

Two new species of the genus *Chaetomargoreicheia* Magrini & Bulirsch, 2005 (Coleoptera: Carabidae: Scaritinae: Clivinini)

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Abstract. *Chaetomargoreicheia radei* sp. nov. from Croatia and *Ch. faillei* sp. nov. from Bosnia and Herzegovina are described, illustrated including female genitalia and compared to the known species. *Ch. zoufali* (Reitter, 1913), the nominotypical species of the genus, is redescribed and illustrated including female genitalia and all known species of the genus are keyed.

INTRODUCTION

The clivinine genus *Chaetomargoreicheia* was established by Magrini & Bulirsch (2005) as a subgenus of the genus *Reicheadella* Reitter, 1913 for two species; later Bulirsch & Guéorguiev (2008) raised it to a separate genus and finally, Čurčić et al. (2018) described another new species and keyed three to date known species. The species of this endogenous genus are small and anophthalmous and belong to the subtribe Reicheiina Jeannel, 1957.

MATERIAL AND METHODS

The new species were compared with the holotypes of two known species as well as with the minute description and detailed figures of remaining known species recently described by Čurčić et al. (2018).

Length of body is given with 0.01 mm accuracy; other measurements including ratios and means are rounded down to two decimal places. Label locality data of all specimens are quoted verbatim except for standardized dates.

Macrophotographs were taken by the second author using a Nikon D2X or D800 digital camera, applied to a Nikon Labophot II binocular optical microscope or a Nikon SMZ 1000 stereomicroscope, with diaphragmed lenses.

The following abbreviations are used to indicate the depository of specimens:

CNHM Croatian Natural History Museum, Zagreb, Croatia;
HNHM Hungarian Natural History Museum, Budapest, Hungary;
PBPC collection of Petr Bulirsch, Praha, Czech Republic;
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany.

Others used abbreviations:

HT: holotype; PT: Paratype; BSP: basal setiferous punctures; SP: setiferous punctures; L: length of body from apex of closed mandibles to elytral apex; TL: length of body from anterior margin of clypeus to elytral apex; HMW: maximum width of head; LA: length of antennae; PL: length of pronotum along middle line; PMW: maximum width of pronotum; EL: length of elytra along suture; EW: maximum width of elytra; STY: length of styli; AN: length of antennomeres.

RESULTS

Genus *Chaetomargoreicheia* Magrini & Bulirsch, 2005

Type species: *Reicheia zoufali* Reitter, 1913.

To date the genus is known in three species: *Ch. zoufali* (Reitter, 1913) from Herzegovina, *Ch. lakotai* (Magrini & Bulirsch, 2005) from Montenegro and *Ch. gljevensis* Ćurčić et al., 2018 from Croatia. All species of this genus including two new taxa described below are known only in a single specimen.

Chaetomargoreicheia zoufali (Reitter, 1913)

(Figs. 1, 4, Tab.1)

Reitter 1913: 64 as *Reicheia* (*Reicheadella*) *zoufali*.

Jeannel 1957: 178 as *Reicheadella zoufali* (Reitter, 1913).

Magrini & Bulirsch 2005: 93 as *Reicheadella* (*Chaetomargoreicheia*) *zoufali* (Reitter, 1913).

Bulirsch & Guéorguiev 2008: 50 as *Chaetomargoreicheia zoufali* (Reitter, 1913).

Type material. Holotype (♀): Herzegov. / Ravno / VI. Zoufal [legit] // coll. Reitter // [white label with red margin] Monotypus, 1913 / *Reicheia Zoufali* Reitter // [handwritten] *Reicheella* / *Zoufali m.* / Type, 1913 (HNHM).

Redescription. Body (Fig. 1) light rusty brown, legs, antennae and especially mouthparts lighter, latter yellowish. Length of body 2.44 mm.

Head. Moderately broad, long, anterior margin of clypeus between narrowly rounded, distinctly protruded lateral lobes barely concave, facial furrows moderately deep, broad. Impressions on clypeus oblique, rather superficial, very broad, not forming distinct median keel. Eyes absent; genae drop-type, their posterior angles moderately rounded; genae separated from supraantennal plates by deep furrow. Vertex distinctly, regularly reticulated, rather dull; neck very broad, broadened posteriorly. Antennae relatively short, 0.32 times as long as body, antennomere 2 longer than 3 and 4 combined, 6-10 moniliform. Mandibles rather long, their apical part moderately curved. Terminal maxillary palpomeres moderately long, apex slightly aciculate.

