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A new species of the genus Coccinella (Coleoptera) from North Africa

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Acording to the preceding authors, *Coccinella septempunctata* Linnaeus, 1758 is distributed in Europe, Asia and North Africa, in Japan it is represented by the distinct subspecies *C. septempunctata brucki* Mulsant, 1866. The North African population, however, differs from the former species to such a degree, that it is regarded by the author as a distinct species, described in the present paper.

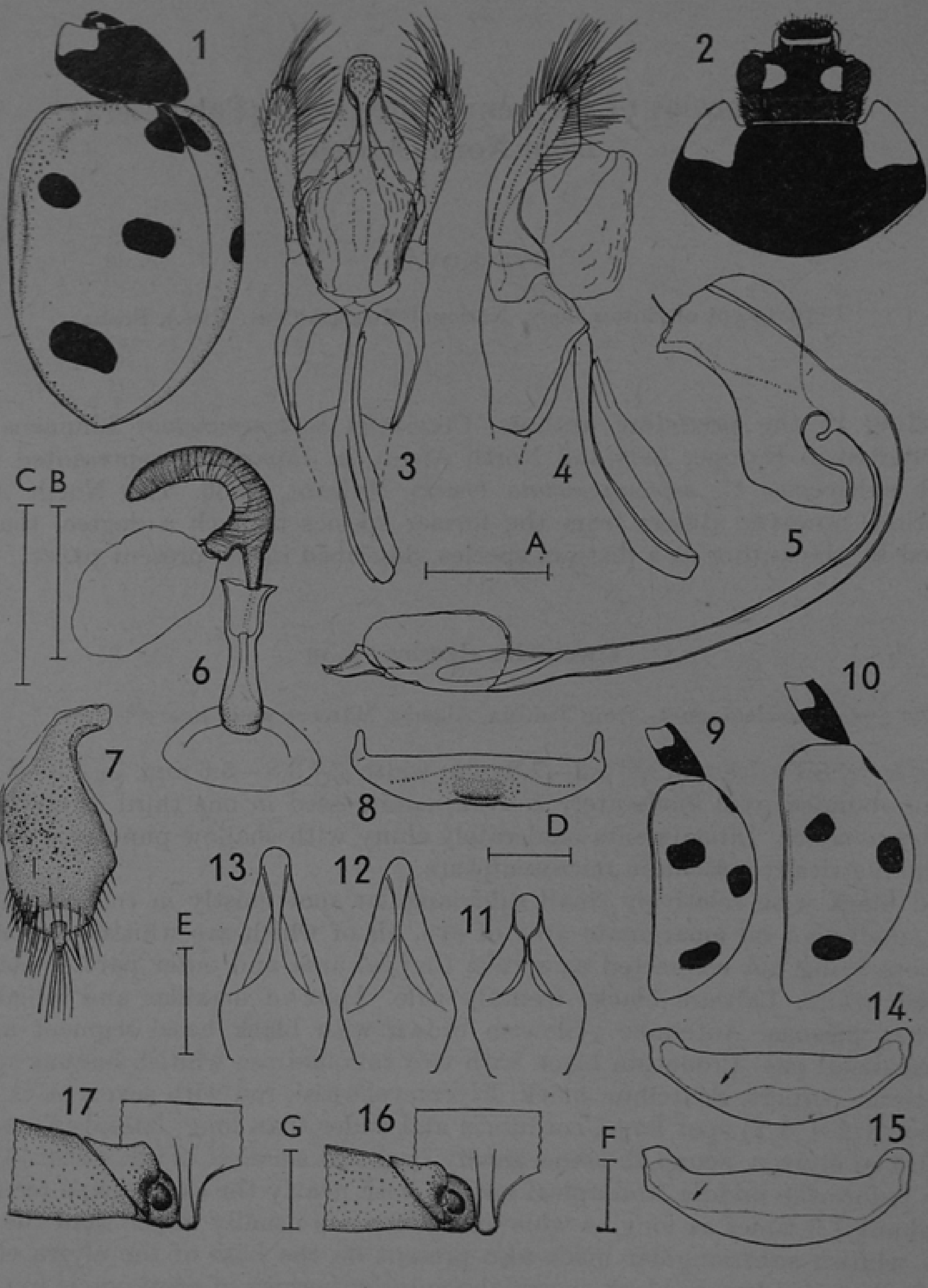
Coccinella algerica sp. n.

