

Synchita variegata Hellwig

(Figs 3–5, 6, 11, 12)

Synchita variegata Hellwig 1792: 403. Type locality: Germany: Braunschweig. – Ślipiński and Lawrence 1997: 415.

Cicones variegatus: Erichson 1845: 273. – Sturm 1849: 36. – Redtenbacher 1858: 345. – Ragusa 1883: 258. – Seidlitz 1891: 258. – Ganglbauer 1899: 863. – Reitter 1911: 114, 1922: 34. – Porta 1929: 230. – Saint-Claire Deville 1938: 283. – Hansen 1939: 75, 1951: 62. – Español 1945: 94. – Horion 1961: 87. – Vogt 1967: 208. – Dajoz 1977: 65. – Burakowski and Ślipiński 1986: 44. – Ślipiński and Merkl 1993: 32.

Cicones carpini Curtis 1827: 149. Type locality: England. – Stephens 1830: 99. – Guérin-Ménéville 1844: 190.

Type material. *Synchita variegata* Hellwig: (HUB) (not examined). *Cicones carpini* Curtis: "Types in the cabinets of Mr. Beck and Mr. Bainbridge" according to Curtis (1827) (not examined).

Synonymies. *Cicones carpini* Curtis has been treated as a synonym of *Synchita variegata* Hellwig by Erichson (1845) and all subsequent authors. This synonymy is plausible because of the fact that Curtis (1827) describes the alternate elytral intervals of his species as convex, which is the most striking character in *S. variegata*, too. This character is absent in all other species of the genus.

Description. Length 2.1–3.5 mm. Least elongate species in this group (PW/PL: 1.23–1.34; EL/EW: 1.48–1.67). Coloration very dark; antennae, legs and mouthparts reddish, pronotum black. Black color pattern on elytra strongly extended, black arcs and spots confluent, leaving only two oblique, narrow, irregular yellow bands on each elytron (first behind scutellar region, second in middle) and large transverse yellow spot (interrupted by black apex of sutural interval) at apical third of elytra.

Head (HW/HL: 1.7–1.8). Sculpture of dorsal surface of head consisting of flattened granules, each with central puncture, bearing lancet-shaped squamiform seta; granules partly connected by narrow ridges; granulation most developed between eyes, becoming finer apically and gradually replaced by dense micropunctures; frontal margin of clypeus smooth. Apart from mouthparts and antennal groove, ventral side of head with coarse dense punctures (separated by approximately one third their diameters). Eyes smaller than in other species (HW/EYL: 4.5). Antennomere 3 1.25–1.5× as long as wide; antennomere 4 1.1–1.2× as long as wide.

Pronotum transverse (PW/PL: 1.23–1.34), broadest in apical third, lateral margins more convex in apical half becoming more or less straight in basal half, shortly concave in front of posterior angles in many specimens; anterior angles produced, posterior angles marked by pointed tooth being larger than denticles of lateral margins. Pronotum transversally strongly convex, with two distinct, round, admedian basal depressions, and shallow, U-shaped depression in front of these; middle of lateral declivity with broad and shallow impression; lateral portions explanate. Pronotal sculpture consisting of large irregular punctures, interstices reduced to narrow ridges forming irregular, polygonal net; ridges widened at connecting points, latter with puncture bearing squamiform seta. Setae black, additionally five small spots with white scales, one spot in middle of anterior margin and 2 on each side of discal part in front and behind U-shaped depression.

Elytra relatively short (EL/EW: 1.48–1.67). Third interval usually slightly convex, at least at base. Third interval in basal half and 7th interval in humeral region with double row of squamiform setae. Setae as in Fig. 6, on intervals semi-erect (about 40°), rows less regular than in other species.

