Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen 71: 141-152 | Wien, Dezember 2019 | ISSN 0375-5223

Contribution to the tribe Pogonini Laporte, 1834 (Coleoptera: Carabidae: Trechinae) with descriptions of a new genus and a new species from southern Iran

Saeed Azadbakhsh

Abstract

Two new taxa of the tribe Pogonini Laporte, 1834 from southern Iran are described and illustrated: *Iranopogonus* gen.n. (type species: *Bedeliolus freyellus* Jedlicka, 1959) and *Pogonus* (*Pogonus*) *hormozganicus* sp.n. *Olegius* Komarov, 1996 syn.n. is synomized with *Pogonopsis* Bedel, 1898. Identification keys for the Palearctic genera of Pogonini and Iranian species of *Pogonus* Dejean, 1821 are provided.

Key words: New species, new genus, *Iranopogonus*, Pogonini, Carabidae, new synonymy, Iran, key.

Zusammenfassung

Zwei neue Taxa aus der Tribus Pogonini Laporte, 1834 aus dem südlichen Iran werden beschrieben und abgebildet: *Iranopogonus* gen.n. (Typusart: *Bedeliolus freyellus* Jedlicka, 1959) und *Pogonus* (*Pogonus*) *hormozganicus* sp.n. *Olegius* Komarov, 1996 syn.n. wird mit *Pogonopsis* Bedel, 1898 synonymisiert. Bestimmungsschlüssel werden sowohl für die paläarktischen Gattungen der Pogonini als auch für die iranischen Arten der Gattung *Pogonus* Dejean, 1821 vorgestellt.

Introduction

The tribe Pogonini Laporte, 1834 belongs to Trechinae Bonelli, 1810. The members of this subfamily are recognized by setae located on the outer furrow of the mandibles. Species of Pogonini can be separated from the remaining tribes of this subfamily by a normally developed last segment of the maxillary palpus and by a furrow on the "dorsal" (extensor) side of the tarsus. Eight genera are known from the Palaearctic Realm.

Pogonus Dejean, 1821 comprises 37 Palaearctic species and subspecies (Bousquet 2017). Their habitats are restricted to a humid-saline environment. They are small to medium-sized ground beetles; their dorsal surface is completely or partially green-metallic. The general habitus of *Pogonus* species resembles those of *Bembidion*, but the last segment of the maxillary palpi is well developed and tarsi dorsally with a longitudinal furrow. The species are arranged in two subgenera *Pogonoidius* Carret, 1903 and *Pogonus* s.str. The members of *Pogonus* s.str. are distributed in the Palaearctic and Australian regions. During the last decades, several species of this subgenus have been described from the Australian region (Hudson 2000, Baehr & Hudson 2001, Baehr 2010).

This study reports on the investigations in the south of Iran from 2014 to 2016, for the purpose of clarifying the fauna of the Iranian species of Pogonini. I was able to collect

several species of this tribe that were previously known from Iran, including *Bedeliolus freyellus* Jedlicka, 1959, from Bushehr and Hormozgan Provinces. In Hormozgan Province, I discovered a new species of the subgenus *Pogonus*. For my study on *B. freyellus*, I compared my material with the type and other species of the genus *Bedeliolus* Semenov, 1900. I concluded that *B. freyellus* does not fit in *Bedeliolus*, but should be transferred to a new genus. My studies on *Pogonopsis* Bedel, 1898, with the species *P. pallida* Bedel, 1898 from Tunisia, and on *Olegius* Komarov, 1996 showed that these two genera are synonyms.

Until now, ten species of the tribe Pogonini were known from Iran (Azadbakhsh & Nozari 2015, Ahmadi et al. 2016), but the new species raises the number to eleven.

Material and methods

The following acronyms are used for the depositories of the specimens examined:

cAZ Coll. Saeed Azadbakhsh, Bandar Abbas, Iran

cSM Coll. Mieczysław Stachowiak, Bydgoszcz, Poland

HYIM Hayk Mirzayans Insect Museum, Evin, Tehran, Iran

MNHN National Museum of Natural History, Paris, France

NHMB Natural History Museum of Basel, Switzerland

NMH Hungarian National Museum, Budapest, Hungary

ZMUT Zoological Museum of Tehran University, Tehran, Iran

Acronyms used for morphometry:

