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Two new species of *Ocalea* ERICHSON from Austria, Slovenia and Italy (Coleoptera, Staphylinidae, Aleocharinae)

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A b s t r a c t : *Ocalea plana* nov.sp. and *Ocalea italica* nov.sp. are described and illustrated. Two synonymies are established: *Ocalea rivularis* MILLER, 1852 = *O. latipennis* SHARP, 1870, nov.syn. = *O. pollinensis* SCHEERPELTZ, 1970, nov.syn. The Central European *Ocalea* species are differentiated in a key.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, *Ocalea*, West Palaearctic region, taxonomy, new species, new synonymies, key to species

Introduction

The genus *Ocalea* ERICHSON, 1837 currently comprises 17 known species in Europe (SMETANA & SCHÜLKE 2015). Most species, some of which are very similar, show high intraspecific variability. FAGEL (1957) already pointed this out, as well as the very small differences in the aedeagus ("l'édéage est désespérément uniforme"), to which ASSING & TERLUTTER (2009) and TERRILE (2023) also refer. During work on a revision of the European species, the distinction of two previously unknown *Ocalea* species became clear, and they are described in this paper. Due to the great variability of *O. rivularis* MILLER, 1852, two new synonyms are recognised.

Material and methods

The material referred to in this study is deposited in the following public and private collections:

BMNH .....The Natural History Museum, London (M. Barclay)

MHNG.....Muséum d'Histoire Naturelle, Genève (G. Cuccodoro)

NHMW .....Naturhistorisches Museum Wien, Austria (H. Schillhammer)

TLFI.....Tiroler Landesmuseum Ferdinandeum, Innsbruck, Austria (Manfred Kahlen)

cAss .....Collection Volker Assing in Naturhistorisches Museum Wien, Austria

cFel .....private collection Benedikt Feldmann, Münster

cRen.....private collection Klaus Renner, Bielefeld

cTer.....private collection Heinrich Terlutter, Münster

cWun .....private collection Paul Wunderle, now in private collection Benedikt Feldmann, Münster

cZan.....private collection Adriano Zanetti, Verona

Morphological studies were performed using a dissecting microscope (Carl Zeiss) with a maximum magnification of 80x and a standard microscope (Carl Zeiss). Images were taken using a digital camera (moticam 2500).

Measurements were made according to ASSING & SCHÜLKE (2012). Reduced length was measured from the front of the clypeus to the posterior margin of the elytra.

***Ocalea plana* nov.sp.**

T y p e m a t e r i a l : Holotype: ♂, "I. Lombardei, Alpi Orobie, 1200 m, Pso di S. Marco, 22.VIII 1994 Assing / Holotypus *Ocalea plana* nov. spec. det. H. Terlutter 2025" (cAss). Paratypes: ITALY: same data as holotype, 1♂, 1♀, (cTer, cAss); "I-Pordenone, Pradis di Sopra, leg. Kahlen / Mineres, 25.10.82, 600 m, Laubstreu", 1♂, (TLFI); AUSTRIA: "Burgenland, leg. M. Kahlen / Leithageb. Zeilerberg, 19.11.1967", 2♂♂, (TLFI); SLOVENIA: "Kras, Divača, leg. Kahlen / Divaška jarna, Eingangsdoline, 430 m, 9.4.1996, Laubstreu", 1♂, (TLFI).

D e s c r i p t i o n : Body length 4.0-5.0 mm, reduced length 1.8-2.2 mm. Habitus as in Fig. 1. Body colour brown, elytra yellowish brown, posterior part of abdominal segments yellowish brown, first three antennomeres light brownish yellow, becoming more brownish towards apex, legs light brownish yellow.

Head as long as broad (Fig. 2); punctation shallow and distant, microsculpture composed of isodiametric meshes; eyes 0.82 times as long as postocular region in lateral view. Antennae (Fig. 3) slender, antennomeres I-III elongate and of subequal length; III 1,59 as long as IV; IX and X about as long as broad.

Pronotum 1.04 times as wide as long and 1.25 times as wide as head; posterior angles obtuse but distinct; lateral margins in posterior third slightly convex or straight, pubescence directed cephalad along anterior 3/4 of midline, caudad along posterior 1/4, lateral in lateral portions of pronotum disc; with shallow depression along midline, small round depression just anterior to base of pronotum; punctation and microsculpture similar to head, but punctation denser.