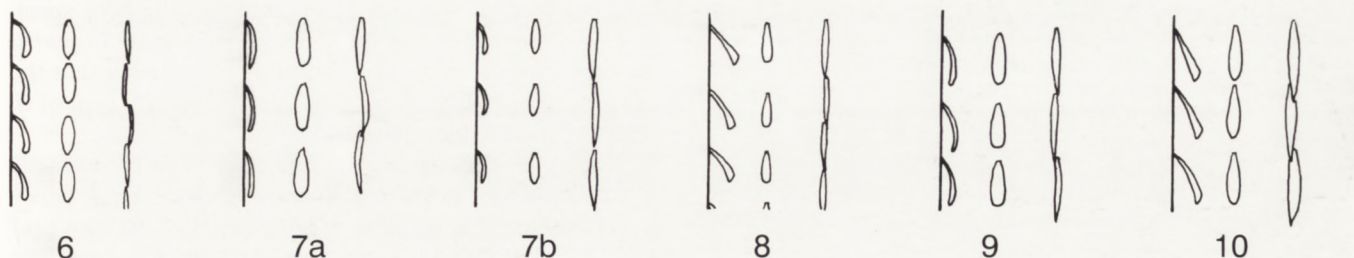
Sculpture of ventrite 1: ridges forming irregular net with large meshes, becoming obsolete at hind angles. Ventrite 2 weakly and irregularly wrinkled and very finely and sparsely punctured.

Legs relatively short; length to width ratio of metatibiae 5.4–6.1.

Aedeagus as in Figs 11 and 12.

Remarks. In small specimens some characters may be modified in the following way: coloration brown or yellowish-brown with even lighter markings; white squamulation more extended on pronotum and elytra; 3rd elytral interval completely flat, a double row of squamiform setae only at base.

Biology. Hellwig (1792) states in the original description, that the type specimens have been found under bark of *Abies*. This habitat could never be confirmed by subsequent authors or collectors. The habitat of *S. variegata* is the wood and the bark of *Fagus silvatica* infected by several fungi (mostly *Ustulina maxima*, *Hypoxylon deustum* or *Daldinia concentrica*, according to Dajoz (1977) and Ślipiński and Merkl (1993). Horion (1961) also cites *Quercus* and *Acer* as habitats and states that *S. variegata* is mostly associated with *Mycetophagus atomar-*



Figures 6–10. Elytral setae: setae of intervals, lateral aspect (left), setae of intervals, dorsal aspect (middle), setae of striae, dorsal aspect (right); (6) *Synchita variegata*, (7a) *S. undata*, specimen from Hungary: Valkó, (7b) *S. undata*, specimen from Germany: Frankfurt, (8) *S. fallax*, (9) *S. oculata*, (10) *S. ussuriensis*. (Scale: 0.1 mm).

ius (F.) (Mycetophagidae). The adult hibernates and the maxima of its activity are from April to June and from September to November.

Distribution. Mediterranean and Central European: southern Sweden (Skåne, Halland) (Hansen 1939), Denmark, southern England, France, Belgium, Netherlands, Germany, Poland, Slovakia, Czech Republic, Austria, Switzerland, northeastern Spain (Province of Barcelona) (Español 1945), Italy, Slovenia, Croatia, Bosnia, Serbia, Hungary, Romania, Bulgaria, northern Turkey and Algeria (Bou Berak) (Horion 1961). Introduced to USA: Massachusetts (Boston) (IZPAN).