BL Body length, measured from apex of clypeus to apex of elytra

BW Maximum body width = maximum width of both elytra

PW Maximum pronotum width

PL Pronotum length

PWB Pronotum width at base

PWA Pronotum width at anterior margin

EL Elytral length, measured along suture

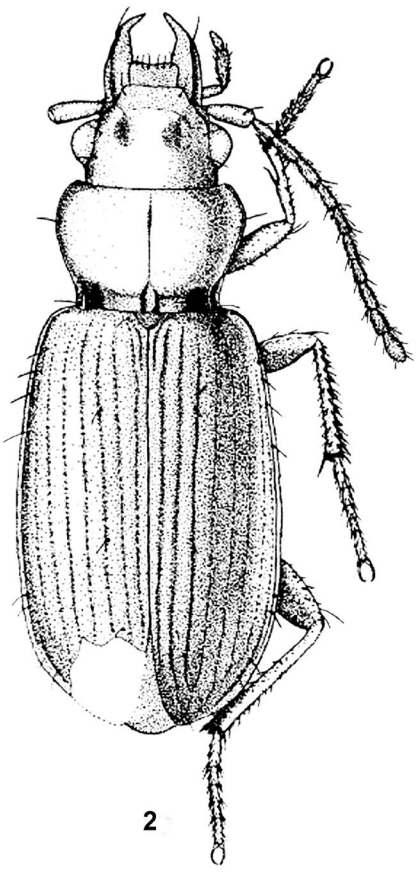
In the description of *Pogonus* (*Pogonus*) *hormozganicus* sp.n., general characteristics of the subgenus *Pogonus* are not repeated: body glabrous; seta at the outer margin of mandible present; two supraorbital setae; antennae pubescent from segment 3 on; last segment of maxillary palp well developed; basal margin of elytron complete and reaching scutellum; male foretarsus with two widened segments.

Taxonomy

New synonymy in *Pogonopsis* Bedel, 1898 (Figs. 1–3, 5, 6)

= *Olegius* Komarov, 1996, syn.n. (type species: *Olegius turkmenicus* Komarov, 1996).

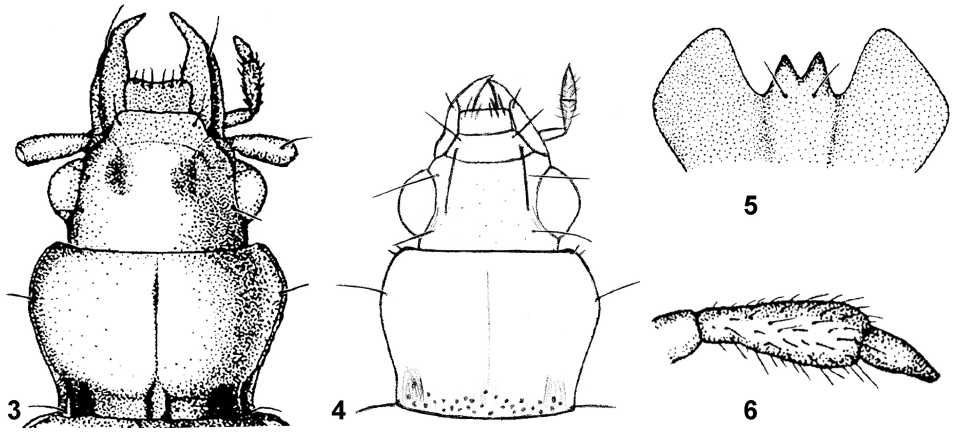
Taxonomic notes: Komarov (1996) described a new genus and species based on a single female, namely *Olegius turkmenicus* Komarov, 1996, from Turkmenistan. He



Figs. 1–2: Dorsal habitus: (1) Type of *Pogonopsis pallida*, Tunisia (photograph by Azadeh Taghavian, MNHN); (2) *Pogonopsis turkmenicus*, Turkmenistan (redrawn from original description by Komarov 1996).

separated his new genus and species from the other genera within the tribe Pogonini, based on small body size (4.5 mm), monochrome and yellow testaceous coloured body, without metallic lustre, frontal impressions flat, labrum slightly incised, mandible rather long, last segment of maxillary palpi twice shorter and considerably narrower than penultimate, elytra without basal border, third interstria with 3 setiferous punctures and shoulders rounded and without denticle (Fig. 2). However, when Komarov (1996) compared his new genus and species with other genera of Pogonini, he did not give attention to *Pogonopsis* Bedel, 1898 that was erected for *P. pallida* Bedel, 1898 from Tunisia.

Studies on *Pogonopsis pallida* showed that this genus comprises all important characters of the genus *Olegius* mentioned above, such as small body size (5 mm), monochrome, yellow coloured body (without metallic lustre), flat frontal impressions, slightly incised labrum, rather long mandible, last segment of maxillary palp half as long and considerably narrower than penultimate one, elytra without basal border, third interstria with three setiferous punctures, and shoulders rounded, without denticle. Unfortunately, I could not study the



Figs. 3–6; (3) Head and pronotum structure of *Pogonopsis turkmenicus*: (4) Head and pronotum structure of *Iranopogonus freyellus*. (5) Mentum structure of *P. turkmenicus*. (6) Maxillary palp structure of *P. turkmenicus*. Figs. 3, 5 and 6 redrawn from KOMAROV (1996).

types of *O. turkmenicus* to prove whether this species is synonymous with *P. pallida* or not, but based on the original description (KOMAROV 1996) and the type specimen of *P. pallida* deposited in MNHN, I consider the genus *Olegius* as a synonym of *Pogonopsis*.