Coccinella septempunctata, auct., from Tunisia, Algeria, Marocco and Canary Is.

Length ♂♂ 5.1—7.6 mm, ♀♀ 5.3—7.8 mm; width ♂♂ 3.8—5.6 mm, ♀♀ 4.0—5.8 mm. Body of rounded oval moderately convex, compressed in one third of elytra as in *C. septempunctata*. Integuments moderately shiny with shallow punctures and with an isodiametrically reticulate microsculpture.

Head black with relatively small subtriangular spot mostly in contact with eye and a small spot on emarginate area of eye, all of which are whitish luteous; the two spots being not connected as a rule. Clypeal area and outer part of mandible yellowish white. Labrum black, frontaly pale. Apex of maxillar and labial palpi somewhat piceous. Antennae yellowish brown with black basal segment and infuscated distal one. Pronotum black with two subquadrate whitish luteous spots in the anterior corners. Scutellum black. Elytra yellowish red with seven black spots: scutellar (1/2 + 1/2) spot large, cordiform and wider than long; lateral (2) at about one third of elytron, round to transversally oval and smallest of all; discal (3) spots a little before the middle, and apical one (5) both nearly the same shape transverse oval, about 1.5 times as long as wide and latter one usually larger than the discal one. A whitish subtriangular mark also present on the base of the elytra close to the scutellum. Underside black except the anterior corners of prothoracic hypomera and mesepimera which are whitish luteous. Anterior corners of first abdominal segment and usually part of metepimeron also are yellowish brown. Elytral epipleuron yellowish red. Legs black with claws reddish brown.

Head half as wide as pronotum, sparsely covered with white short hairs. The punctation is rather irregular, the diameter of the punctures is 1.3—1.8 times as large as one of the eye facets, particular punctures separated by 1 to 2 diameters. Pronotum trapezoidal, the anterior corners being rather acute, the lateral margins very slightly arcuate but rather strongly bordered, and the posterior corners obtuse



Figs. 1—9, 11, 14, 16, *Coccinella algerica* sp. n. 1, Dorsal pattern. 2, Head and pronotum. 3, Tegmen of male genitalia, ventral view. 4, Do., lateral view. 5, Sipho. 6, Female genitalia. 7, Genital plate. 8, Last visible sternite of male. 9, Shape of body, lateral view. 11, median lobe of tegmen (Canary Is.). 14, Last visible tergite of female. 16, Prosternal process and fore trochanter.

Figs. 10, 12, 13, 15, 17, *Coccinella septempunctata* L. 10, Shape of body, lateral view (Algeciras). 12, Median lobe of tegmen (Mt. Gilboa). 13, Do., (Tokyo). 15, Last visible tergite of female (Algeciras). 17, Prosternal process and trochanter.
Scale A—F is 0.5 mm, scale A is applied to figs. 3—5, scale B is to fig. 6, scale C is to fig. 7, scale D is to fig. 8, scale E is to figs. 11—13, scale F is to figs. 14—15, scale G is to figs. 16—17.

not so much rounded. The punctation is somewhat more than that on head, the punctures are at most 1.5 times as large as eye facets, but becoming denser towards the base and sides. Particular punctures on the disc are separated by 1 to 2 diameters. Microsculpture well developed as on head. Scutellum moderately small, flat or feebly depressed in the middle, and covered with very shallow punctures, irregularly but densely arranged. Microsculpture indistinct or missing. Elytron rounded oval about 1.5 times as long as wide, with slightly defined humeral bulge. Dorsal surface regularly, but rather weakly or at most as in *C. septempunctata* convex. Lateral margin strongly bordered from the humeral angle to nearly three fourths of the lenght of elytron. The punctation is somewhat less densely arranged than that on pronotum. the punctures are equal in size to the eye facets, but along the lateral margins 2.5 times as large as eye facets. Microsculpture very reduced. Prosternal carinae distinct, reaching almost two thirds of the length of prosternum, weakly closed in the middle. Anterior surface of fore trochanters arcuately emarginated and the anteromedial corners rounded. Femoral lines of 1st. visible sternite of abdomen almost complete, contiguous part of an oblique line which extends towards the anterior corner of sternite, before attaining a line runing alone posterior margin of sternite is reduced or almost missing. Last sternite of male rather narrowly ovaly depressed in the middle. Posterior margin somewhat truncate behind the impression and sinuate besides it. Last tergite of female simple, anterior edge of ventraly inflexed portion it is arcuately emarginate laterally.