Elytra about 0.87 times as long and 0.84 times as wide as pronotum; posterior margins moderately sinuate near posterior angles; punctures slightly larger and denser than those on head, microsculpture composed of isodiametric meshes. Pubescence is only very slightly directed outwards, some hairs slightly erect. Hind wings fully developed.

Abdomen almost as wide as elytra, widest at segments V/VI; tergites III-V with rather deep, tergite VI with shallow anterior impression; punctation fine and rather sparse; tergites III-VIII shiny, with very shallow microsculpture composed of extremely fine transverse striae (visible only at high magnification); posterior margin of tergite VII with pronounced palisade fringe.

♂: posterior margin of tergite VIII weakly convex (Fig. 5), truncate medially; posterior margin of sternite VIII slightly produced medially (Fig. 6); median lobe of aedeagus of distinct morphology, with flat ventral process in lateral view (Fig. 4); parameres inconspicuous.

♀: posterior margin of tergite VIII slightly convex (Fig. 7), truncate medially; posterior margin of sternite VIII slightly sinuate medially (Fig. 8); spermathecae rather simple, without distinctive characters (Fig. 9).

E t y m o l o g y : The name refers to the flat/planar apical lobe of the aedeagus in lateral view.

C o m p a r a t i v e n o t e s : Very similar to *O. badia* ERICHSON and *O. robusta* BERNHAUER. *O. robusta* has a larger body size, the female has a very different spermatheca. Due to the large intraspecific variability of *O. badia*, *O. plana* can only be distinguished from this species by the difference in the structure of the aedeagus. Females of *O. badia* and *O. plana* cannot be separated by morphological characters or by the spermathecae.

D i s t r i b u t i o n a n d b i o n o m i c s : Northern Italy, Austria and Slovenia. Some specimens have been found in wood litter.

***Ocalea italica* nov.sp.**

T y p e m a t e r i a l : Holotype: ♂, "Montecchio, (Negrar VR), 14.1.1973, leg. A. Zanetti, Detriti di *Quercus* / Holotypus *Ocalea italica* nov. spec. det. H. Terlutter 2025", (cZan). Paratypes: AUSTRIA: "Karnische Alpen, Obergail, 1100 m, leg. K. Renner, 2.VIII 86", 2♂♂, 3♀♀ (cRen); "Waidisch ob. Ferlach, Kärnten 3.X.59", 1♂., leg. G.A.Lohse, (MHNG); "Austria , Kärnten, Koschuta 1000-1700, 26.6-4.7.1987, Siede & Wunderle", 2♂♂, 1♀ (cWun); "Austria, Kärnten Hochobir, Jahnwiese, 26.6.-4.7.1987, Siede & Wunderle" 1♀ (cWun); "Au Kärnten, Hochobir 1000m, Gesiebe/Schneerest 11.05.90 Wunderle", 2♀♀ (cWun); "Austria, Kärnten, Trögern, Potokgrab., 26.6.-4.7.1987, Siede & Wunderle", 6♀♀ (cWun); "Kärnten, Austria, Karawanken, Jovanberg, 1300-1500m, 12.7.86, Wunderle", 1♂ (cWun); "Kärnten, Austria, Karawanken, Eisenk. Uschowa, 1800m, 14.7.1986 Wunderle", 3♂♂ (cWun). ITALY: 1♂, 2♀♀ same data as holotype (cZan); "Ligur. Appenin, 31.V.1960, Italien, nördl. Chiavari", 1♂, leg. G.A.Lohse (MHNG); "Vallone di S. Spirito (Maiella), m 1100, 18.VII.1974 / leg. A. Zanetti", 1♂, 4♀♀ (cZan); "Val. Squaranto (VR) dint. Valdiporro, m 900, 9.IX.79 Zanetti", 1♂. (cZan); "M. Cucco (Sigillo-PG), 20.VII.1975 W. Rossi", 2♂♂, 2♀♀ (cZan); "Mte Penna, Italia, 1.VI.60, Ligurischer Appenin", 1♂, leg. G.A.Lohse (MNHG); "I-Liguria, NW Finale Ligure, Colle de Lelogno Bach, N-Seite, 1010 m Laub geschwemmt, 12.09.2001 P. Wunderle", 3♂♂, 1♀ (cWun, cTer); "Piana Verteglia, Monti Picentini, It.m. Campania" 1♂ (NHMW). SLOVENIA: "SLO Kamniško-Savinjske Alpe, Raduha, Sedlo, 46°24'38"N, 14°46'52"E, 29.V.2023, 1250 m, brook, sifted, leg. B. Feldmann" 3♂♂, 2♀♀ (cFel, cTer); "SL Goriska, Bovec-Trenta, Soca-Ufer, geschwemmt, 560 m, 46.361565, 13.710572, leg. J. Köhler, 20.VII.2014", 2♂♂, 1♀ (cFel).