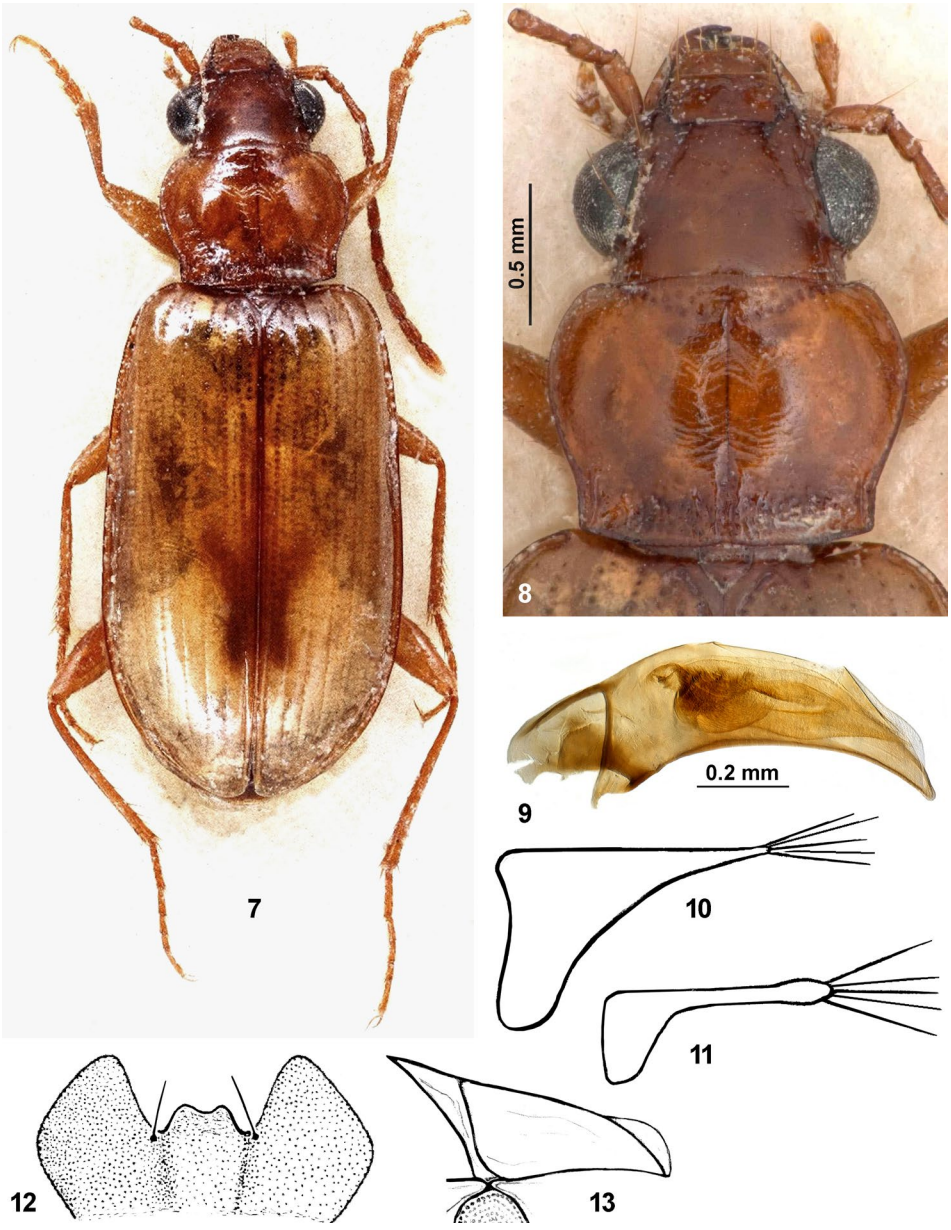
Included species: *Pogonopsis* includes *P. pallida* from Tunisia and *P. turkmenicus* comb.n. from Turkmenistan.

***Iranopogonus* gen.n.** (Figs. 4, 7–13)

Type species: *Bedeliolus freyellus* JEDLICKA, 1959

Generic diagnosis: The new genus possesses all key features of the tribe Pogonini, such as: outer furrow of mandible with setiferous puncture; last segment of maxillary palp well developed and as long as or slightly shorter than penultimate segment; frontal furrow deep and distinct, not semi-circular, and not extending to posterior supraorbital seta, but just extending behind the level of anterior supraorbital seta; tarsi dorsally with a longitudinal furrow. This new genus has a unique combination of characters that are not known from other genera within this tribe. Body small (4–5 mm), without any metallic lustre; elytra with dark pattern, without basal border; protarsus with shallow dorsal furrow but in meso- and metatarsus hard to see; antennomeres 3–11 pubescent, antennomere 1 beset with long and short bristles; tarsi dorsally pubescent; mentum with small bifid median tooth; submentum with two long setae and one short seta on each side; pronotum smooth, with two lateral bristles and one or two short setae on the anterior lateral margin.

