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**CONTRIBUTION TO THE
KNOWLEDGE OF PALEARCTIC CASSIDINAE**
THE SPECIES NEAR *Cassida pusilla* WALTL
(Coleoptera Chrysomelidae)

RIASSUNTO - *Contributo alla conoscenza delle Cassidinae paleartiche. Le specie vicine a Cassida pusilla Walth.* Dall'analisi di diverse decine di esemplari attribuiti alla specie *Cassida pusilla* Walth 1839, in particolare dal confronto della spermateca, viene confermata l'entità specifica di *C. angusta* Mars. 1876, della quale viene fornita la ridescrizione. Viene inoltre descritta *C. lusitanica* sp. n. del Portogallo.

SUMMARY - The Author describes *C. lusitanica* n. sp. from Portugal, closely related to *C. pusilla* Walth, 1839. Moreover *C. angusta* Mars., 1876 is confirmed as a good species.

Studying several tens of specimens of various provenances, generally attributed to *C. pusilla* Walth and kept in the collections of some Italian museums and research institutes, I have been able to infer the presence of three distinct taxa, different as regards shape and dimensions but especially regarding the morphology of the spermatheca (figs. 4-6). The study of this organ proves once more to be particularly useful in the systematics of Palearctic Cassidinae (see BORDY e DOGUET, 1987; SASSI, in press), also considering the mediocre utility of the masculine copulatory organ (figs. 7-9).

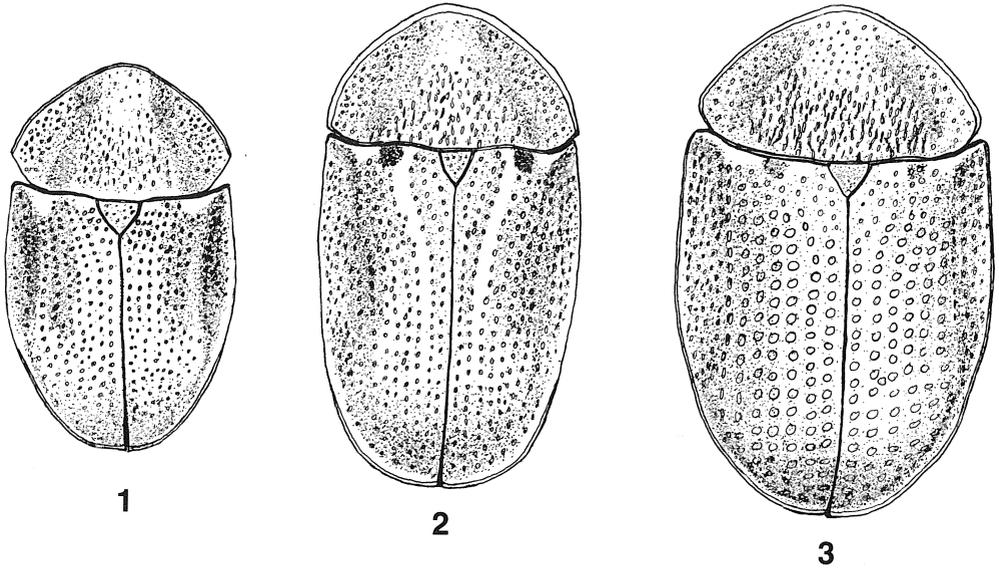
As well as *C. pusilla*, it is therefore confirmed the specific status of *C. angusta* Mars. and it is also described *C. lusitanica*, new for science.

Cassida l u s i t a n i c a n. sp.

(Figs. 1; 4; 7)

Length: 3,7-4,0; width: 2,2-2,3. Length of pronotum: 1,4-1,5; width of pronotum: 2,1-2,2 mm. Body slender, strongly convex, narrowly oval in dorsal outline, entirely dull brownish yellow (in dried specimens).

Pronotum about 1,5 times wider than long, pentagonal in shape, narrowed and rounded-angulate anteriorly, with transparent fimbria at lateral and fore sections.



Figs. 1-3 - 1: Dorsal view of *Cassida lusitanica* n. sp.; 2: Ditto, *Cassida angusta* Marseul; 3: Ditto, *Cassida pusilla* Waltl.