O t h e r m a t e r i a l e x a m i n e d : "29.6.2013 Cardoso (400m) – Coll. Mezano (800m), It, Alpi Apuane, Provin Lucca, 44°1'14.94"N, 10°19'24.72"E, leg. T. Wolsch", 1♂, 1♀ (cSchülke); "18.5.2016 Bocca di Trat, Italy, Prov. Trentino, 1470-1650m, N vom Ledrosee, 45°55'16.44"N, 10°46'2.86"E, leg. T. Wolsch", 1♂ (cSchülke).

D e s c r i p t i o n : Body length 4.5-5.75 mm, reduced length 2.05-2.5 mm. Habitus as in Fig. 10. Body colour dark brown, head and pronotum almost black, elytra and posterior part of abdominal segments slightly paler, antennae brown, legs yellowish brown.

Head slightly wider than long; punctures rather dense and distinct, distinct punctures reaching to front of vertex, spaces as wide as diameter of punctures, with pronounced microsculpture; eyes as long as postocular region in lateral view. Antennae slender, antennomeres I-III elongate and of subequal length, III 1.64 as long as IV; IX and X about as long as wide.

Pronotum 1.08 times as wide as long and 1.18 times as wide as head; posterior angles distinct; lateral margins in posterior third weakly sinuate, pubescence directed cephalad along midline, caudad just in front of posterior margin, laterally in lateral parts of pronotum disc; a small transverse depression just before base of pronotum; punctures and microsculpture similar to those on the head, but punctures more dense.

Elytra about 1.06 times as long and 1.42 times as wide as pronotum; posterior margins distinctly sinuate near posterior angles; punctation and microsculpture similar to those of pronotum. Pubescence directed towards outer angle of posterior margin. Hind wings fully developed.

Abdomen slightly smaller than elytra; tergites III-V with rather deep anterior impression, tergite VI with shallow anterior impression; punctation fine and rather sparse; posterior margin of tergite VII with distinct palisade fringe; tergites III-VIII shiny, with very shallow microsculpture composed of extremely fine transverse striae (visible only at high magnification).

♂: posterior margin of tergite VIII weakly convex, truncate in the middle; sternite VIII longer than tergite VIII, posterior margin distinctly produced in the middle (Fig. 13); aedeagus with distinct morphology, with weakly sinuate upper margin of ventral process in lateral view, and rather thick transverse ridges of bulb (Figs 16, 17), visible as a small hook in lateral view; parameres not distinct.

♀: posterior margin of tergite VIII weakly convex, truncate in the middle; sternite VIII longer than tergite VIII, posterior margin broadly rounded (Fig. 14); spermatheca rather simple, without distinctive characters (Fig. 15).

Etymology: The name refers to the main distribution area of this species in Italy.

Comparative notes: While *O. rivularis* shows great morphological variability in length, proportions and punctation, *O. italica* is very similar to *O. rivularis*. Normally *O. italica* has a more dense punctation than *O. rivularis*, the edges of the punctures appear sharper. In *O. rivularis* the punctation of the vertex is weak or absent near the clypeus, whereas in *O. italica* the distinct punctation reaches the anterior part of the vertex. However, the two species are best distinguished by the shape of the ventral process of the aedeagus and the internal structure of the aedeagus (Figs 16, 21).

Distribution and bionomics: Austria, Italy, Slovenia. Collected mainly along rivers in damp forest litter.

Ocalea rivularis MILLER, 1852

Ocalea rivularis MILLER, 1852: 110.
Ocalea latipennis SHARP, 1870: 280. nov. syn.
Ocalea pollinensis SCHEERPELTZ, 1956: 29ff. nov. syn.