Relationships with other genera: JEDLICKA (1959) described the species *Bedeliolus freyellus* from southeastern Iran ("Baluchistan") and placed it in this genus based on some small setae on the anterior lateral margin of the pronotum. However, this species is easily separated from the genus *Bedeliolus* by the light body colour, axe-shaped maxillary palp segment, absent basal border of elytra, shoulders with a prominent denticle, and smooth episterna. In *Bedeliolus* SEMENOV, 1900 (type species: *Bedeliolus vigil* SEMENOV, 1900), the body is dark brown to black, the basal border of elytra complete and distinct,



Figures 7–13: *Iranopogonus freyellus*: (7) Dorsal habitus of type specimen; (8) dorsal structure of head and pronotum of type specimen; (9) aedeagus structure with internal sac; (10) right paramere; (11) left paramere; (12) mentum structure; (13) metepisternum structure. Figs. 7 and 8 taken by Matthias Borer (NHMB).

the shoulders without distinct denticle, all episterna coarsely or strongly punctured, and palpi rather long and slender.

Iranopogonus gen.n. is close to *Pogonopsis* Bedel, 1898 by the absence of a basal border of elytra, and readily distinguishable from most other Pogonini genera by this character. The new genus is easily distinguishable from *Pogonopsis* based on the following differences: (1) head with big and more bulging eyes (versus eyes moderately sized and less bulging); (2) frontal furrow deep and distinct (versus frontal furrow flat); (3) mandibles of normal size (versus mandibles long; comp. Figs. 3 and 4); (4) last segment of maxillary palp as long or slightly shorter than penultimate one (versus half as long as penultimate one); (5) pronotum with some short setae of the anterior lateral margin (versus without short setae); (6) elytra with dark pattern (versus elytra monochromous); (7) labrum not incised (versus incised); (8) lateral margin of elytra ending with a minute denticle at the level of the base of stria 5 (versus minute denticle at the level of the base of stria 6); (9) median tooth of mentum short (versus strongly protruding; comp. Figs. 5 and 12).

Etymology: The name of the new genus is derived from Iran, the country of the type locality of *I. freyellus*.

Distribution: South of Iran and United Arab Emirates.

Included species: The new genus includes a single species, *Iranopogonus freyellus* (Jedlicka, 1959) comb.n.

Key to the Palaearctic genera of the tribe Pogonini

1 Basal border of elytra incomplete. 2

– Basal border of elytra complete. 3

2 Eyes big and bulging. Frontal furrow deep and distinct. Mandibles normal. Last segment of maxillary palp normal. ..... ***Iranopogonus* gen.n.**

– Eyes smaller and less bulging. Frontal furrow less deep and flat. Mandibles long. Last segment of maxillary palp smaller than penultimate segment. ..... ***Pogonopsis***

3 Sides of head without eye folds. Body yellow, without metallic shimmer. ..... ***Cardiaderus* Dejean, 1828**

– Sides of head with pronounced eye folds. 4

4 Episternum coarsely or strongly punctured. Basal margin of elytra without denticle. Anterior part of pronotum with a group of fine and upright bristles. Body dark without metallic shimmer. ..... ***Bedeliolus***

– Episterna smooth. Basal margin of elytra with prominent denticle. Body in most species with pronounced metallic shimmer. 5

5 Frontal furrows deep and distinct, posteriorly extending behind the level of anterior supraorbital seta. Pronotum at least basally densely punctured, with deep basal impressions which are limited on outer side by a distinct carina. ..... ***Pogonus***

– Frontal furrows less deep and posteriorly not extending behind the level of anterior supraorbital seta. 6

6 Body slender, cylindrical. Head including eyes about as wide as pronotum. 7

– Body flat. Head including eyes considerably narrower than pronotum. Mental tooth strongly protruding, reaching apex of labial palpi. Body narrower than in *Pogonus*. ..... ***Pogonistes* Chaudoir, 1871**

7 Basal fovea of pronotum indistinct. Trochanter of male very long. .....
..... ***Diodercarus*** **Lutshnik, 1931**

– Basal fovea of pronotum distinct. Trochanter of male normal. ..... ***Syrdenus*** **Dejean, 1828**

Iranopogonus freyellus **(Jedlicka, 1959) comb.n.** (Figs. 4, 7–13)

Type material examined: Holotype, 1 male, Iran, Sistan va Baluchestan Province, Chabahar env., IX.1937, leg. Band (NHMB).

