


Halictus consobrinus Pérez, a new species for the Italian fauna (Hymenoptera: Halictidae)

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INTRODUCTION

The colonization of the European continent by North African taxa primarily occurs through two main routes: the Strait of Gibraltar and the Strait of Sicily. Sicily serves as a key gateway for the dispersal of African species into Europe, as evidenced by the substantial number of North African taxa recorded on the island (Habel et al., 2010; Sparacio et al., 2023). This pattern is especially common in insects, and particularly in flying species like bees (Habel et al., 2010; Sparacio et al., 2023). Several North African species exhibit marginal distributions in Europe, such as *Halictus consobrinus* Pérez, *Halictus senilis* (Eversmann), *Seladonia pici* Pérez or *Melitta schmiedeknechti* Friese, which are thought to have crossed via the Strait of Gibraltar and/or the Strait of Sicily (Baldock et al., 2018; Ortiz-Sanchez & Pauly, 2017; Flaminio et al., 2023). We report here for the first time the occurrence of *Halictus consobrinus* Pérez, 1895, in Sicily. The species is not listed in the check lists of Comba 2019 and Reverté et al. 2023.

RESULTS AND DISCUSSION

A specimen of *Halictus consobrinus* was collected at Monte Soro (Italy, Sicily) on May 5, 1991, and subsequently conserved and identified in the entomological collection of Naturalis (Netherlands). *Halictus consobrinus* belongs to the subgenus *Halictus* (*Monilapis*) Cockerell (Pesenko, 2004). While females of *Halictus* are generally difficult to separate morphologically (Amiet et al., 2001; Ortiz-Sanchez & Pauly, 2017), this species is an exception. It can be recognized by the orange cuticle of the hind basitarsus, its yellowish-white to ochre hair bands, and the structure of the lateral parts of the propodeum, which display clearly visible, spaced punctures ($i = 0.1\text{--}1d$) with smooth and shiny interspaces (Fig. 1a,b, Fig. 2c). This species is often confused with *Halictus* (*Acalcaripes*) *patellatus* Morawitz, which shares identical external coloration and body shape but differs structurally: in *H. patellatus*, the sides of the propodeum are more densely punctured ($i < 0.5d$), and the interspaces are strongly shagreened and less shiny, giving a grainy appearance (Fig. 2d). *Halictus consobrinus* is distributed primarily in North Africa, notably Morocco and Algeria (Ebmer, 1985; Baldock et al., 2018). In Europe, it was first reported from the Iberian Peninsula, likely after crossing the Strait of Gibraltar, and it is now recorded from

Sicily, probably through colonization across the Strait of Sicily (Fig. 3e). It is highly likely that this species has been present in Sicily for some time but has gone unnoticed due to its morphological similarity to *Halictus patellatus*. The Sicilian specimen was collected in a mountainous region with a microclimate similar to that of the locus typicus near Annaba (Algeria) (Fig. 3f) (Ebmer, 1985). Although no records currently exist from Tunisia (Khedher, 2024), its presence there is highly probable, as species that cross the Strait of Sicily generally originate from Tunisia, and this warrants further investigation.

MATERIAL

Specimen data available at <https://doi.org/10.5886/g25tj2>

REFERENCES

- [1] Amiet F, Herrmann M, Müller A, Neumeyer R (2001). Apidae 3: *Halictus*, *Lasioglossum*. 6. *Fauna Helvetica*, 208 pp. [In German and French]
- [2] Baldock D, Wood TJ, Cross I, Smit J. (2018) The Bees of Portugal. *Entomofauna*, Supplement 22, 1–164.
- [3] Comba M (2019) Hymenoptera Apoidea: Anthophila of Italy. Bibliographic checklist of Italian wild bees with notes on taxonomy, biology, and distribution. [accessed 08 October 2025]. <https://digilander.libero.it/mario.comba/>
- [4] Ebmer AW (1985) *Halictus* und *Lasioglossum* aus Marokko (Hymenoptera: Apoidea: Halictidae). *Linzer biologische Beiträge*, 17(2), 271–293.
- [5] Flaminio S, Cilia G, Vella A, Quaranta M, Lo Verde G (2023) *Melitta schmiedeknechti* (Hymenoptera Apoidea, Melittidae), a new species for the fauna of Italy. *Bulletin of Insectology* 76:315–319.
- [6] Habel JC, Rödder D, Stefano S, Meyer M, Schmitt T (2010) Strong genetic cohesiveness between Italy and North Africa in four butterfly species. *Biological Journal of the Linnean Society*, 99(4), 818–830. <https://doi.org/10.1111/j.1095-8312.2010.01394.x>
- [7] Khedher HB (2024) First checklist of halictid bees (Hymenoptera : Apoidea, Anthophila, Halictidae) of Tunisia. *Journal Of Insect Biodiversity And Systematics*, 10(2), 243–271. <https://doi.org/10.61186/jibs.10.2.243>