Disc strongly convex, explanate margins flat, rather strongly declivitous, forming a shallow concavity on each side in connection with sides of disc. Lateral angles behind the middle of sides, subacute. Posterior margin strongly sinuate. Punctuation closed and strongly rugose, formed by deep, lengthened punctures partially joining on disc, more rounded punctures on explanate margins.

Scutellum subequilateral, shallowly punctured.

Elytra subparallel or slightly rounded-sided, not or lightly wider than pronotum. Humeral angles subacute, moderately projecting forward, not very close to lateral angles of pronotum; a shallow longitudinal depression in area of seventh to ninth puncture rows anterior to middle.

Punctuation almost regular anterior to middle, from moderately irregular to almost confused on apical declivous. Intervals flat, scattered punctulated, with short, erected hairs. Explanate margins slender, strongly declivitous, rather deeply punctured.

Antennae, barely reaching behind sides of pronotum, thickened distally, feebly obscured on apical segments. Length ratio of antennal segments: 100; 50; 50; 45; 55; 35; 55; 45; 55; 60; 110.

Frontoclypeal area matte, as long as wide, with scattered, coarse punctures. Lateral grooves shallow but distinct, straight and converging in acute angle. Labrum slightly emarginate.

Legs slender, impunctate, with scattered hairs chiefly on apex of tibia.

Spermatheca S-shaped; ramus lengthened and curved upward; ductus not spiraled.

Holotype: «Faro». (No other data reported, female, preserved in the collection

of Museo Civico di Storia Naturale, Genova); *paratypes*: «Faro». (Female, Museo Civico di Storia Naturale, Genova) and «Faro, Portugal, A. Schatzmayr, pusilla Spaeth det., det. J. Muller, ex coll. Burlini» (Male, Museo Civico di Storia Naturale, Verona).

Derivatio nominis

Living in «Lusitania», the ancient name of Portugal.

Cassida angusta Marseul, 1876

(Figs. 2; 5; 8)

DESBROCHERS (1891: 43); PEYERIMHOFF (1911: 298); ESCALERA (1914: 535); SPAETH (1914: 98); SPAETH e REITTER (1926: 53); WINKLER (1930: 1358); KOCHER (1958: 150); JOLIVET (1967: 381).

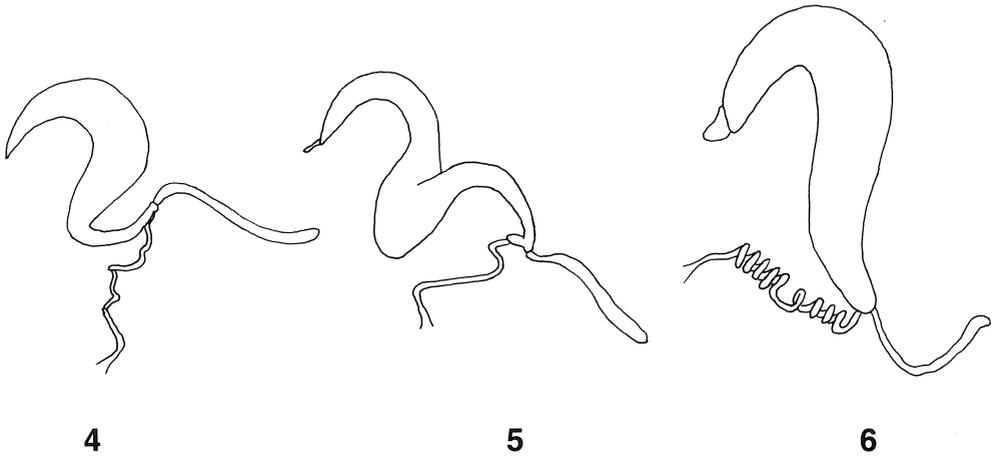
C. angusta was described in 1876 by MARSEUL on an Algerian specimens, differing from *C. pusilla* owing to its narrower and longer shape. Formerly DESBROCHERS (1891) had considered *C. angusta* as a synonym, maintaining that in the original description there were not provided diagnostic elements valid to the separation. Later on, both PEYERIMHOFF (1911) and ESCALERA (1914) quoted without comments the taxon in issue as a separate species, while in the subsequent catalogues SPAETH (1914) and WINKLER (1930) it was considered on the contrary as a variety of *C. pusilla*. SPAETH e REITTER (1926) in their revision of Palearctic Cassidinae gave a short redescription of the taxon, attributing to it the systematic status of subspecies (Lokal-form). In his catalogue of Morocco's coleoptera, KOCHER (1958) doubtfully thought it is a distinct species, remarking the unclear systematic position of the taxon. And last JOLIVET (1967) quoted it as a distinct species, without any remark, but in my opinion nevertheless, he barely quoted literally the old data of PEYERIMHOFF. JOLIVET in fact did not deal, at least at species level, with any systematic probleme in his work, notwithstanding the title. It is therefore probable that it was not in this intention to take sides on the systematic status of *C. angusta*, but only to underline its finding on a host-plant (*Ormenis mixta*) different from those commonly indicated in literature for *C. pusilla*.

