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Synergus evanescens MAYR, 1872¹ a group species; *Synergus dacianus* sp. n.
(Hymenoptera, Cynipidae)

[With 8 figures in the text]

Abstract. The fact that MAYR (1872) described three various species under the name *Synergus evanescens* is recorded. A species new to science, *Synergus dacianus* sp. n. is described.

Synergus evanescens MAYR, 1872 was described on the base of numerous series of inquilines reared from the galls of four species, *Andricus fecundatrix* (HARTIG), ♀♀, *A. multiplicatus* GIR., ♀♂, *A. quercuscalycis* (BURGSD.), ♀♀, and *A. legitimus* WIEBES-RIJKS, ♀♀, (stunted acorn of *Quercus pubescens* WILLD.). The type-specimens are deposited in the Naturhistorisches Museum in Vienna. The lectotype and paralectotypes were designated by J. QUINLAN (QUINLAN and FERGUSON 1981). The specimen, ♀, selected as lectotype was reared from the gall of *A. fecundatrix* (HARTIG), ♀♀ (the label with the name "gemmae" is attached); the paralectotypes were reared from the galls of *A. fecundatrix* (HARTIG), ♀♀, *A. multiplicatus* GIR., ♀♂ and *A. legitimus* WIEBES-RIJKS, ♀♀. The specimens from the galls of *A. multiplicatus* GIR., ♀♂ and *A. legitimus* WIEBES-RIJKS, ♀♀, are not conspecific with the lectotype. The specimen from the gall of *A. legitimus* WIEBES-RIJKS, ♀♀ (from acorn of *Quercus pubescens* WILLD.) belongs to *Synergus clandestinus* EADY, 1952, and the specimens reared from the galls of *A. multiplicatus* GIR., ♀♂, to a new species². I gave the name *Synergus dacianus*, sp. n. to this species because the first material that I examined was collected by me in 1964 in Romania.

¹ The year, when the description of the species was published requires ascertainment. The year 1872 is questionable, 1873 is more probable.

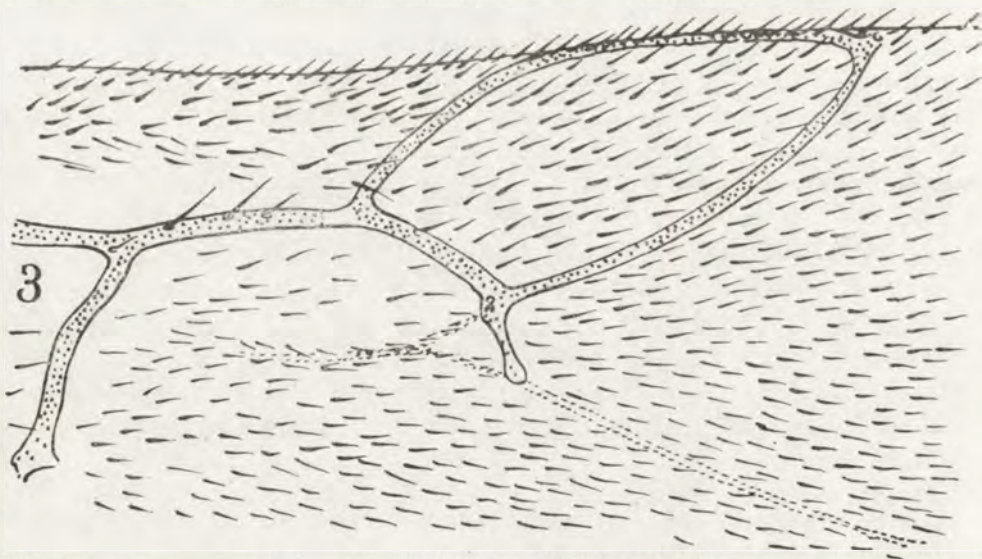
² The type-series, except the specimens reared from the galls of *A. quercuscalycis* (BURGSD.), ♀♀ (*C. calicis*: MAYR 1872) was examined by me in 1983.



1



2



3

Figs 1-3. *Synergus dacianus*, sp. n. 1 - mesoscutum (posterior part) and scutellum; 2 - first three segments of antenna, male; 3 - radial cell, female.