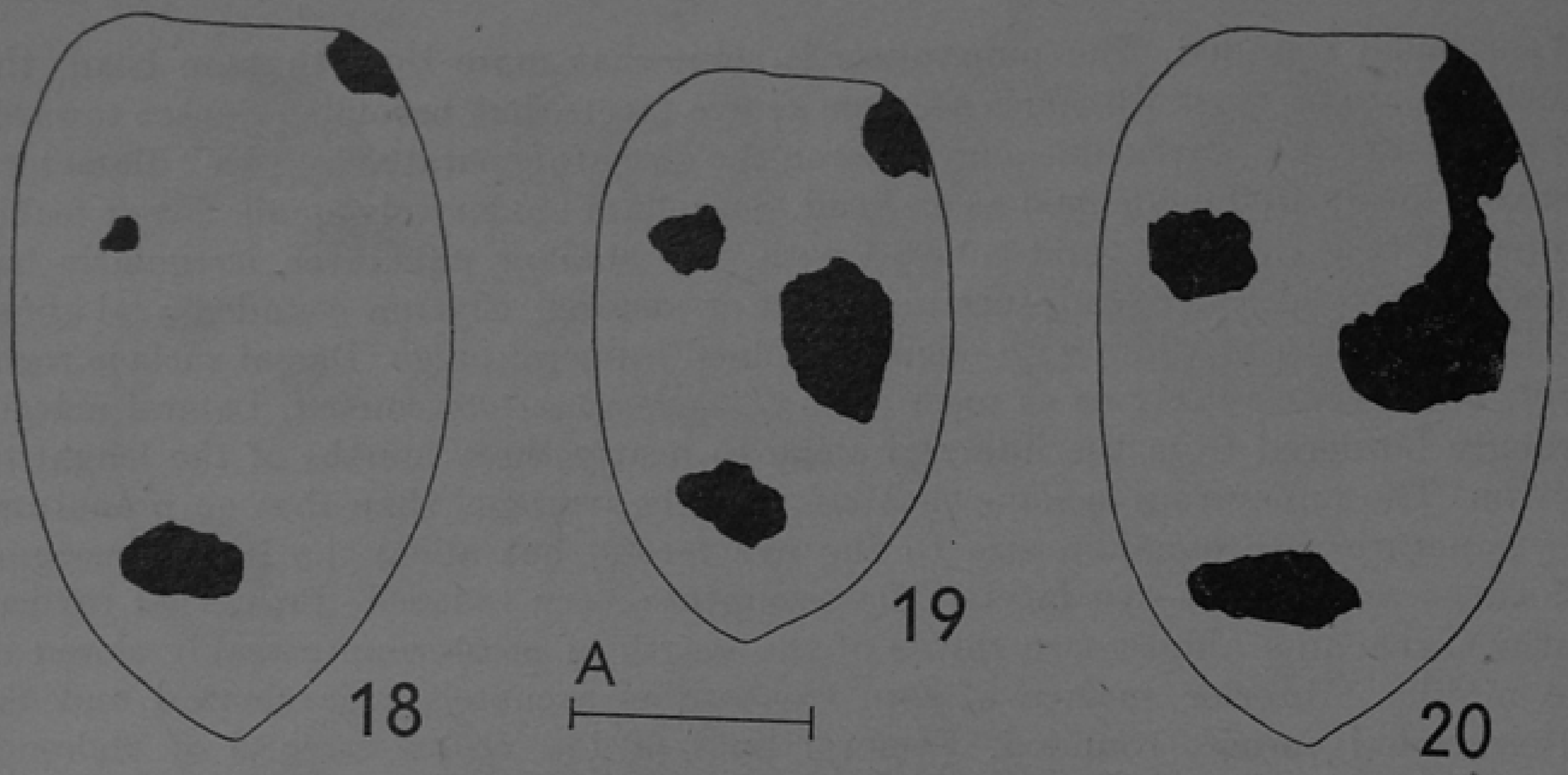
Male genitalia: Tegmen robust, median lobe of tegmen pear-shaped, widest in the middle, anteriorly strongly convergent and concave on the sides, widely rounded on the tip if seen from above, slightly bent at the dorsal surface and triangularly narrowing in the basal half, provided with a large internal tooth in the distal half if seen from side. Lateral lobes of tegmen distinctly shorter than the median lobe, slightly emarginate dorsaly before the tip. Basal piece nearly as wide as long. Trabes thick, rather longer than two thirds of the tegmen lenght. Sipho relatively short, strongly curved in basal third, with siphonal capsula S-shaped. Apex of sipho as in *C. septempunctata*.