Material examined. Without locality data (23, CSK, DEI, MHN, NMW, TMB); AUSTRIA: without exact locality data (1, HUB); VIENNA: Lainzer Tiergarten, 14.5.1951, leg. Schubert (1, NMW); LOWER AUSTRIA: Brühl (9, NMW); Dornbach, leg. Wingelmüller (2, NMW); Klosterneuburg, Weidlinggraben, 19.4.1987, leg. Pircher (1, CSK); Wien Umg., leg. Hoffmann (1, NMW); Wienerwald, 3.1934, leg. Prock (3, NMW); CARINTHIA: without exact locality data, leg. Kahr (3, NMW); BOSNIA: without exact locality data (3, TMB); Čelice, leg. Reiss (2, NMW); Ivan (4, NMW); Pazarić, Zovnik, 21.5.1937, leg. Fodor (10, CSK, TMB); HERCEGOVINA: Vučije bara, leg. Fodor (1, TMB); BULGARIA: Balkan, Vršec (1, DEI); CROATIA: without exact locality data, leg. Reitter (1, NMW); Capela (7, DEI); Dalmatia, Na Podeli, 3.4.1928, leg. Fodor (1, TMB); Plitvice (6, DEI); Svica (6, DEI); CZECH REPUBLIC: MORAVIA: without exact locality data (9, DEI, TMB, ISNB); Hr. Voda-Smilov, 7.5.1993, leg. Fornůsek (2, MSNG); Mährisch Weisskirchen, leg. Schuler, 1896 (9, NMW); BOHEMIA: Příbram, leg. Roubal (1, MSNM); FRANCE: without exact locality data (1, TMB); CORSE: without exact locality data (10, ISNB, NMW, TMB); Vizzavona, 20.6.1909 (4, NMW); Vizzavona, 2.6.1936 (1, ISNB); Col de Vizzavona 1200m, 20.4.1992, leg. Zoia (4, CSK, MSNG); HAUTES PYRENEES: Aragonet, 5.7.1855, leg. Pandellé (9, ISNB); OISE: Compiègne, 20.8.1936 (3, ISNB); PROVENCE: Hyères (1, ISNB); SEINE & MARNE: Fontainebleau (8, DEI, ISNB, TMB); Jonchery sur Vesle (3, ISNB); TARN: Albi 22.9.1929, (1, MHN) and 5.10.1924 (1, MHN); VAR: Ste. Baume (1, ISNB); GERMANY: without exact locality data (1, DEI); "Prusse" (1, ISNB); "Germania c." (1, ZSM); "Mecklenburg" (1, NMW); BAYERN: Königssee (1, DEI); BERLIN: Berlin (1, DEI); BRANDENBURG: without exact locality data, leg. Weise (2, NMW); Umg. Chorin (1, DEI); BREMEN: Hasbruch, 4.5.1952, leg. von Budberg (7, NMW); HAMBURG: (1, DEI); HESSEN: without exact locality data (12, NMW); Frankfurt am Main, leg. von Heyden (2, NMW); Kassel (9, DEI); Taunus: Lorschbach, 17.5.1920 (1, NMW); HOLSTEIN: Eutin (6, DEI); MECKLENBURG: without exact locality data, leg. Friese (2, NMW); NORDRHEIN-WESTFALEN: Düsseldorf (2, DEI); SACHSEN: Erzgebirge: Prinzenhöhe (3, DEI); THÜRINGEN: Laucha (Unstrut) (1, DEI); Naumburg (1, DEI); HUNGARY: without exact locality data (2, NMB, ISNB); Bakony (4, DEI); Budapest (1, TMB); Umg. Budapest, leg. Diener (1, NMW); Szelecz, 1907, leg. Kocsi (1, ISNB); ITALY: S. Pietro (Carso), 30.9.1934, leg. Springer (3, CSK, MSNM); Montenero d'Idria, Sella, 9.6.1934, leg. Springer (1, MSNM); LAZIO: M. Cavo, 17.5.1936, leg. Cerutti (4, MSNM); SICILIA: Palermo (1, DEI); TOSCANA: Vallombrosa, 4.1925, leg. Lombardi (4, MSNM); Arezzo, Mte. Verna, 24.8.1930, leg. Andreini (1, MLSF); Arezzo, Lippiano, 18.11.1921, leg. Andreini (1, MLSF); UMBRIA/MARCHE: Appenin: Mte. Nerone, 21.9.1920, leg. Andreini (1, MLSF); POLAND: Stettin, leg. Bethe (1, NMW); ROMANIA: Banat (1, DEI); Baile Herculeane, 1895, leg. Ganglbauer (25, NMW); Baile Herculeane (1, TMB); Transsylvania (1, TMB); SERBIA: without exact locality data (1, TMB); CRNA GORA: Durmitor, Dolina Susice, 7.-27.7.1933, leg. Fodor (5, CSK, TMB); Bjela Gora, Granovo, 1929, leg. Fodor (2, TMB); Kameno, leg. Paganetti (1, NMW); SLAVONIA: Ruma, leg. Schweiger (1, MSNG); Xupanje (1, DEI); SLOVENIA: Tarnowaner Wald, Čevan, 21.10.1934, leg. Springer (2, MSNM, TMB); Wochein, 1893, leg. Ganglbauer (1, NMW); SWITZER-

LAND: Biel (Bienne), 14.5.1913, leg. Mathey (1, MSNM); Biel (2, ISNB); Schaffhausen (1, DEI); TURKEY: Anatolia bor., Cangal Dag, leg. Schubert, 7.-15.6.1960 (3, CSK, NMW); same data but 16.-26.5.1957 (1, NMW); forest S Ayancik, 6.1966, leg. Schubert (1, NMW).