Synergus dacianus sp. n.

Synergus evanescens MAYR, 1882, partim

Head, viewed frontally, transversely ovate, slightly wider than its height (1.2 times). Eyes longitudinally ovate, 1.7 times longer than wide. Cheeks arcuate, slightly protruding behind the lateral margin of the eyes. Malar space about half the length of the eye. Face striated, without a distinct keel in the middle; frons slightly depressed with weak lateral carinae extending from antennae to outer margin of lateral ocelli, sometimes not reaching them; ocelli elevated above the upper margin of the eyes, the margin between the lateral ocelli convex.

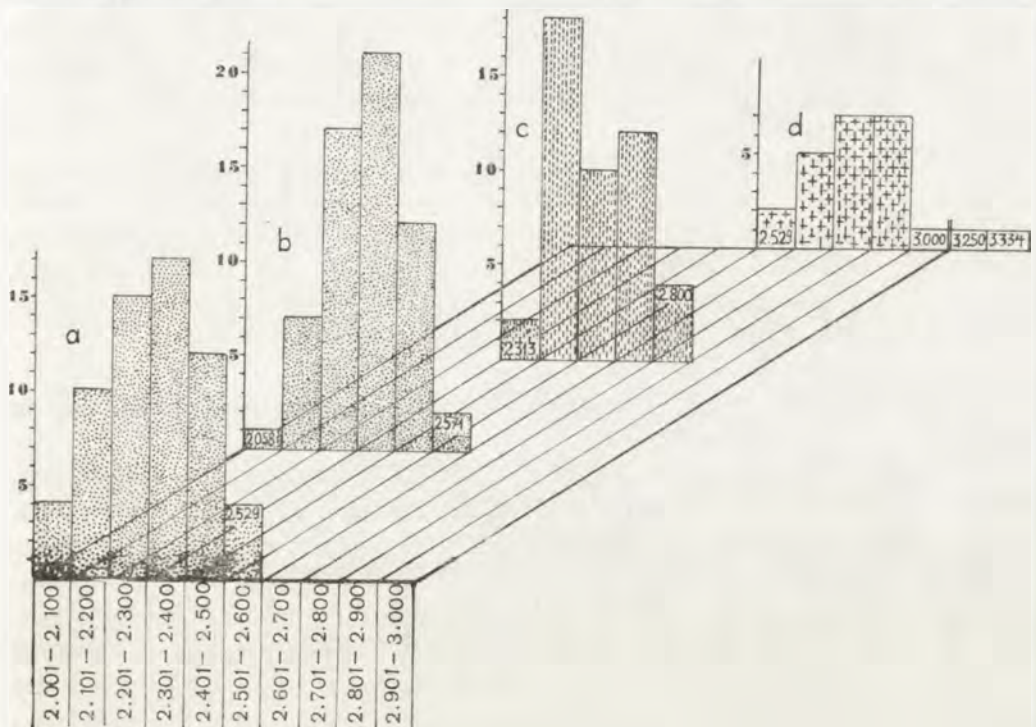


Fig. 4. Variability of the ratio of the length of Rs2 to the length of Rs1; a and b — *Synergus crassicornis* (CURTIS) (= *S. evanescens* MAYR): a — females, Rs2 : Rs1 = 2.009–2.529, M = 2.315, SD = 0.130, n = 62; b — males, Rs2 : Rs1 = 2.058–2.571, M = 2.333, SD = 0.106, n = 60; for females and males together (a + b) — Rs2 : Rs1 = 2.009–2.571, M = 2.331, SD = 0.129, n = 122; c — *S. clandestinus* EADY, females and males together: Rs2 : Rs1 = 2.313–2.800, M = 2.554, SD = 0.108, n = 46; d — *S. dacianus*, sp. n., females and males together: Rs2 : Rs1 = 2.529–3.334, M = 2.796, SD = 0.185, n = 24. Top: Number of wings.