Pronotum. Slightly vaulted in lateral view, moderately shiny, surface with few very fine wrinkles and almost regular, rather fine reticulation; 1.01 times as wide as long, 1.47 times as wide as head. Outline in anterior half slightly, posteriorly moderately strongly, regularly rounded; widest just below middle; posterior angles broadly rounded. Reflexed lateral

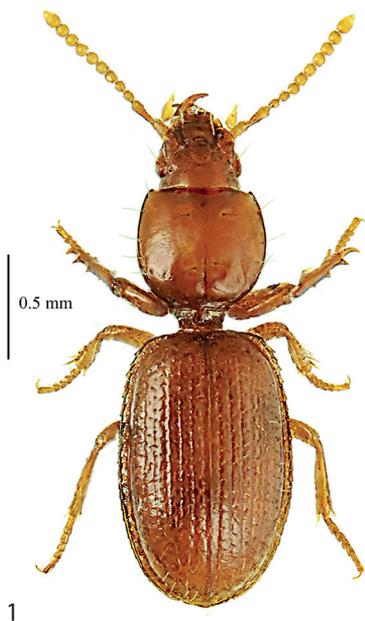


Fig. 4. *Chaetomargoreicheia zoufali* (Reitter, 1913). Stylomeres of HT.

Fig. 1. *Chaetomargoreicheia zoufali* (Reitter, 1913). Habitus of HT.

margin entire, extended from rather sharp, moderately protruded anterior angles to base as distinct prebasal groove. Median line narrow, moderately impressed almost towards prebasal groove; anterior transverse impression very superficial, just visible, medially diminish. Episterna just visible from above in apical third. Five pairs of lateral SP (two below anterior angles, one at about middle and two near posterior rounded angles; fourth SP on left side slightly more moved interiorly than others SP) and two pairs of submedian SP.

Elytra. Moderately convex, almost regularly oval, disc moderately flattened in lateral view, 1.61 times as long as wide, 1.35 times as wide as pronotum, 2.23 times as long as pronotum; base with isolated, large BSP, without tubercles, barely sloping to moderately protruded humeri; outline slightly broadened on sides, lateral channel broad, reflexed lateral margin with about 10 sharp lateral teeth in basal part, slightly denticulated almost up to apex. Striae 1-5 distinct, finely punctuate, stria 6 and especially 7 finer, moderately punctuate; all striae, except first, diminish apically, first striae on apex, lateral ones in apical fifth. Striae, especially lateral, strongly weakened basally. Intervals in basal part slightly convex. Intervals 2-7 with rows of 18-25 SP.

Protibia. Apical spine bent outwards in dorsal view, apical spur of almost equal length, slightly curved. Lower marginal teeth very distinct, sharp, upper one smaller, rather sharp.

Styli. As in Fig. 4; gonapophyses very robust and curved especially at base, with very short and small ensiform spines, typical for not very specialized surface species. Laterotergites IX broad, with few marginal bristles.

Comment. In the Reitter's original description, there is the following statement: 'body length 2-2.2 mm' and four pairs of lateral SP; both mentions are also repeated by Jeannel (1957). As quoted above the type specimen has actually five pairs of lateral SP and its length is 2.44 mm. Reitter described it based on a single HT so that his above mentioned measurement is probably incorrect; moreover it is compared by himself with *Reicheadella corcyrea* (Reitter, 1884) with mentioned 'body length 2-2.2 mm' as well.

***Chaetomargoreicheia radei* sp. nov.**

(Figs. 2, 5, Tab. 1)

Type material. Holotype (♀): [Croatia] Velika pećina / Neorić, Sutina, Bazin / 3.v.2005; leg. P. Rade, (CNHM).

Description. Body (Fig. 2) yellow-brown, legs, antennae and especially mouthparts lighter, latter yellow. Length of body 2.76 mm.