Synchita undata Guérin-Ménéville (Figs 1, 2, 7a, 7b, 13, 14, 21)

Synchita undata Guérin-Ménéville 1844: 189. Type locality: France: Paris: Saint-Cloud.

Cicones undatus: Rey 1889: 35. – Seidlitz 1891: 258. – Fauvel 1895: 107. – Ganglbauer 1899: 862. – Reitter 1922: 35. – Porta 1934: 169. – Saint-Claire Deville 1938: 283. – Méquignon 1949: 184. – Horion 1961: 88. – Vogt 1967: 208. – Dajoz 1977: 66. – Burakowski and Ślipiński 1986: 45. – Ślipiński and Merkl 1993: 33. – Jones 1993: 3.

Cicones pictus Erichson 1845: 273 (= syn. nov.). Type locality: Austria.

Cicones pictus: Sturm 1849: 39. – Redtenbacher 1858: 345. – Ragusa 1883: 258. – Seidlitz 1891: 258. – Ganglbauer 1899: 862 (partim). – Reitter 1911: 114, 1922: 34 (partim). – Porta 1929: 230. – Saint-Claire Deville 1938: 283. – Horion 1961: 87 (partim). – Vogt 1967: 208 (partim). – Dajoz 1977: 66 (partim). – Burakowski and Ślipiński 1986: 45. – Ślipiński and Merkl 1993: 33.

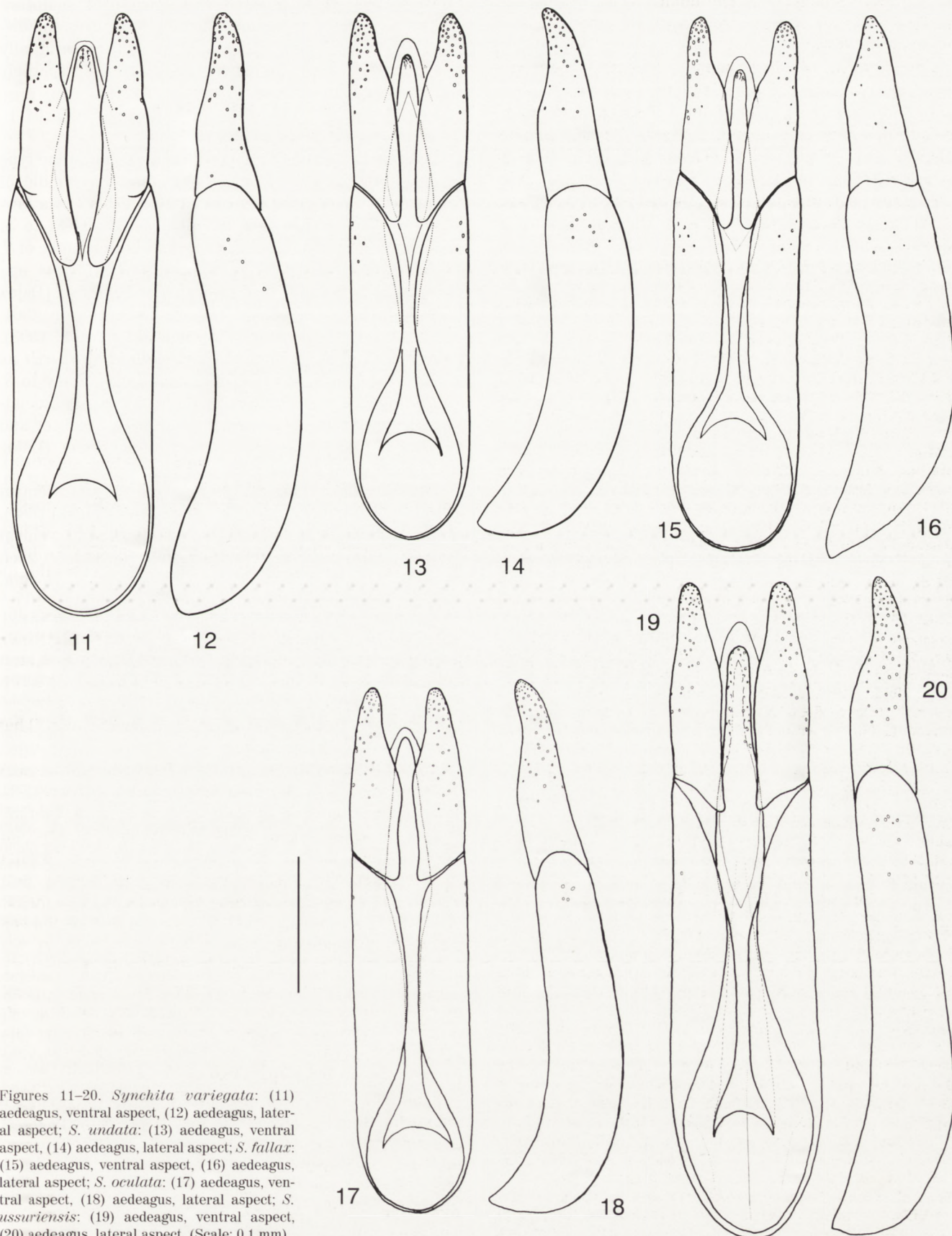
Type material. *Synchita undata* Guérin-Ménéville: the (unique ?) type specimen could not be found in the following institutions: BML, HUB, ISNB, MHNG, MHPN, MSNG. According to Horn *et al.* (1990) the collection of Guérin-Ménéville has been split and sold in separate parts. The present location of Guérin-Ménéville's collection of Colydiidae is not known.