Frons, vertex and occiput punctate with coriaceous sculpture between punctures. Head, viewed dorsally, as wide as thorax, with sharply falling occiput, not protruding behind lateral margin of the eyes. Pronotum with distinct lateral carinae, coriaceous medially, rugose laterally on the shoulders. Mesoscutum transversely rugose, with coriaceous sculpture between rugae. Notaulices distinctly impressed posteriorly, indistinct or absent anteriorly. Median scutal furrow present in the posterior fourth or represented by a short narrow triangular patch. Scutellum convex, transversely rugose, posteriorly reticulate rugose, with sculpture between rugae as on mesoscutum. Scutellar foveae lenticular, shallow and shining, their posterior margin not sharply marked. Septum between foveae anteriorly narrow, narrower than median scutal furrow posteriorly (Fig. 1). Mesopleurae closely longitudinally striated. Carinae of propodeum straight, almost parallel. Abdomen with large tergite slightly excised apically in female, and with apical band of punctures distinct and of even width sub-dorsally and laterally, equal to one-third of the length of the tergite. Antennae with the second segment in both sexes longer than broad, the length about one and a half times the breadth; in male with the third segment curved and expanded basally and apically (Fig. 2). Radial cell long, Rs2¹ slightly curved. Rs2 : Rs1 = 2.5 – 3.3, M = 2.796, SD = 0.185, n = 24 (Figs 3 and 4). Head and thorax black, abdomen reddish brown to black, antennae and veins of the wings yellow, coxae and hind femora dark brown to black, middle femora brown basally, hind tibiae brown in the middle, front femora, middle femora in the apical half, front and middle tibiae and tarsi, hind tibiae basally and apically, apex of hind femora and hind tarsi yellow.

Body length. ♀ 1.7–2.6 mm; ♂ 1.5 mm.

Host. Galls of *Andricus multiplicatus* GIRAUD, ♀♂.

Geographical distribution. Romania, Bulgaria and Austria. Presumably in the range of geographical distribution of *Quercus cerris* L.

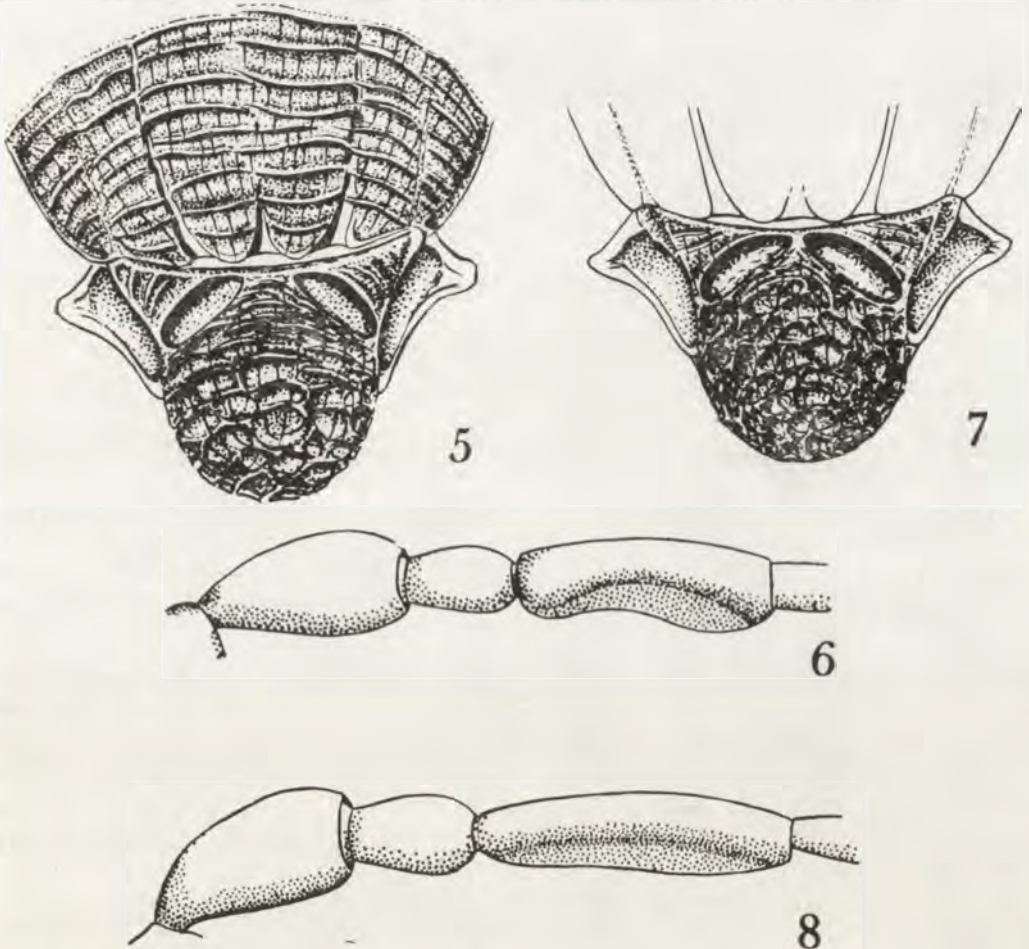
Types, deposited in the Museum of Institute of Zoology PAS in Warsaw. Holotype, ♀, with the labels attached: 1. Romania, Greaca, 3 October, 1964, leg. E. KIERYCH; 2. ex cec. *A. multiplicatus* GIR., ♀♂, ex *Qu. cerris* L., det. E. KIERYCH; 3. *Synergus dacianus*, sp. n., det. E. KIERYCH, 1984, 4. Holotype. Paratypes. Four specimens, females, labelled as holotype and with a label – Paratype.