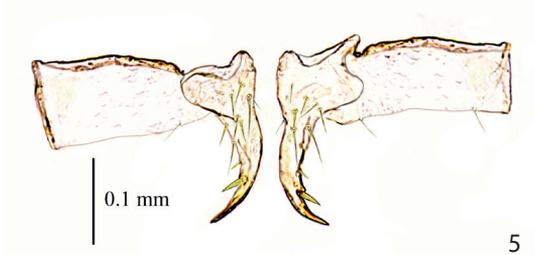
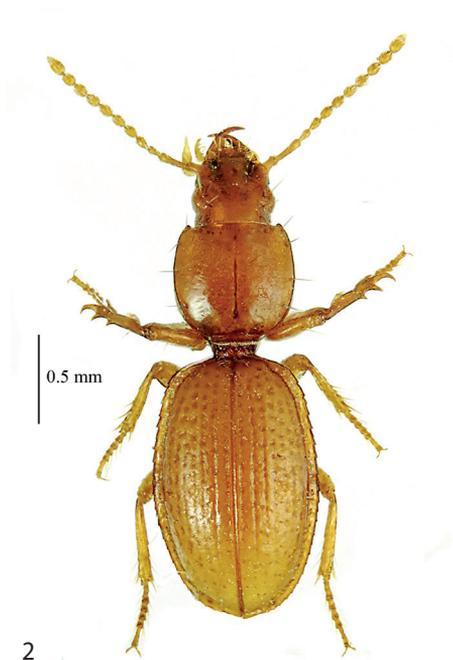
Head. Moderately broad, long, anterior margin of clypeus between distinctly protruded lateral lobes almost straight, facial furrows rather deep, broad. Impressions on clypeus oblique, moderately deep, broad, forming long and blunt median keel. Eyes absent, genae drop-type, their posterior angles moderately obtuse. Vertex moderately reticulated, rather shiny; neck broad, just broadened posteriorly. Antennae relatively long, 0.36 times as long as body, antennomere 2 longer than 3 and 4 combined, antennomeres 6-10 distinctly longer than wide. Mandibles very long, their apical part long, moderately curved. Terminal maxillary palpomeres long, apex aciculated.

Pronotum. Slightly vaulted in lateral view, moderately shiny, surface with few very fine wrinkles and almost regular, rather fine reticulation; 1.00 times as wide as long, 1.46 times as wide as head. Outline moderately strongly, regularly rounded; widest at about middle; posterior angles broadly rounded. Reflexed lateral margin entire, extended from moderately sharp, distinctly protruded anterior angles to base as distinct prebasal groove. Median line narrow, moderately impressed almost towards prebasal groove; anterior transverse impression very superficial, just visible, medially diminish. Episterna just visible from above in apical third. Four pairs of lateral SP (two below anterior angles, one asymmetrically at about middle and one in posterior rounded angles) and neither submedian nor sublateral SP.

Elytra. Rather convex, almost regularly oval, disc moderately flattened in lateral view, 1.63 times as long as wide, 1.36 times as wide as pronotum, 2.23 times as long as pronotum; base with isolated, large BSP, without tubercles, moderately sloping to rather slightly protruded humeri; outline moderately broadened on sides, lateral channel broad, reflexed lateral margin with about 25 long and sharp teeth, barely finer apically. Striae 1-3 and especially 4 very fine, diminish latero-apically and at base, striae 5-7 formed by rows of moderately deep punctures on elytral disc. Intervals in medio-basal part barely convex, flattened latero-basally. Intervals 2-7 with rows of 10-15 SP.

Protibia. Apical spine bent outwards in dorsal view, apical spur of almost equal length, slightly curved. Lower marginal teeth very distinct, sharp, upper one smaller, sharp.

Styli. As in Fig. 5; gonapophyses fine and slightly curved, with very pointed and rather long ensiform spines, typical of deep-soil species. Laterotergites IX moderately broad, with very few marginal bristles.



2

Fig. 2. *Chaetomargoreicheia radei* sp. nov. Habitus of HT.

5

Fig. 5. *Chaetomargoreicheia radei* sp. nov. Stylomeres of HT.