Cicones pictus Erichson: Lectotype and one paralectotype in HUB (examined). Three specimens of the HUB collection bear the label data "Austria", but only two of them are labelled as belonging to the historical collection ("Hist.-Coll. 8005 \ Zool. Mus. Berlin"). The specimen with the handwritten label ("pictus Er. Aust. Parr. Schüpp.") has been designated as lectotype.

Synonymies. *Synchita undata* has been described by Guérin-Ménéville (1844) from Saint-Cloud near Paris. The original description is not exact enough to distinguish this species from the similar *S. fallax* sp. nov. Although the type specimen of *S. undata* seems to be lost, it is justified to take the species from the type locality (surroundings of Paris) as *S. undata*. *Synchita fallax* sp. nov. does not occur in the surroundings of Paris. Therefore, it is not necessary to designate a neotype.

Cicones pictus has been described by Erichson (1845) from Austria without exact locality data. The type specimens of *C. pictus* do not differ significantly from *Synchita undata*. Their examination led to the conclusion that the taxon *C. pictus* Erichson, 1845 is a junior synonym of *S. undata* Guérin-Ménéville, 1844.

The name *Cicones pictus* has been used erroneously on one hand for *Synchita fallax* sp. nov. by several subsequent authors (Fauvel 1895, Méquignon 1949, Reitter 1911 and 1922, Rey 1889) and on the other hand for *S. undata* (Burakowski and Ślipiński 1986, Ganglbauer 1899, Redtenbacher 1858, Ślipiński and Merkl 1993, Sturm 1849). The use of variable and incorrect characters made the sep-



Figures 11–20. *Synchita variegata*: (11) aedeagus, ventral aspect, (12) aedeagus, lateral aspect; *S. undata*: (13) aedeagus, ventral aspect, (14) aedeagus, lateral aspect; *S. fallax*: (15) aedeagus, ventral aspect, (16) aedeagus, lateral aspect; *S. oculata*: (17) aedeagus, ventral aspect, (18) aedeagus, lateral aspect; *S. ussuriensis*: (19) aedeagus, ventral aspect, (20) aedeagus, lateral aspect. (Scale: 0.1 mm).

aration of *S. fallax* sp. n. and *S. undata* nearly impossible. Therefore, published data for distribution and biology of both species (Burakowski and Ślipiński 1986, Dajoz 1977 and 1981, Horion 1961, Kocher 1956, Porta 1929 and 1934, Ragusa 1883, Sainte-Claire Deville 1938) are unreliable.