Additional material examined. Ten specimens of the type-series of *Synergus evanescens* MAYR, 1872 reared from cec. *A. multiplicatus* GIR., ♀♂. Four females and one male, Bulgaria, Vitoscha Zb. mostova, from cec. *A. multiplicatus* GIR., ♀♂, leg. L. VASSILEVA.

¹ Abbreviations. Rs1 – first abscissa of radius, Rs2 – second abscissa of radius, Rs2 : Rs1 – the ratio of the length of the second abscissa of radius to the first abscissa of radius, M – mean of Rs2 : Rs1, SD – standard deviation, n – number of wings from which the measurements were taken.

Key to distinguishing discussed species of *Synergus*

1. Mesoscutum sharply carinate especially centrally, without or with very weak sculpture coriaceous in interspaces. Scutellar foveae with posterior margin sharply marked (Figs 5 and 7). Inquilines of the galls of *A. fecundatrix* (HARTIG), ♀♀ and *A. legitimus* WIEBES-RIJKS, ♀♀. 2.
- Mesoscutum transversely rugose, not sharply carinate, with distinct coriaceous sculpture between rugae. Scutellar foveae with posterior margin not sharply marked (Fig. 1). Inquiline of the galls of *A. multiplicatus* Gir., ♀♂. The third segment of antennae in male curved and expanded basally and



Figs 5-8. 5-6 — *Synergus crassicornis* (CURTIS) (= *S. evanescens* MAYR): 5 — mesoscutum (posterior part) and scutellum; 6 — first three segments of antenna, male. 7-8 — *Synergus clandestinus* EADY: 7 — scutellum; 8 — first three segments of antenna, male (Figs. 6 and 8 according to EADY 1952).

- apically (Fig. 2). Radial cell long, $Rs2 : Rs1 = 2.5-3.33$, M of $Rs2 : Rs1 = 2.796$ (Figs. 3 and 4).
 *S. dacianus*, sp. n.
2. Radial cell short. $Rs2 : Rs1 = 2.0-2.5$, M of $Rs2 : Rs1 = 2.331$ (Fig. 4). Scutellar foveae with the septum between them wide (Fig. 5). Male with the third segment of antennae distinctly expanded basally and apically (Fig. 6). Inquiline of the galls of *A. fecundatrix* (HARTIG), ♀♀.
 *S. crassicornis* (CURTIS) (= *S. evanescens* MAYR).
- Radial cell long. $Rs2 : Rs1 = 2.3-2.8$, M of $Rs2 : Rs1 = 2.55$. Scutellar foveae with the septum between them narrow (Fig. 7). Male with the third segment of antennae not expanded but slightly curved and with the inner surface of the curve flattened (Fig. 8). Inquiline of the galls of *A. legitimus* WIEBES-RIJKS, ♀♀
 *S. clandestinus* EADY.