Material examined: *O. rivularis*: Lectotype ♀, present designation: "*rivularis* MILL. Verh. Zool.bot. Ver. Wien I, p.110, Kraatz, F.D.II.p52,3 / *rivularis* MILL. Austria, Dr. Haag / c. Eppelsh. Steind. d. / typus / Typus / Lectotypus ♀ *Ocalea rivularis* MILLER, desig. H. Terlutter 2025 (NHMW). Paralectotype 1♀: "Miller, 861 / *rivularis* / Typus" (NHMW). *O. latipennis:* Lectotype, together with other specimens in the Sharp collection, labelled as *O. latipennis* (BMNH). The lectotype is labelled accordingly, but I do not know, whether this designation is formally published. *O. pollinensis:* Holotype ♂: "♂ / Piani Pollino, VI 951 / Mass. Pollino, Ruffo I. / ex coll. Scheerpeltz / Typus, *Ocalea*, *pollinensis*, SCHEERPELTZ" (NHMW).

Remarks: No number of specimens is given in the original description of *O. rivularis*. In the collection in Vienna there are two specimens labeled as types. The specimen with the patria information Austria is designated als lectotype.

O. rivularis has a large morphological variability, as already described by LOHSE (1974) and FAGEL (1957). Lohse suggests that this variability is partly due to geography. *O. rivularis* has been described from Austria, *O. latipennis* from Scotland. When analysing

more extensive material from different European countries, such a differentiation could not be traced. Larger and darker specimens have been labelled as *O. latipennis* in collections, but no consistent morphological features can be found to distinguish them from *O. rivularis*. The same applies to *O. pollinensis*, which has been described from southern Italy. The synonymy of *O. latipennis* and *O. pollinensis* has already been suggested by TERRILE (2023). The external shape of the aedeagus is also variable in size and the shape of the ventral process, but the internal structures are relatively constant. The spermathecae are also variable and not suitable for separation. I therefore propose a single variable species *O. rivularis*, which can be separated from other *Ocalea* species by the slender shape of the ventral process and the internal structures of the aedeagus.

Key to the middle European species of *Ocalea*

1 Posterior angles of pronotum rounded, lateral margins in front of posterior angles convex to nearly straight 2
- Posterior angles of pronotum distinct or nearly rectangular, margin in front of posterior angles weakly or distinctly sinuate 4
2 Body length from anterior margin of clypeus to posterior margin of elytra less than 2.2 mm 3
- Body length from anterior margin of clypeus to posterior margin of elytra mostly more than 2.2 mm (Aedeagus Fig. 19; Spermatheca Fig. 20)..... *O. robusta* BERNHAUER
3 Aedeagus with a broader ventral process in lateral view (Fig. 18)..... *O. badia* ERICHSON
- Aedeagus with a flattened ventral process in lateral view (Fig. 4) ..... *O. plana* nov.sp.
4 Lateral margin in front of posterior angles weakly sinuate, upper part of pronotum in lateral view more convex, more shiny, pubescense of inner half of elytra directed caudad (Aedeagus Fig. 20)..... *O. picata* (STEPHENS)
- Lateral margin in front of posterior angles clearly sinuate, upper part of pronotum in lateral view less convex, microreticulation of pronotum more pronounced, pubescence of inner half of elytra directed diagonally 4
4 Legs yellowish, pubescence of elytra directed diagonally..... 5
- Legs dark brown, pubescence of elytra directed laterad in posterior 1/6 and diagonally postero-laterad in anterior 5/6 (Aedeagus Fig. 22)..... *O. concolor* KIESENWETTER
5 Aedeagus as in Fig. 21 ..... *O. rivularis* MILLER
- Aedeagus as in Fig. 16 ..... *O. italica* nov.sp.

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Zusammenfassung

Ocalea plana nov.sp. und *Ocalea italica* nov.sp. werden beschrieben und abgebildet. Zwei Synonyme werden begründet: *Ocalea rivularis* MILLER, 1852 = *O. latipennis* SHARP, 1870, nov.syn. = *O. pollinensis* SCHEERPELTZ, 1970, nov.syn. Die mitteleuropäischen *Ocalea*-Arten werden in einer Bestimmungstabelle unterschieden.