Differential diagnosis. *Ch. radei* sp. nov. has neither submedian nor sublateral SP. All remaining species of the genus have either two pairs of sublateral (*Ch. lakotai* (Magrini & Bulirsch, 2005)) or submedian SP (remaining three species). Next differences are quoted in the key below.

Name derivation. With great pleasure we dedicate this new species to Predrag Rade (Karlovac, Croatia), collector of the type specimen.

***Chaetomargoreicheia faillei* sp. nov.**

(Figs. 3, 6, Tab. 1)

Type material. Holotype (♀): Trebinje (BH) / Arenstorff pecina / 10.v.2017 // N 42°41'32.4'' E 18°21'43.6'' / 594 m / A. Faille // DANN extraction code / IBE M 220 (SMNS).

Description. Body (Fig. 3) rusty brown, legs barely lighter, antennae and mouthparts yellowish. Length of body 2.54 mm.

Head. Moderately broad, long, anterior margin of clypeus between narrowly rounded, distinctly protruded lateral lobes barely concave, facial furrows deep and very broad. Impression on clypeus oblique, superficial, very broad, forming oblique median keel. Eyes absent; genae relatively flat, barely drop-type, their outline almost directly narrowed anteriorly; posterior angles moderately rounded. Vertex finely reticulated, rather shiny; neck very broad, broadened posteriorly. Antennae relatively long, 0.38 times as long as

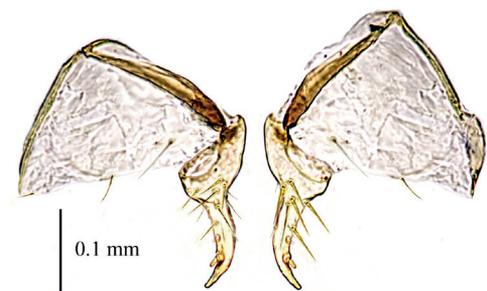
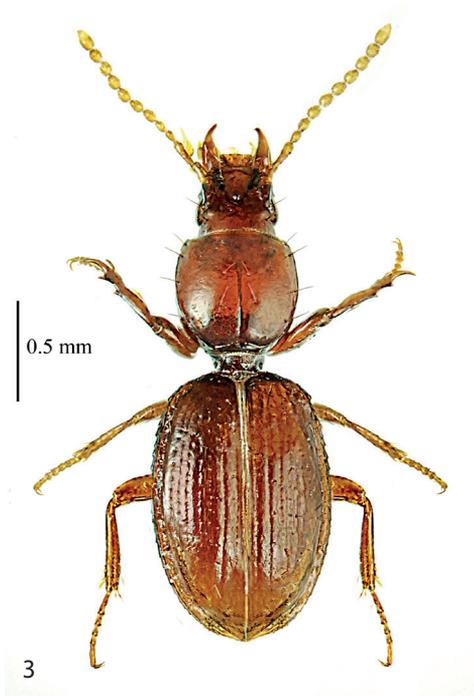


Fig. 6. *Chaetomargoreicheia faillei* sp. nov. Stylomeres of HT.

Fig. 3. *Chaetomargoreicheia faillei* sp. nov. Habitus of HT.

body, antennomere 2 just longer than 3 and 4 together, antennomeres 6-10 submoniliform. Mandibles long, their apical part moderately curved. Terminal maxillary palpomeres rather long, apex aciculate.

Pronotum. Slightly vaulted in lateral view, shiny, surface with few very fine wrinkles and irregular rests of very fine reticulation; 0.98 times as wide as long, 1.50 times as wide as head. Outline rather slightly, regularly rounded; widest below anterior third; posterior angles very broadly rounded. Reflexed lateral margin entire, extended from obtuse, barely protruded anterior angles to base as fine prebasal groove. Median line narrow, moderately impressed almost towards prebasal groove; anterior transverse impression very superficial, just visible. Episterna just visible from above in apical third. Four pairs of lateral SP (two below anterior angles, one asymmetrically at about middle and one in posterior rounded angles) and two pairs of submedian SP.