Additional material examined: 1 male, Iran, Bushehr Province, Bushehr city env., 40 m a.s.l., 13.IV.2016, leg. S. Azadbakhsh (ZMUT); 2 males, same locality, 15.IV.2015, leg. S. Azadbakhsh (cAZ); 3 males, 3 females, same locality, 13.IV.2016, leg. S. Azadbakhsh (cAZ, cSM); 1 male, 1 female, Iran, Hormozgan Province, Bandar Abbas Minab road, Hasan-Langi, 27.III.2017, 27°22'03" N. 56°48'49" E, leg. S. Azadbakhsh (cSM).

Redescription: BL 3.8–5.0 mm, BW 1.5–1.97 mm, PW 1.2–1.57 mm, PL 0.9–1.1 mm, EL 2.4–2.9 mm. Macropterous. Reddish yellow, with dark pattern on elytra. Elytra yellow, with dark pattern at base and at middle; the middle maculae in mature specimen connected to lateral margins and apex, forming a cross pattern. Antennae, mandibles, legs until tarsi, and palpi yellow. Head including eyes slightly narrower than pronotum, with some shallow and sparse punctures. Eyes big and bulging. Temples short, without any bristle. Frons without setae; frontal furrows deep and long, but not reaching to posterior supraorbital seta. Mandibles with a distinct retinaculum. Mentum with bifid median tooth (Fig. 12).

Pronotum subcordate, transverse, constricted to base, sinuate to posterior angles; basal fovea rather deep; lateral margins with two long setae, one before the middle and one at the posterior angle, and with one or two short setae anteriorly; posterior angles sharp and distinct (Fig. 8), basal margin with sparse punctures.

Elytra long, almost parallel-sided, wider than pronotum, widest behind middle; shoulders distinct; anterior border incomplete, not reaching to scutellum (Fig. 8), but ending with a minute denticle at the level of the base of stria 5; striae narrow and shallow, finely punctate, weaker on sides, striae 6 and 7 more weaker at base and faint; interval 3 with 6 setiferous punctures, intervals almost flat, with strong microsculpture. Abdominal sterna darker and, besides a pair of ordinary setae, with short and very thin and sparse hairs. Metepisternum long and narrow (Fig. 13). Tibiae with rows of rather long and thick setae. First segment of protarsus in male widened. Fore tibia with several small spines at outer margin; tarsi dorsally pubescent.

Aedeagus: Median lobe (Fig. 9) without any apical capitulum, bent at apex; in dorsal view, apex curved to left. Internal sac as illustrated. Right paramere large and wide, subtriangular, with five elongate apical setae (Fig. 10). Left paramere narrow, with five elongate apical setae (Fig. 11).

Distribution: South of Iran.

Pogonus **(*Pogonus*)** ***hormozganicus*** **sp. n.** (Figs. 14–18)

Type material: Holotype: male, labelled "S-Iran, Hormozgan province/ Mand river, 2 m/ S. Azadbakhsh leg. 2014" (ZMUT). Paratypes: 2 females (cAZ, HYIM), same data as holotype; 1 male, 1 female, same locality as holotype except 23.III.2016, 2 m (cAZ); 1 male, 1 female, labelled "S-Iran, Hormozgan province/ Rostan river, 5 m/ S. Azadbakhsh leg. 23.III.2016" (cAZ); 5 males,

3 females, labelled "S-Iran, Hormozgan province/ Gachin river, 3 m/ S. Azadbakhsh leg. 2.IV.2016" (cAZ); 3 females, labelled "S-Iran, Hormozgan province/ Gachin river, 3 m/ S. Azadbakhsh leg. 12.IV.2016" (cAZ).