The analysis of the spermatheca therefore permits to resolve the ambiguity and to revalue with certainty the taxon in question as a good species.

Consequently I consider it useful to give a redescription, reporting furthermore a key to the separation as regards *C. pusilla* and *C. lusitanica*.

Length: 4,6-5,0; width: 2,5-2,7. Length of pronotum: 1,7-1,8; width of pronotum: 2,4-2,6 mm. Body slender, strongly convex, narrowly elongate in dorsal outline. Colour uniformly yellow (in dried specimens) with a reddish spot between the base of third and fourth puncture rows. Sometimes there is a little, elongate spot between 7 and 8 rows, posterior to middle.

Pronotum about 1,4 times wider than long, subtriangular, with transparent fimbria at lateral and fore sections. Disc convex, explanate margins flat, obliquely sloping down. There is a feebly, longitudinal concavity on each side, in connection with sides of disc. Lateral angles obtuse, placed near the basal line. Posterior margin



Figs. 4-6 - 4: Spermatheca of *Cassida lusitanica* n. sp. (Portugal, Faro); 5: Ditto, *Cassida angusta* Mar-seul (Libya, Tripoli); 6: Ditto, *Cassida pusilla* Walzl (Italy, Emilia Romagna).

feebly sinuose. Dorsal surface rugose, coarsely and closely punctured (punctures are less deeply impressed than in *C. lusitanica*). Punctures lengthened and partially joining on disc.

Scutellum triangular, punctured.

Elytra parallel-sided, as broad at the base as the prothorax, with a longitudinal depressed area on each side among seventh to ninth puncture rows, anterior to middle. Humeri moderately prominent, subacute. Disc densely punctured in regular rows. Intervals punctulated, part very slightly raised. Second interspace feebly carinate at the base. Explanate margins steeply declivitous, with distinct punctures.

Antennae barely reaching behind sides of pronotum, thickened distally. Length ratio of antennal segments: 100; 67; 51; 51; 49; 44; 47; 44; 49; 55; 100.

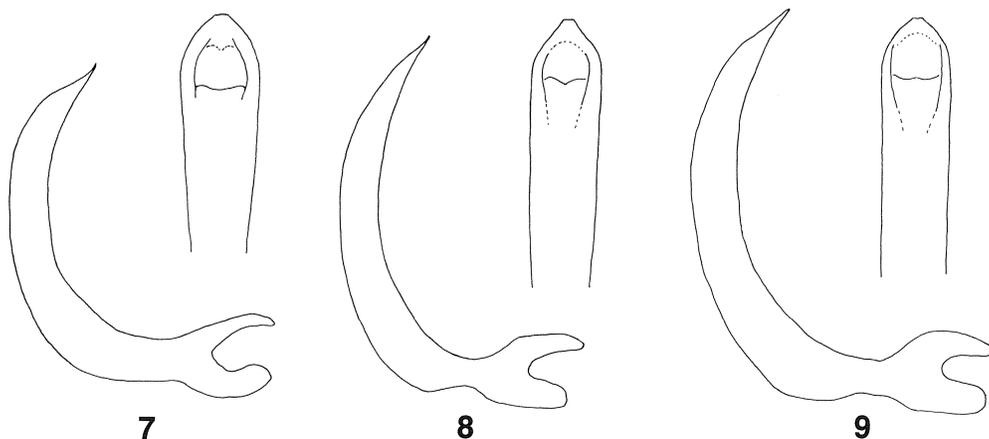
Frontoclypeal area as long as it is wide, lustrous with few, coarse but moderately impressed punctures. Lateral grooves gently curved and converging in obtuse angle. Labrum incised to 1/4 length.

Legs slim, impunctate, with scarce hairs. Under side of tarsi posteriorly glabrous, with a dense tuft of cilia only on its apical section.