Description. TL 2.3–3.6 mm. More elongate than *S. variegata* (PW/PL: 1.18–1.25; EL/EW: 1.64–1.80). Coloration: antennae, tarsi, pronotal margins (lateral margin broadly and apical margin narrowly), clypeus and mouthparts reddish; tibiae and femora reddish to dark brown, femora sometimes darker than tibiae; head and pronotum dark brown; elytra yellow with dark brown scutellar region, 3 transverse zigzag bands and darkened sutural interval on apical declivity.

Head (HW/HL: 1.5–1.7). Sculpture of dorsal surface of head consisting of flattened granules, each with central puncture, bearing lancet-shaped squamiform seta; granules partly connected by narrow ridges; granulation most developed between eyes, becoming finer apically and gradually replaced by dense micropunctures; frontal margin of clypeus smooth. Apart from mouthparts and antennal groove, ventral side of head with coarse dense punctures (separated by approximately one third their diameters). Eyes (HW/EYL: 3.5). Antennomere 3 1.5–2.0× as long as wide; antennomere 4 1.25–1.65× as long as wide.

Pronotum transverse (PW/PL: 1.18–1.25), broadest in apical third; lateral margins more convex in apical half, becoming more or less straight in basal half; denticulation of lateral margin mostly concealed by apicad directed, procumbent, squamiform setae; anterior angles weakly produced, posterior angles obtuse, marked by tooth similar to those of denticulation of lateral margin. Pronotum transversally convex; median part of disc flattened, with two indistinct, round, admedian basal depressions; middle of lateral declivity with broad, shallow impression; explanate portions of lateral margins as broad as tibiae. Pronotal sculpture similar to that of *S. variegata*, consisting of large irregular punctures, interstices reduced to narrow ridges forming irregular, polygonal net, ridges only widened at connecting points, latter with puncture bearing squamiform seta. Setae of pronotal integument dark brown, additionally 6 small spots with white setae, 3 on frontal margin of pronotal disc, 2 apico-lateral to admedian basal depressions and one between these depressions.

Elytra oblong (EL/EW: 1.64–1.80); lateral margins narrowly explanate and slightly serrate. All intervals flat and with single row of procumbent, squamiform setae. Length of setae about two thirds of distance between them, apices narrowly rounded; striae setae narrower than setae of intervals, each one as long as distance between them (Figs 7a and 7b).

Ventral side roughly punctured. Sculpture of prosternum, proepisterna, mesosternum and basal and lateral parts of metasternum consisting of large, deep, irregular punctures separated by narrow, high ridges; sculpture on central part of metasternum obsolete; sculpture of ventrite 1 similar to that of lateral parts of metasternum, ridges forming irregular net with large meshes, additionally, with

sparse, irregularly distributed, small punctures; sculpture of ventrite 2 similar to that of ventrite 1, punctures still distinct, partly elongate, attenuated; sculpture gradually becoming obsolete on apical ventrites. Abdomen sparsely pubescent with thick hairs.

Legs: length to width ratio of metatibiae 5.7–6.5.

Aedeagus as in Figs 13 and 14.

Biology. According to the original description the type specimen(s) has (have) been beaten from a bundle of branches of *Ulmus* sp. Several authors list associations with tree species that can definitely be assigned to *S. undata* (from localities outside the distribution range of *S. fallax*). These are *Acer pseudoplatanus*, *Ulmus* sp., *Quercus* sp., *Alnus* sp., *Fraxinus* sp. and *Fagus* sp. (Dajoz 1977, Fauvel 1895, Guérin-Méneville 1844, Horion 1961, Jones 1993, Redtenbacher 1858, Ślipiński & Merkl 1993). Dajoz (1977) cites the fungus *Nummularia bulliardii* as habitat of *Cicones pictus*. This citation may apply to *S. undata* as well as to *S. fallax*. Other coleoptera associated with *S. undata* are: *Synchita separanda* Reitter and the latridiid *Enicmus brevicornis* Mannerheim (Dajoz 1977; Allen 1993).