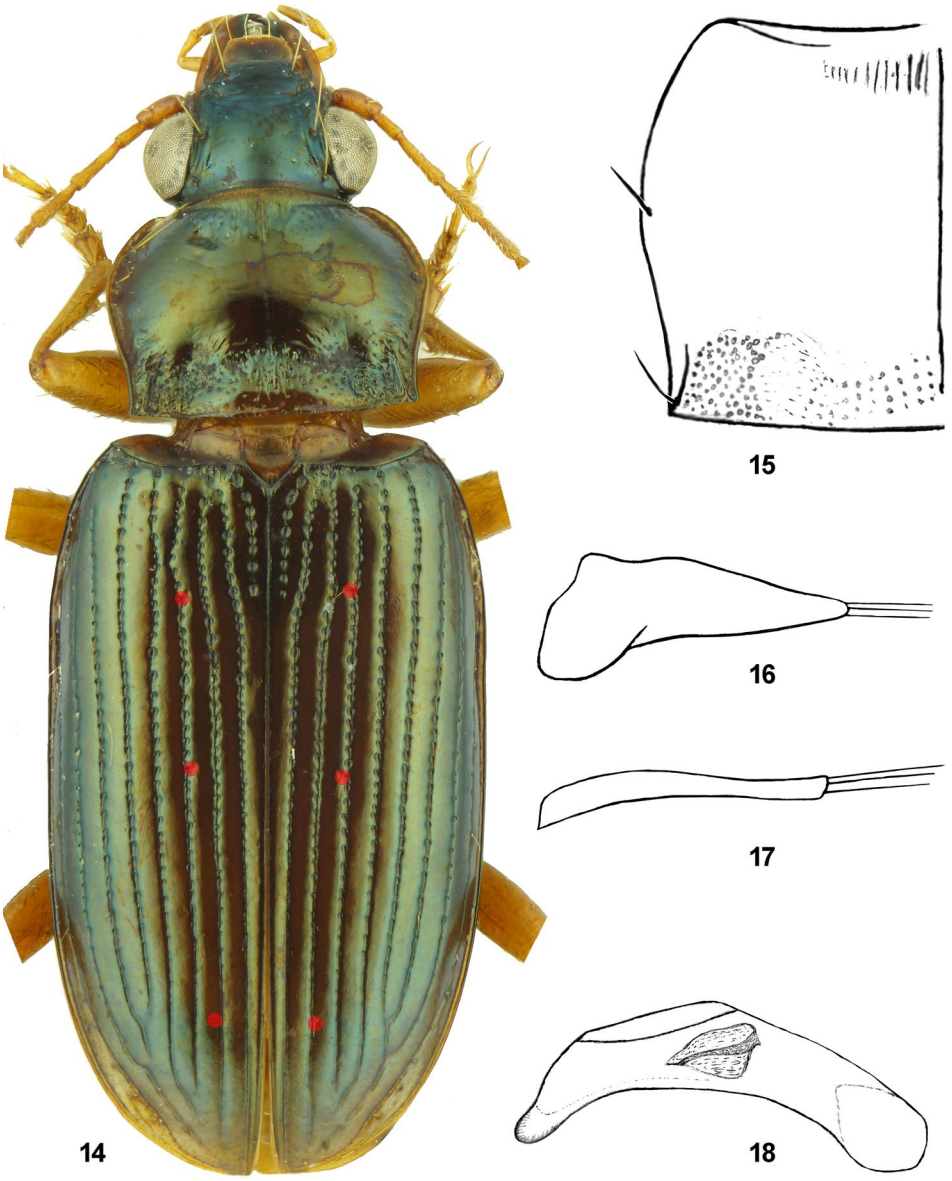
Description: BL 6.5–7.8 mm (Holotype 6.8 mm), BW 3.0–3.2 mm, PW 2.5–2.6 mm, PL 1.7–1.9, EL 4.9–5.2 mm, PWB/ PWA 1.38. Macropterous. Dark brown in immature to metallic green in mature specimens. Elytra uniformly metallic green, apex sometimes paler but not extended and limited to margin. Antennae, palpi and legs reddish. Head big, smooth, impunctate, with deep and parallel frontal furrows extending to setiferous punctures at anterior corners of clypeus. Pronotum almost rectangular, little wider than long, wider than head, base little wider than anterior margin; lateral margins gently sinuate to base, with sharp posterior angles that sometimes project laterally; anterior margin with some sparse punctures at middle; basal foveae moderately deep and closely punctate (Fig. 15). Elytra flat, long, with parallel sides; striae rather strong and uniformly punctured, well visible towards apex and lateral margins; intervals slightly convex; interval 3 with three setiferous punctures, the first two located next to third stria, the third one in most specimens next to second stria. Shoulders prominent, angled; humeral tooth distinct. Median lobe of aedeagus small, down-curved at apex, apical lamella rounded at apex (Fig. 18). Both parameres elongate; right paramere large, triangular, with three or more elongate apical setae (Fig. 16); left paramere narrow, with three or more elongate apical setae (Fig. 17). Internal sac as in Figure 18.

Differential diagnosis: The new species can be differentiated from most known Palearctic species of this subgenus by the shape of pronotum, as the sides are only slightly sinuate towards base and the basal margin little wider than the anterior margin. In *P. luridipennis* (Germar, 1823) and *P. iridipennis* Nicolai, 1822 the pronotum is strongly sinuate at base; moreover the elytra are usually brownish-yellowish, rarely more darkened. In *P. gilvipes* Dejean, 1828, *P. chalceus* (Marsham, 1802), *P. littoralis* Duftschmid, 1812, and *P. micans* Chaudoir, 1842 the pronotum sides are also strongly sinuate and the pronotum is wider; the basal margin is normally shorter than the anterior margin.