[8] Lazzara, K. (2025). Monte Soro, Nebrodi Mountains, Sicily. [Google Earth photograph]. Google. Imagery © 2025 Maxar Technologies.
<https://earth.google.com/>

[9] Ortiz-Sanchez F, Pauly A (2017) Contribution à la connaissance des Halictinae d'Espagne, avec un atlas des espèces de la Péninsule Ibérique (Hymenoptera: Apoidea: Halictidae). *Belgian Journal of Entomology*, 54, 1-92.

[10] Pérez J (1895) Espèces nouvelles de Mellifères de Barbarie (Diagnoses préliminaires). Gounouilhou, Bordeaux, 64 pp.

[11] Pesenko Y (2004) The phylogeny and classification of the tribe Halictini, with special reference to the *Halictus* genus-group (Hymenoptera : Halictidae). *Zoosystematica Rossica*, 13(1), 83-113.
<https://doi.org/10.31610/zsr/2004.13.1.83>

[12] Reverté S, Miličić M, Ačanski J, Andrić A, Aracil A, Aubert M, Balzan MV, Bartomeus I, Bogusch P, Bosch J, Budrys E, Cantú-Salazar L, Castro S, Cornalba M, Demeter I, Devalez J, Dorchin A, Dufrêne E, Đorđević A, . . . Vujić A (2023) National records of 3000 European bee and hoverfly species : A contribution to pollinator conservation. *Insect Conservation And Diversity*, 16(6), 758-775.
<https://doi.org/10.1111/icad.12680>

[13] Sparacio I, Muscarella C, Falci A, Surdo S (2023) Tiger beetles of Sicily (Coleoptera Cicindelidae). *Biodiversity Journal*, 14(4), 791-849.
<https://doi.org/10.31396/biodiv.jour.2023.14.4.791.849>

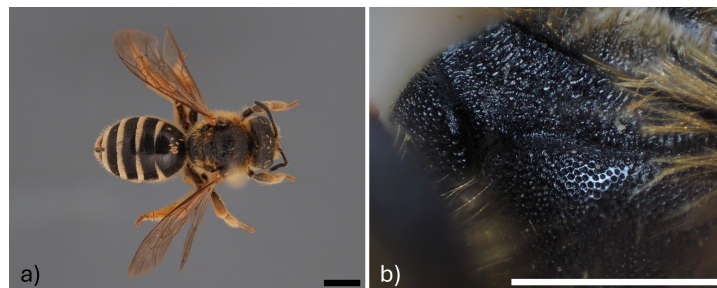


Figure 1: *Halictus consobrinus* specimen RMNH.INS.1713994: (a) dorsal habitus and (b) propodeum in oblique view of specimen; scale bar=2 mm.



Figure 2: Propodeum in oblique view of specimen of *H. consobrinus* from Spain (c) and of *H. patellatus* (d) from Sicily; scale bar=2 mm.

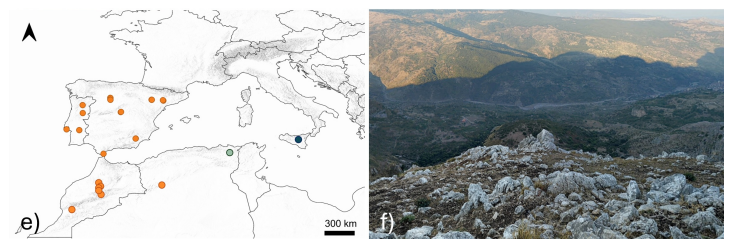


Figure 3: Distribution map of *H. consobrinus* (e) with literature records in orange, the *locus typicus* of the lectotype designed by Ebmer (1985) in green, and the new record in blue; habitat where the studied specimen was collected (f) (photo by Kelly Lazzara, © 2025, from Google Earth (Imagery © 2025 Maxar Technologies)).