Elytra. Convex, almost regularly long oval, disc finely vaulted in lateral view, 1.54 times as long as wide, 1.40 times as wide as pronotum, 2.13 times as long as pronotum; base with isolated, large BSP, without tubercles, strongly sloping to broadly rounded humeri; outline moderately broadened on sides, lateral channel broad, its margin with about 8-10 sharp lateral teeth in basal part below humeri, then fine but sharp denticulated almost up to apex. Striae 1-5 distinct, very slightly to moderately punctuate, stria 6-7 much finer, irregularly interrupted, moderately punctuate; all striae, except first, diminish apically, first striae before apex, lateral ones in apical fourth to third; all striae, especially lateral ones, strongly weakened basally. Intervals in basal part rather slightly convex, flattened latero-apically.

Intervals 2-3, 5 and 7 with rows of about 16-10 SP.

Protibia. Apical spine bent outwards in dorsal view, apical spur of almost equal length, slightly curved. Lower marginal teeth very distinct, sharp, upper one smaller, sharp.

Styli. As in Fig. 6; gonapophyses fine and very slightly curved, with cup-shaped basal part, small and short ensiform spines; with blunt apex. Laterotergites IX moderately broad, with few marginal bristles.

Differential diagnosis. *Ch. faillei* sp. nov. differs from all remaining species of the genus by the elytra having SP only in intervals 2-3, 5 and 7; from *Ch. zoufali* moreover by the longer antennae having the antennomeres 6-10 submoniliform; by the pronotum being widest in anterior third and being more shiny, having much finer reticulation and by the elytra being slightly shorter and especially having the base strongly sloping to the broadly rounded humeri.

Name derivation. The new species is named after our friend Arnaud Faille (Stuttgart, Germany), collector of the type specimen.

KEY TO SPECIES OF GENUS *CHAETOMARGOREICHEIA*

(Based on precise description of *R. gljevensis* and study of HT of remaining four species.)

- 1(4) Pronotum without submedian SP.
- 2(3) Pronotum with four pairs of lateral and two pairs of sublateral SP (distinctly moved from lateral channel); antennomeres 6-10 moniliform. L. 2.5 mm. Montenegro. *Ch. lakotai* (Magrini & Bulirsch, 2005)
- 3(2) Pronotum with four pairs of lateral and none sublateral SP; antennomeres 6-10 distinctly longer than wide. L. 2.8 mm. Croatia. *Ch. radei* sp. nov.
- 4(1) Pronotum with two pairs of submedian and with 4-5 pairs of lateral SP (latter not / indistinctly moved from lateral channel). Bosnia and Herzegovina or Croatia.
- 5(6) Elytra with SP in intervals 2-3, 5, 7 only; antennomeres 6-10 distinctly longer than wide. L. 2.5 mm. Bosnia and Herzegovina: Trebinje. *Ch. faillei* sp. nov.
- 6(5) Elytra with SP in intervals 2-7.
- 7(8) Pronotum with five pairs of lateral SP (two of them near posterior angles). Antennomeres 6-10 moniliform. Smaller, L. 2.4 mm. Herzegovina: Ravno. *Ch. zoufali* (Reitter, 1913)
- 8(7) Pronotum with four pairs of lateral SP (one of them near posterior angles). Antennomeres 6-10 submoniliform. Larger, L. 3.1 mm, Croatia: Gljević near Sinj. *Ch. gljevensis* Čurčić et al., 2018

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HT	L	TL	LA	L ---- LA	PM W	PL	PMW ---- PL	EL	EW	EL ---- EW	EW ---- PMW	HM W	STY	AN 1°	AN 2°	AN 3°	AN 4°	AN 11°
<i>Ch. zoufali</i>	2.44	2.28	0.80	3.05	0.59	0.58	1.01	1.29	0.80	1.61	1.35	0.40	0.24	0.08	0.12	0.05	0.05	0.10
<i>Ch. radei</i>	2.76	2.50	0.99	2.78	0.66	0.66	1.00	1.47	0.90	1.63	1.36	0.45	0.20	0.09	0.16	0.08	0.07	0.12
<i>Ch. faillei</i>	2.54	2.34	0.96	2.64	0.60	0.61	0.98	1.30	0.84	1.54	1.40	0.40	0.21	0.08	0.13	0.06	0.07	0.11

Tab. 1. *Ch. zoufali*, *Ch. radei* sp. nov. and *Ch. faillei* sp. nov. Measurements of HT (in mm).

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