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A review of genus *Omophron* Latreille, 1802 (Coleoptera: Carabidae) Palearctic fauna and distribution

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The article is the review of the fauna and distribution of the species of genus *Omophron* Latr. (Coleoptera: Carabidae) found in the Palearctic. It presents the list of the species, in which every species of the genus *Omophron* Latr. found in the Palearctic is given a general description, the information on the distribution of the species is provided, the data concerning the material processed and the most significant bibliography sources are indicated. In total there are 19 species indicated for the Palearctic in the article. Three species (*O. brettinghamae* Pasc., *O. interruptum* Chaud., *O. testudo* Andr.) are indicated for the Palearctic for the first time.

Key words: Omophron, Palearctic, fauna, distribution

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INTRODUCTION

Ground beetles of the genus *Omophron* Latreille, 1802 (Coleoptera: Carabidae) are conspicuous due to their oval body outline, hidden mesosternum, concealed scutellum, multi-striate elytra, and peculiar burrowing habits. There are 67 species of the genus *Omophron* Latr. ground beetles known in the world fauna. The group is cosmopolitan except for South America and Australia, where they remain unreported. The southern border of the prevalence area of the genus *Omophron* Latr. goes through South Africa, Madagascar, Malaya, the Philipines, Guatemala and Saint Domingo; the northern border reaches the Arctic Circle in some places.

To date the research of the genus *Omophron* Latr. in the Palearctic and in the world in general is to be considered insufficient, as there are only several publications concerning this genus of ground beetles. Although the attempts to carry out the revision of the world fauna have been made (Chaudoir, 1868; Bänninger, 1921), the lists and descriptions of the species indicated in them are insufficient; moreover, many of the taxons nowadays are the synonyms of the names of other species. Considering the research into the genus *Omophron* Latr. in the Palearctic we have to mention the survey of the Palearctic fauna published by Kryzhanovskij (1982), but it provides the data only on five species (*Omophron limbatum* (Fabricius, 1777), *O. aequale* Morawitz, 1863, *O. rotundatum* Chaudoir, 1852, *O. axillare* Chaudoir, 1868 un *Phrator variegatum* (Olivier, 1811) found in the Palearctic. The fauna of the genus *Omophron* Latr. in China can be considered to be studied rather thoroughly. M.

Tian and T. Deuve (2000) have published the data on the fauna of the genus in China including four new species (*O. pseudotestudo*, *O. parvum, O. yunnanense* and *O. hainanense*).

The species of the genus *Omophron* Latr. are spread unequally in the Palearctic region. All in all there are 19 species of the genus *Omophron* Latr. from both subgenuses – *Omophron* Latr. and *Phrator* Sem. - found in the Palearctic. The subgenus *Omphron* Latr. is represented by 17 species, but 2 species belong to the subgenus *Phrator* Sem.

12 of the species found in the Palearctic region are encountered only in the Palearctic, the distribution area of 6 species (*O. axillare* Chaud., *O. brettinghamae* Pascoe, 1860*, O. gemmeum* Chaudoir, 1868*, O. interruptum* Chaudoir, 1868*, O. oberthueri* Gestro, 1892*, O. testudo* Andrewes, 1919) stretches into the Oriental region, but the basic area of distribution of 1 species (*P. multiguttatum* Chaudoir, 1850) is the Afrotropical area. Only two species of the genus *Omophron* Latr. are found in the Western Palearctic. In the most part of the Western Palearctic only one species *O. limbatum* (F.) is distributed. The distribution area of the other species *P. variegatum* Ol. is the region of the Mediterranian Sea. There are 17 species of the genus *Omophron* Latr. found in the Eastern Palearctic. The greatest variety of species is observable in Southeast Asia (16 species). One species (*O. aequale* Mor.) is distributed in East Asia.

A large part of the species of the genus *Omophron* Latr. found in the Palearctic are represented only by some specimens, and thus it is possible that these species are more widespread in the region. It is necessary to do the research in order to define the distribution areas more precisely.