Acknowledgments

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REFERENCES

- EADY R. D. 1952. A Revision of Section I (MAYR, 1872) of the Genus *Synergus* (Hym. Cynipidae) in Britain, with a Species new to Science. Trans. Soc. Brit. Ent., Bournemouth, **11**: 141-152, 17 ff.
- MAYR G. L. 1872. Die Einmiethler der mitteleuropäischen Eichengallen. Verh. Zool.-Bot. Ges., Wien, **22**: 669-726.
- QUINLAN J., FERGUSSON N. D. M. 1981. The status and identity of the *Cynipoidea* (Hymenoptera) described by J. CURTIS. Entomologist's Gazette, Faringdon, **32**: 251-256.

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STRESZCZENIE

[Tytuł: *Synergus evanescens* MAYR, 1872 gatunkiem zbiorczym; *Synergus dacianus* sp. n. (Hymenoptera, Cynipidae)].

Typowa seria okazów gatunku *Synergus evanescens* MAYR, 1872, przechowywana w Naturhistorisches Museum w Wiedniu, jest gatunkowo niejednorodna. Okazy wchodzące w jej skład należą co najmniej do trzech gatunków, mianowicie do *Synergus crassicornis* (CURTIS) (= *S. evanescens* MAYR: QUINLAN i FER-

GUSSON 1981), *S. clandestinus* EADY i *S. dacianus* sp. n. Spośród wyznaczonych przez J. QUINLANA (QUINLAN i FERGUSON 1981) paralektotypów tylko okazy wyhodowane z galasów *Andricus fecundatrix* (HARTIG), ♀♀ należą do tego samego gatunku co lektotyp. Okaz (paralektotyp) wyhodowany z żołądzia *Quercus pubescens* WILLD. (galas *Andricus legitimus* WIEBES-RIJKS, ♀♀) należy do *S. clandestinus* EADY, a okazy (paralektotypy) z galasów *A. multiplicatus* GIR., ♀♂ do *Synergus dacianus* sp. n. Opis tego gatunku zamieszczono w pracy, a różnice między trzema pokrewnymi gatunkami, *S. crassicornis* (CURTIS), *S. clandestinus* EADY i *S. dacianus* sp. n., wykazano w załączonym kluczu i na rysunkach. Na histogramie (Fig. 4) przedstawiono zakresy zmienności stosunku długości drugiego odcinka żyłki radialnej do długości odcinka pierwszego tej żyłki (Rs2 : Rs1)

РЕЗЮМЕ

[Заглавие: *Synergus evanescens* MAYR, 1872 — сборный вид; *Synergus dacianus* sp. n. (Hymenoptera, Cynipidae)].

Типовая серия экземпляров вида *Synergus evanescens* MAYR, 1872, хранящаяся в Естественноисторическом музее в Вене, является неоднородной в смысле видовой принадлежности. Входящие в нее особи принадлежат не менее чем к трем видам, а именно: *Synergus crassicornis* (CURTIS) (= *S. evanescens* MAYR: QUINLAN и FERGUSON 1981), *S. clandestinus* EADY и *S. dacianus* sp. n. Из обозначенных Д. Квинляном (QUINLAN и FERGUSON 1981) паралектотипов только особи, которые вывелись из галлов *Andricus fecundatrix* (HARTIG), ♀♀ принадлежат к тому же виду, что и лектотип. Экземпляр (паралектотип), выведенный из желудя *Quercus pubescens* WILLD. (галл *Andricus legitimus* WIEBES -RIJKS) принадлежит к *S. clandestinus* EADY, а экземпляры (паралектотипы) из галлов *A. multiplicatus* GIR., ♀♂ к *Synergus dacianus* sp. n. Описание нового вида приведено в тексте, а различия между тремя родственными видами — *S. crassicornis* (CURTIS), *S. clandestinus* EADY и *S. dacianus* sp. n. представлены в виде ключа и рисунков. В гистограмме (Фиг. 4) представлены пределы изменчивости соотношения длины второго отрезка радиальной жилки к длине первого отрезка этой жилки (Rs2 : Rs1).