The new species is different from *P. syriacus* Chaudoir, 1871 by body shape and colour. At first sight, the new species is bigger and brighter, and the body is more parallel-sided than *P. syriacus*. In *P. syriacus* the lateral margins of the pronotum sides are also more strongly sinuate. The elytral intervals are flat in *P. syriacus* but slightly convex in *P. hormozganicus* sp.n. The appendages are dark in *P. syriacus,* but light reddish in *P. hormozganicus* sp.n. The median lobes of the aedeagi have similar shapes, but the ventral outline is more evenly curved in *P. syriacus*, whereas it is more strongly curved near the apex in *P. hormozganicus* sp.n. There are also differences in the structures of the internal sacs (comp. Figs. 16 and 29).

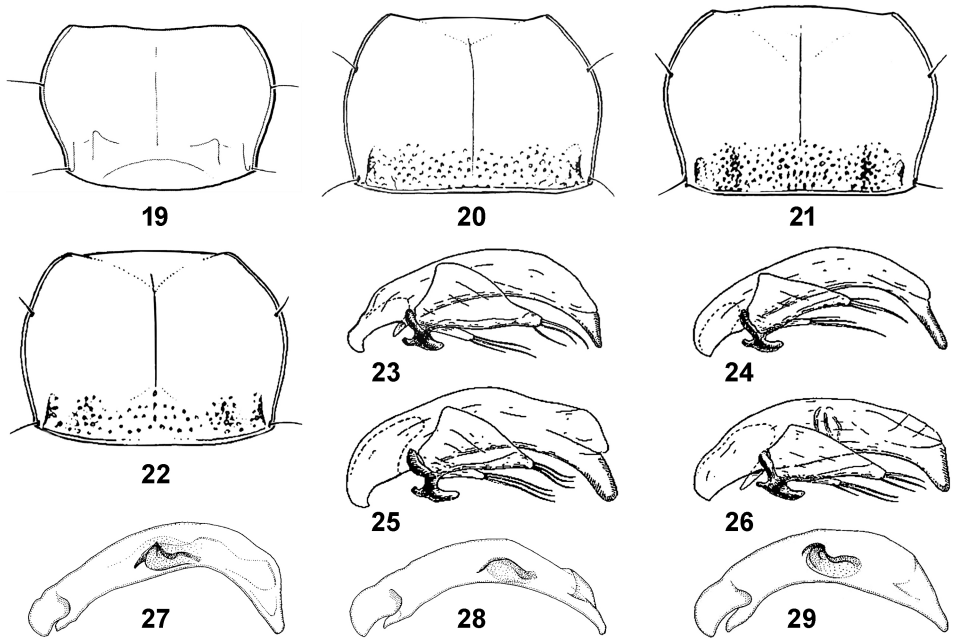
During my investigation in collections, I found some specimens of this new species that were identified as *P. biroi* Csiki, 1907, but *P. hormozganicus* sp.n. is different from *P. biroi* based on the shape of pronotum and elytra. The pronotum sides are more gently sinuate than in *P. biroi*, and the basal margin is wider. The elytra are more elongate and interval 3 has just three setiferous punctures, while in *P. biroi* interval 3 has more than four setiferous punctures.

Etymology: The specific epithet is based on the name of Hormozgan Province, where this species was collected for the first time.



Figures 14–18: *P. hormozganicus* sp.n.: (14) dorsal habitus; (15) pronotum (left half); (16) right paramere; (17) left paramere; (18) aedeagus structure (lateral view).

Distribution: The adult specimens of *P. hormozganicus* sp. n., were collected from different parts of Hormozgan Province. Due to the similarity of climatic conditions, it can be expected that it will be found in Busher and Sistan va Baluchestan Provinces, too.



Figures 19–29: Pronotum (19–22) and aedeagus (23–29) structures in *Pogonus*: (19, 24) *P. gilvipes*; (20, 28) *P. transfuga*; (21, 29) *P. syriacus*; (22, 27) *P. orientalis*; (23) *P. luridipennis*; (25) *P. chalceus*; (26) *P. littoralis*. Figs. 23–26 redrawn from Jeannel (1941), 27–29 redrawn from Arndt et al. (2011).

Key to the species of *Pogonus* in Iran

Note that all species belong to the subgenus *Pogonus* s.str.

1 Bicoloured dorsally: head and pronotum metallic bronze-green, elytra brownish yellow or sometimes darkened. Interval 9 of elytra at apex strongly widened and reducing widths of intervals 7 and 8. BL = 6–7 mm. Median lobe of aedeagus as in Figure 23. ..... ***P. luridipennis***

– Unicoloured, dark metallic; elytra at most slightly paler. 2

2 Lateral margin of pronotum strongly sinuate towards base; basal margin not or hardly wider than anterior margin (Fig. 19, 23). 3

– Lateral margin of pronotum not or moderately sinuate towards base; basal margin distinctly wider than anterior margin (Figs. 15, 20, 21, 22). 6

3 Elytra interval 3 with four or more setiferous punctures. 4

– Elytra interval 3 with three setiferous punctures. Legs or antennae at least in part darkened. 5

