= *S. sabatia* Invrea, 1953) is distinguished in the other hand by the same characteristics indicated for *S. pusilla*, and perhaps could be a synonymous of that one, but this hypothesis will be tested in a future contribution. In short, none of the above-mentioned species shows the spots of T2 with the same shape and extension of *S. cristinae* n. sp.

According to the identification keys of Lelej (1985, 1995), the new species belongs to the subgenus *Smicromyrme* (sensu strictu), which also include taxa omitted from the "3 spots-group" like *S. rufipes* (Fabricius, 1787) and *S. ruficollis* (Fabricius, 1794). Comparing the descriptions given by Lelej (1985) for the remaining species (*S. lewisi* Mickel, 1935; *S. iliensis* Lelej, 1985; *S. nikolajevi* Lelej, 1985; *S. cephalotes* Lelej, 1985) I exclude the possibility that the species of Pano Koufonissi Island could belong to these taxa.

**DISTRIBUTIONAL AND ECOLOGICAL REMARKS.** Pano Koufonissi [36°56'N - 25°59'E] belongs to the group of "Small Cyclades", that number other islets (Donoussa, Iraklia, Kato Koufonissi, Keros, Schinoussa) and a large amount of little rocks. This island is located 5 km off the South-Eastern coast of Naxos; the surface is 3.8 km<sup>2</sup>, and the maximum altitude is 114 m a.s.l. The only village has 260 inhabitants, mainly fishermen or working in tourism.

The new species has been collected on the coast of the eastern side of the island. This area is characterized by the presence of outposts of low mediterranean maquis, with *Juniperus phoenicea* L., *Pistacia lentiscus* L., *Genista acanthoclada* DC., *Sarcopoterium spinosus* (L.) Spach, *Euphorbia acanthothamnus* Heldr. et Sart. ex Boiss., *Tamarix* sp., as the dominant shrubs, and several more typical plants from the sandy dunes, like *Euphorbia chamaesyce* L., *Pancratium maritimum* L., *Eryngium maritimum* L., *Cyperus capitatus* Vand., *Sporobolus pungens* (Schreb.) Kunth.

The severe wind present during all my stay in the island may have disturbed the activity of the velvet ants, as they would usually



be found in abundance in similar environments of Greek islands; I was able to collect only a specimen of this new taxon. The species seems at present endemic of this island, but further research could verify its presence on some other Cycladic islands, whose entomological fauna is very little known. The biology of *Smicromyrme cristinae* n. sp. is unknown at present.

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#### SUMMARY

A new species of *Smicromyrme* from Pano Koufonissi Island (Cycladic Archipelago, Aegean Sea) is described and illustrated: *S. cristinae* sp. n., actually known only for a single female specimen. It belongs to the group of *Smicromyrme* characterized by the presence of three spots of light pubescence on tergum 2 (T2) and it is distinguished mainly by the shape of the central spot and by the extension of that one and the two other lateral spots, extremely close to each-other and so large that they cover almost half of T2; by the absence of light pubescence on the head; by the proportions between metasoma and thorax; and by the fully red colour of thorax and legs, without darkish parts on them.

#### RIASSUNTO

*Una nuova specie di Smicromyrme delle Isole Cicladi (Hymenoptera, Mutillidae).*

Viene descritta e illustrata *Smicromyrme cristinae* n. sp. dell'Isola di Pano Koufonissi (Arcipelago delle Cicladi, Mar Egeo). Questo taxon, attualmente conosciuto per un singolo esemplare di sesso femminile, appartiene al gruppo di *Smicromyrme* caratterizzate dalla presenza di tre macchie di pubescenza chiara sul tergum 2, oltre alla consueta banda apicale. Fra queste può agevolmente distinguersi soprattutto per la notevole estensione e la forma delle macchie, che risultano quasi in contatto fra loro e ricoprono quasi la metà superiore del tergum; per la mancanza di pubescenza chiara sulla testa; per il colore rosso chiaro delle zampe, delle antenne e del torace; per l'assenza in quest'ultimo della parte inscurita in prossimità della testa che caratterizza invece buona parte delle specie del gruppo.

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