Distribution. (Fig. 21) Mediterranean and Central European: southern Poland (Burakowski & Ślipiński 1986), southern England (Jones 1993), southern and central Germany (Bayern, Hessen, Sachsen), Slovakia, Czech Republic, Austria, Switzerland, France, Italy, Bosnia, Hungary, southern and western Romania (Seidlitz 1891),

Material examined. Without locality data (18, DEI, HUB, MHNG, NMW, TMB, ZSM); "Megerle" (1, NMW); "Sartorius 1876" (4, NMW); "coll. Bittner" (6, NMW); "Ullrich" (1, NMW); AUSTRIA: without exact locality data (41, DEI, ISNB, IZPAN, MSNG, TMB); (2, HUB, lectotype, paralectotype); "pictus, Scriba" (1, NMW); "Sartorius" (1, IZPAN); LOWER AUSTRIA: Leobersdorf, 14.6.1997, leg. Schuh (10, CSK), Oberwaltersdorf (5, CHW); Umg. Wien (1, IZPAN); CARINTHIA: Obir (1, CKF); STYRIA: without exact locality data (2, DIE, MHNG); VIENNA: (4, DIE, ISNB, NMW); Prater (7, NMW); BOSNIA: without exact locality data (4, IZPAN, TMB); Majevice planina, leg. Zoufal (30, DEI, HUB, IZPAN, NMB, NMP, NMW, TMB), HERZEGOWINA: without exact locality data (2, HUB); CZECH REPUBLIC: Kublow (1, NMP) BOHEMIA: Praha, 6.1953, leg. Olexa (1, TMB); MORAVIA: without exact locality data (2, IZPAN); Znojmo-Hraditše, 5.2.1996, leg. Vávra (2, MSNG); FRANCE: without exact locality data (2, DEI); 1856, Gautier (1, ISNB); Lyon, quai de Serin, leg. Roman, 16.4.1939 (7, CSK, MHNL), same data but 29.1.1939 (7, MHNL), same data but 18.4.1938 (1, MHNL); Nizza, leg. Diener (1, TMB); Rouen (1, DEI); OISE: Compiègne (1, ISNB); PARIS: Coll. Fauvel, 1897 (6, ISNB, NMW); (5, DEI, MHNG, MHNL, NMW); Bois de Boulogne (4, MHNG); Gacogne, coll. Rey (1, MHNL); Jardin du Luxembourg, leg. Leveille (2, ISNB); VAR: Ste. Baume, leg. Mesmin (4, ISNB); GERMANY: BAYERN: without exact locality data (1, NMB); HESSEN: Frankfurt am Main, Schwanheimer Wald, 24.7.1994, leg. Karner and Schuh (10, CSK); SACHSEN: without exact locality data (7, NMW); HUNGARY: without exact locality data (5, DEI, NMB, ISNB, IZPAN); Budapest, leg. Csiki, 30.4.1914 (TMB), same data but 5.4.1915 (TMB), same data but 28.8.1915 (2, TMB); Budapest, leg. Hajoss (3, TMB); Budapest, Kaposztas megyer, 5.2.1995, leg. Merkl (2, TMB); Heves m., Kerecsend, 15.4.1985, leg. Merkl and Szel (6, TMB); Hűvösvölgy (1, TMB); Komárom m., Tardosbanya, Gyenyinszka, 15.7.1990, leg. Merkl (1, TMB); Mosonmagyaróvár NW Győr, leg. Revy, 10.10.1946 (12, TMB), same data but 30.3.1949 (4, TMB), same data but 30.6.1949 (4, CSK, TMB); Pécs, 1906, leg. Reitter (1, TMB); Pest m., Nagyko-väcsi,