Spermatheca very characteristic: ramus not arising from the end of the organ, lengthened, twisted upward; ductus not spiraled.

Hitherto known from Algeria, Marocco, Tunisia. New for Libya (Tripoli, 30.3.26).

The considerable structural difference in the shape of the spermatheca represents the more suitable diagnostic character to distinguish clearly the three species in examination. It is in any case opportune to provide a key which utilize the external characters only, bearing anyway in mind that such key, owing to the very small number of the specimens available, has a provisional nature. The finding of further material could in fact change the meaning of extremely variable characters, so as length of the body, dimensions and arrangement of clypeal and elytral punctures, etc.



Figs. 7-9 - 7: Aedeagus in lateral and dorsal view of *Cassida lusitanica* n. sp. (Portugal, Faro); 8: Ditto, *Cassida angusta* Marseul (Libya, Tripoli); 9: Ditto, *Cassida pusilla* Waltl (Italy, Rome).

1. Body slender, parallel-sided (length/width ratio > 1,8). Tarsal soles with brush of dense cilia only on their apical section. Second interspace feebly carinate at the base. Frontoclypeal area lustrous **C. angusta** Mars.
- Lateral margins more rounded (length/width ratio < 1,8). Tarsal sole with brush of cilia normally developed. Interstrices flat. Frontoclypeal area matte 2
2. Body smaller (length < 4 mm). Elytra with a shallow depression in area of seventh to ninth puncture rows fairly demarcated from disk by an almost angular flexure. Elytra with punctation arranged in rather irregular rows toward apex. Frontoclypeal area with deeper punctures **C. lusitanica** n. sp.
- Body larger (length > 4 mm). Elytra without depressed area clearly demarcated from disk, with regular or almost regular rows of punctures. Frontoclypeal area more slightly punctured **C. pusilla** Waltl

During the draft of the present study, I have received a specimen bearing Suffrian's determination label: *C. puncticollis*. The collection data are: «Lusitania, Deyrolle, Heyd., Suff. vid.» and it is preserved in the Deutsches Entomologisches Institut, Eberswalde. This individual, whose data correspond to Suffrian's original description, is hereby designated the Lectotype and is so labeled.

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R E F E R E N C E S

- BORDY B. e DOGUET S., 1987 - *Contribution a la connaissance des Cassidinae de France. Etude de leur spermatheque (Coleoptera, Chrysomelidae)*. Nouv. Revue Ent., n. s., 4 (2): 161-176.
- DESBROCHERS DES LOGES J., 1891 - *Monographie des Cassida de France*. Le Frelon, 5: 1-44.
- ESCALERA M. M., 1914 - *Los Coleopteros de Marruecos*. Trab. Mus. Nac. Cienc. Nat. (sez. zool.), 11: 1-553.
- JOLIVET P., 1967 - *Notes systematiques et ecologiques sur les Chrysomelides marocains. (Coleoptera) 2° note*. Bull. Soc. Nat et Phys. du Maroc, 46 (3-4): 305-394.
- KOCHER L., 1958 - *Catalogue commente des Coléoptères du Maroc, VIII*. Trav. Institut. scient. Cherifien (serie zool.), 19: 1-172.
- MARSUEL M. S. A. DE, 1876 - *Mélanges*. L'Abeille, 16: 35.
- PEYERIMHOFF P. DE, 1911 - *Notes sur la Biologie de quelques Coléoptères phytophages du Nord-Africain*. Ann. Soc. Ant. Fr., 41: 285-314.
- SASSI D., (in press) - *Le specie appenniniche del genere Cassida del Museo Civico di Verona (Coleoptera Chrysomelidae)*. Atti Mus. Civ. St. Nat. Verona.
- SPAETH F., 1929 - *Cassidinae*. In: WINKLER A., (ed.) - *Catalogus Coleopterorum regionis palearcticae*. Wien, 11: 1354-1359.
- SPAETH F. e REITTER E., 1926 - *Bestimmungs-Tabellen der europäischen Coleopteren. 95. Cassidinae der palaearktischen Region*. Skrobaneck e Söhne. Troppau.
- SPELT G. e LEWITT M., 1926 - *Versuch einer Verwertung des Receptaculum seminis als systematisches Merkmal bei den Chrysomeliden*. Archiv f. Naturges., 6 (6): 96-142.

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