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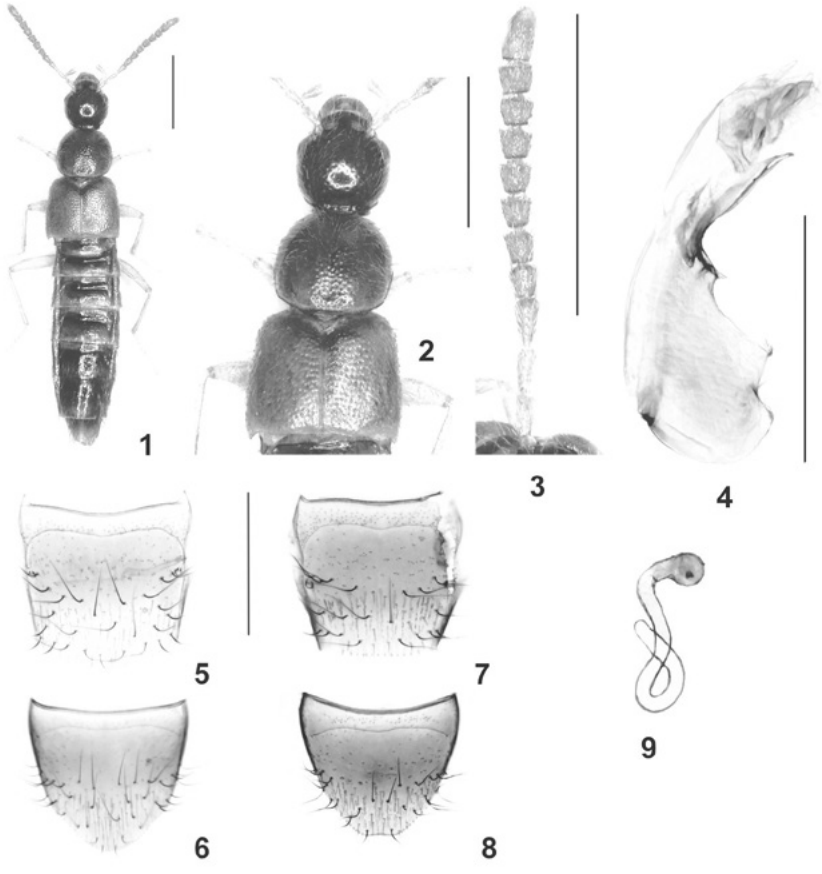
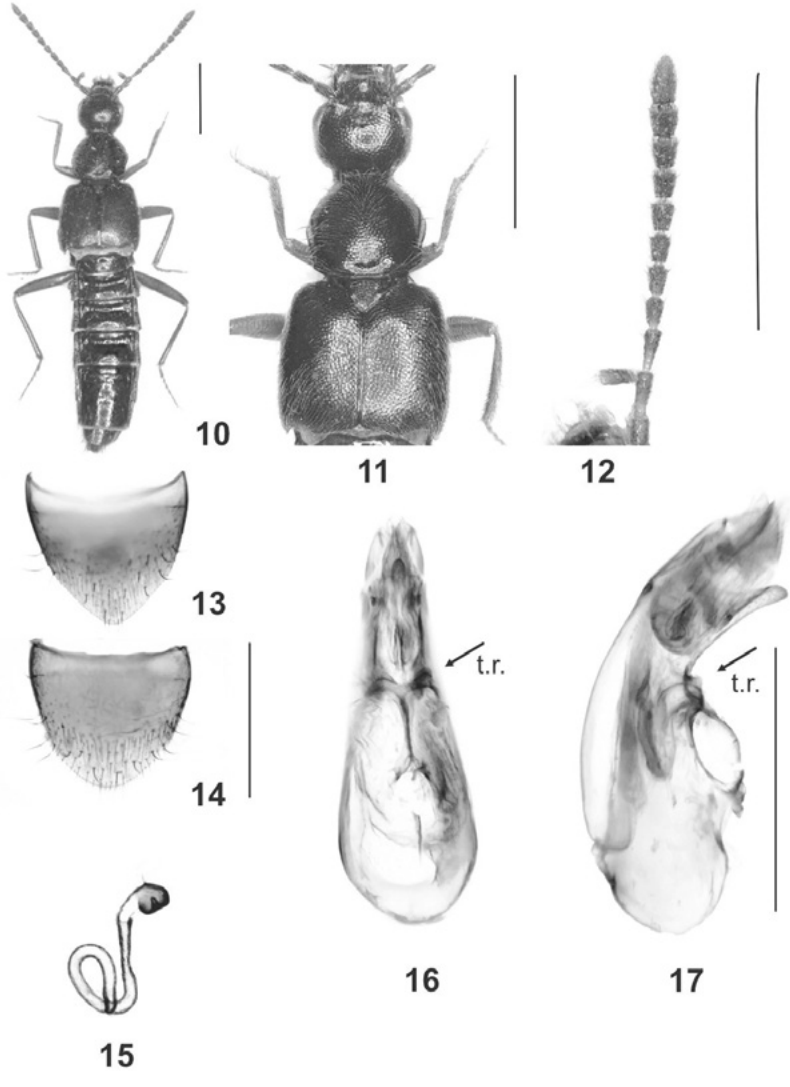
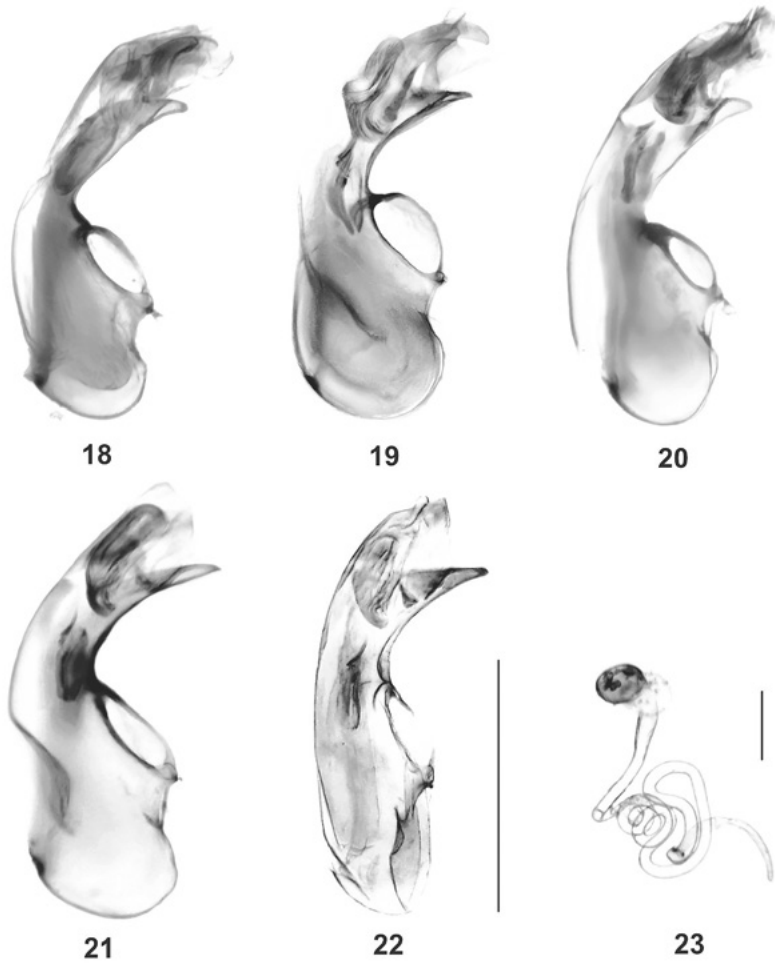


Figs 1-9: *Ocalea plana* nov.sp. (1-6 holotypus, 7-9 paratypus): (**1**) habitus; (**2**) forebody; (**3**) antenna; (**4**) aedeagus in lateral view; (**5**) male tergite VIII; (**6**) male sternite VIII; (**7**) female tergite VIII; (**8**) female sternite VIII; (**9**) spermatheca. Scale bars 1-2, 4-9: 0.5 mm; 3: 1.0 mm.



Figs 10-17: *Ocalea italica* nov.sp. (10-12 holotypus, 13-17 paratypes): (**10**) habitus; (**11**) forebody; (**12**): antenna; (**13**) male sternite VIII; (**14**) female sternite VIII; (**15**) spermatheca; (**16**) aedeagus in ventral view,; (**17**) aedeagus in lateral view. t.r.: transverse ridge. Scale bars 10-11, 13-17: 0.5 mm; 12: 1.0 mm.



Figs 18-23: Aedeagus in lateral view: (**18**) *O. badia*; (**19**) *O. robusta*; (**20**) *O. picata*; (**21**) *O. rivularis*; (**22**) *O. concolor*. Scale bar 0.5 mm. (**23**) spermatheca of *O. robusta*. Scale bar 0.1 mm.