Female genitalia: Spermatheca relatively thick in basal portion, strongly curved and slightly narrowing distad. Cornu slightly poinred at the end. Ramus wide and truncate, bearing two short thorn-shaped protuberances; the length of ramus mostly a half as long as nodulus. Infundibulum slender, its anterior end with a narrow campaniform dilatation and its posterior end with a small dilatation, diameter of which is nearly equal to that of the anterior one. Accessory plate large. Genital plate (9th sternite) rather slender, pear-shaped.

Variation: Colour pattern constant in most examined specimens, however, in one specimen the discal spot missing and the lateral rather reduced, in another specimen the scutellar and discal spots confluent together.

Type material: Holotype: ♂, Algeria, Batna, Exp. Obenberger; Allotype: ♀, Tunis c., Le Kef, Exp. Obenberger; Paratypes: Tunisia: 7 ♂♂, 12 ♀♀ Le Kef, Exp. Obenb.; 2 ♀♀, Le Kef, VI. 1926, Dr. Jureček; 2 ♀♀, Udna, 16. V. 1927, Mařan lgt.; ♂ Tunis, Exp. Obenb.; ♂ Tunis, L. Salvator; ♂, Gabes, Exp. Obenb.; ♀, Gafsa, Exp. Obenb.; 2 ♂♂, 2 ♀♀, Bizerta, L. Salvator; 2 ♂♂, 2 ♀♀, Lac. Sedjoumi, 1. V. 1907 (coll. Hlisnikovský); 6 ♂♂, 4 ♀♀, Hamman Lif, 4. V. 1907 (coll. Hlisnikovský).

Algeria: 50 ♂♂, 30 ♀♀, Batna, Exp. Obenb.; 3 ♂♂, 3 ♀♀, Tebessa, Exp. Obenb.; 3 ♀♀, Bougie, 18. IV. 1907 (coll. Hlisnikovský); 2 ♂♂, 10 ♀♀, Sidi Bel Abbés, Zoufal; 3 ♀♀, Abadla, Zoufal; 2 ♀♀, Colomb Béhar, Zoufal; ♂, 2 ♀♀, Saida, (coll. Kouřil); 2 ♂♂, ♀, Barrage du Ghrib, (coll. Kouřil);



Figs. 18—20, Elytral pattern of three aberrant forms of *Coccinella algerica* sp. n. 18, ♂ from Tenerife, Costa Sur. 19, ♂ from Algeria, Batna. 20, ♀ from Tenerife S/C.
Scale A is 2.0 mm, scale A is applied to figs. 18—20.

♂, Bouira, 12. VI. 1971, Horák et Hoffer lgt.; 5 ♂♂, 5 ♀♀, Ait Hassem, 18. VI. 1971, Horák et Hoffer lgt.; ♀, Biskra, 30. V. 1971, Horák et Hoffer lgt.; ♀, Djebel Djurdjura, 2,000 m, 16. VI. 1971, Horák et Hoffer lgt.; 2 ♂♂, Ain Zatout, Dj. Aures, 1.—4. VI. 1971, Horák et Hoffer lgt.

Marocco: 3 ♀♀, Asni, Gregor lgt.; ♀, Casablanca, IV. 1931.