4 Elytral striae strong and almost uniformly punctured; striae 6 and 7 conspicuously finer at base, but still more or less recognizable; elytra almost parallel-sided. Bronze-green, sometimes tips of elytra brownish yellow. BL = 5–6.5 mm. Median lobe of aedeagus long (Fig. 24). ..... ***P. gilvipes***

– Elytral striae finely punctured; all of them finely defined, but striae 6 and 7 vanished and not recognizable at base; elytra less parallel-sided. BL = 6–6.5 mm. Median lobe of aedeagus small. ..... ***P. micans***

5 Elytral striae nearly disappearing towards apex and lateral margins. Elytra more oval, convex. BL = 5–7.8 mm. Median lobe of aedeagus as in Figure 25. ..... ***P. chalceus***

– Elytral striae well visible and hardly more delicate towards apex and lateral margins. Elytra elongate, parallel-sided, not convex. BL = 6.5–8 mm. Median lobe of aedeagus as in Figure 26. ..... ***P. littoralis***

6 Elytral interval 3 with four setiferous punctures, the last near apex and next to interval 2. Median lobe of aedeagus as in Figure 27. ..... ***P. orientalis* Dejean, 1828**

– Elytra interval 3 with three setiferous punctures. 7

7 Pronotum widest behind middle (Fig. 20). Aedeagus as in Figure 28. ..... ***P. transfuga***

– Pronotum widest in or slightly before middle (Figs. 15, 21). 8

8 Lateral margin of pronotum distinctly sinuate towards base (Fig. 21). Elytral intervals flat. Appendages dark. Median lobe of aedeagus down-curved along the ventral side (Fig. 29). ..... ***P. syriacus***

– Lateral margin of pronotum weekly sinuate towards base (Fig. 15). Elytral intervals slightly convex. Appendages light reddish. Median lobe of aedeagus down-curved near apex (Fig. 18). BL = 6.5–7.8 mm. ..... ***P. hormozganicus* sp.n.**

Acknowledgements

I would like to thank the colleagues who provided type material for comparison: Azadeh Taghavian (MNHN), Tamás Németh (NMH), and Matthias Borer (NHMB); and Mieczysław Stachowiak (Bydgoszcz, Poland) for his help.

References

Ahmadi M., Esfandiari M., Muilwijk J. & Ostovan H., 2016: A contribution to knowledge of the ground beetle fauna (Coleoptera: Carabidae) of Iran. – Entomologist's Monthly Magazine 152: 183–188.

Arndt E., Schnitter P., Sfenthourakis S. & Wrase D.W., 2011: Ground Beetles (Carabidae) of Greece. – Pensoft, Sofia, 394 pp.

Andrewes H.E., 1935: The fauna of British India, including Ceylon and Burma. Coleoptera. Carabidae. Vol. II. Harpalinae. – Taylor & Francis, London, 323 pp.

Azadbakhsh S. & Nozari J., 2015: Checklist of the Iranian ground beetles (Coleoptera; Carabidae). – Zootaxa 4024 (1): 1–108.

Baehr M., 2010: Two new species of the genus *Pogonus* from northern and western Australia (Coleoptera: Carabidae). – Records of the Western Australian Museum 25: 441–448.

Baehr M. & Hudson P., 2001: New species and a new genus of the subfamily Pogoninae from South Australia (Insecta: Coleoptera: Carabidae). – Records of the South Australian Museum 34: 1–18.

Bedel P.L., 1898: Diagnoses de deux genres nouveaux de Carabiques [Col.] du Sahara septentrional. – Bulletin de la Société entomologique de France 1898, 3 (2): 241–242.

Bousquet Y., 2017: Tribe Pogonini Laporte, 1834, pp. 354–357. – In: Löbl I. & Löbl D. (Eds.): Catalogue of Palaearctic Coleoptera. Vol. 1. Archostemata, Myxophaga, Adephaga. – Revised and updated Edition, Brill, Leiden – Boston, XXXIV + 1443 pp.

Hudson P., 2000: A new flightless species of *Pogonus* Nicolai (Coleoptera: Carabidae) from Western Australia. – Australian Journal of Entomology 39: 241–243.

Jeannel R., 1941: Coléoptères Carabiques. – Faune de France 39, Première partie, Librairie de la Faculté des Sciences, Paris, 571 pp.

Jedlička A., 1959: Weitere Neuigkeiten aus den Sammlungen des Museums G. Frey in Tutzing. – Entomologische Arbeiten aus dem Museum G. Frey 10: 515–522.

Komarov E.V., 1996: A new genus and species of carabids (Coleoptera, Carabidae) of the tribe Pogonini from Turkmenia. – Russian Entomological Journal 5 (1–4): 31–33.

Author's address: Saeed Azadbakhsh, Hormozgan, Bandar Abbas, 79187-99963, Iran.
E-mail: Azadbakhsh@live.com