Canary Is.: ♂, ♀, (coll. Achard); ♀, Lanzarote, Teguise, 4. VII. 1971, A. Machado; ♀, L., Los Tarionos, 3. XII. 1968, A. Machado; ♀, L., Cuera de los Verdes, 6. XII. 1968, A. Machado; 3 ♂♂, ♀, L., Yaiza, 5. XII. 1968, A. Machado; ♀, L., Arrecife, 4. VII. 1971, A. Machado; ♀, L., Papagayo, 27. III. 1972, A. Machado; ♀, L., S. Bartolome, 25. III. 1972, A. Machado; ♀, Fuerteventura, Valas de Ortega, 9. VII. 1971, A. Machado; ♀, Gran Canaria, Cruz de Tejeda, 23. IX. 1973, A. Machado; ♀ G. C., C. Tejeda, 23. IX. 1973, J. M. Fernández; ♂, ♀, G. C., C. Tejeda, 16. V. 1959, J. M. Fernández; 2 ♂♂, Tenerife, B. Kouřil; ♀, T., 4. II. 1950, C. G. Padrón; 12 ♂♂, 8 ♀♀, T., Costa Sur, 5. II. 1967, R. Arozarena; 2 ♂♂, T., Costa Sur, 9. X. 1969, A. Machado; ♀, T., Santa Cruz de T., 8. III. 1954, J. M. Fernández; ♀, T., S/C, 20. I. 1967, R. Arozarena; ♂, T., S/C, 15. II. 1967, R. Arozarena; 2 ♂♂, ♀, T., S/C, 23. I. 1967, R. Arozarena; 2 ♀♀, T., Vilaflor, 15. IV. 1954, A. Gonzales; ♀ T., Las Cañadas, 16. III. 1969, A Machado; ♀, T., Santa Cruz, 6. III. 1969, A. Machado; ♀, T., Barranco de la Leña, 18. V. 1952, J. M. Fernández; ♀, T., Zoufal; ♂, Gomera, J. M. Fernández; ♂ G., El Cedro, 21. VII. 1971; ♀, La Palma, Los Llanos, 7. II. 1954, J. F. Guerra; ♀, Hierro, Pinas, 25. VII. 1971, A. Machado; 2 ♀♀, H., Ajase, 24. VII. 1971, A. Machado.

The type material is preserved in the collection of the Dept. of Entomology, National Museum, Praha and in coll. A. Machado.

Distribution: Tunisia, Algeria, Marocco, and Canary Is.

Remarks: This species has hitherto been recorded under name *Cocinnella septempunctata* L. in various papers based on material from North Africa. Both species are very closely related as suggested by general schape and coloration as well as by similar structure of external margins of elytra and apex of sipho, which distinguish them from other species of the genus. Distinguishing characters of the two species may be tabulated as follows.

C. algerica sp. n.

Body generally smaller.
Dorsal surface of elytra generally less convex, if observed from side, it is either regularly convex or more strongly arcuate posteriorly.

Scutellar black spot (1/2 + 1/2) rather transverse widened, other spots on elytra larger than in European *C. septempunctata*.
Interocular and praeocular white spots not connected as a rule.
Anterior corners of pronotum rather sharply rounded.
Anteromedial corner of fore trochanter rounded, anterior margin of the trochanter shalowly arcuately emarginate.
Median lobus of male tegmen pear-shaped.
Anterior edge of the ventrally inflexed portion of the female ix tergite arcuately emarginate laterally.

C. septempunctata L.

Body generally larger.
Dorsal surface of elytra more convex, if observed from side, it is either regularly convex or less arcuate, to almost straight posteriorly.
Scutellar black spot (1/2 + 1/2) usually rounded.

Interocular and praeocular white spots connected as a rule.
Anterior corners of pronotum more rounded.

Anteromedial corner of fore trochanter distinctly obtusangulate, anterior margin of the trochanter more deeply emarginate.
Median lobus of male tegmen subconical.
Anterior edge of the ventrally inflexed portion of the female ix tergite straight.

Finally, I wish to express my thanks to Dr. A. Machado of the Universidad de La Laguna, Islas Canarias, Tenerife, for the loan of material from the collection in his charge.