MATERIAL AND METHODS

The material for the research was taken from the following collections: The Natural History Museum, London, United Kingdom (BMNH); Institute of Systematic Biology, Daugavpils University, Daugavpils Latvia (DUBC); Erdgenössische Technische Hochschule-Zentrum, Zurich, Switzerland (ETHZ); Institut Royal des Sciences Naturelles de Belgique, Brussel**,** Belgium (ISNB); Latvian Natural Histotry Museum, Department of Entomology, Riga, Latvia (LDM); Institute of Biology, Salaspils, Latvia (LUBIC); Pedagogical University, Moscow, Russia (MPUC); Staatliches Museum für Naturkunde, Stuttgart, Germany (SMNS); Staatliches Museum für Tierkunde, Dresden, Germany (SMTD); Russian Academy of Sciences, Zoological Institute, St. Petersburg, Russia (ZIN); Institute of Zoological Taxonomy, Museum of Zoology, Amsterdam University, Amsterdam, Netherlands (ZMAN); Zoological Museum, University of Copenhagen, Denmark Copenhagen (ZMUC); Zoological Museum of Moscow State University, Moscow, Russia (ZMUM); Museum of Zoology, Barcelona, Spain (MZBS).

Microscopic and morphometric studies were carried out using the stereomicroscope *Zeiss SteREO Lumar V12* and the digital photocamera *Axiocam*. The photos were processed and morphometric measurements were done using the software *Axioview* 4.4. To investigate particular features (especially on the level of subspecies) the laser scanning confocal microscope *Zeiss LSM 5 PASCAL* was used.

In total 2168 specimens of 15 species have been investigated. Processing the material of the collections all the specimens have been allotted the name of species, their sex has been defined, in cases of necessity spicemens' genitalia were dissected and morphometric measurements were made. On the basis of the analysis of the data presented in scientific literature (including the original descriptions of all the species found in the Palearctic) and the study of the collection materials, the list of species has been made, in which every species of the genus *Omophron* is given a general description, the information on the distribution of the species is provided, the data concerning the material processed and the

most significant bibliography sources are indicated.

The limits of the Palearctic region, as those of other biogeographical regions, are used according to the data provided by Löbl & Smetana (2003). The labels of regions and countries used in the publication:

AFR - Afrotropical Region; PAR - Palearctic Region; ORR - Oriental Region;

PAR: AB – Azerbaijan; AF – Afghanistan; AG – Algeria; AL – Albania; AR – Armenia; AU – Austria; BE – Belgium; BH – Bosnia Herzegovina; BU – Bulgaria; BY – Bylorussia; CH – China (GUA – Guandong; HAI – Hainan; GUX – Guanxi; JIA – Jiangsu; NMO – Nei Mongol; SCH – Sichuan; XIN - XinJiang); CR – Croatia; CZ – Czech Republic; DE – Denmark; EG – Egypt; EN – Estonia; FR – France; GB – Great Britain; GE – Germany; GG – Georgia; GR – Greece (incl. Crete); HU – Hungary; IN – India (HP – Himachal Pradesh; SM – Sikkim; UP – Uttar Pradesh; UTH - Uttarkhand); IR – Iran; IS – Israel; IT – Italy; IQ – Iraq; JA – Japan; KI – Kyrgyzstan; KZ – Kazakhstan; LA – Latvia; LB – Lebanon; LT – Lithuania; MC – Macedonia; MD – Moldova; MG – Mongolia; MO – Montenegro; NC – North Corea; NL – The Netherlands; PA – Pakistan; PL – Poland; PT – Portugal; RO – Romania; RU – Russia (CT – Central European Territory; FA – Far East; NT – North European Territory; SH – Sakhalin; ST – South European Territory; WS – West Siberia); SC – South Korea; SE – Serbia; SK – Slovakia; SL – Slovenia; SP – Spain; SV – Sweden; SZ – Switzerland; SY – Syria; TA – Tatarstan; TD – Tadzikistan; TM – Turkmenistam; TRa – Turkey (Asia part); TRe – Turkey (Europe part); TU – Tunis; UK – Ukraine; UZ – Uzbekistan; YU – Yugoslavia (Serbia, Montenegro).

AFR: DRC – Democratic Republic of Congo; ER – Eritreja; ET – Etiopia; KY - Kenya; SO – Somalia; SU – Sudan; TA – Tanzania; UG – Uganda.

ORR: BG – Bangladesh; CH – China (GUA - Guandong, GUX - Guanxi, HAI – Hainan island, NMO – Nei Mongol, SCH - Sichuan, SHA - Shanki, YUN – Yunnan, ZHE - Zhejiang, IN – India (AS – Assam, JH - Jharkhand, OS - Orissa, PJ - Punjab; TN -Tamil Nadu, WB - West Bengal); LO – Laos; MY – Myanma; VT – Vietnam.

LIST OF SPECIES

SUBGENUS *OMOPHRON* LATR.
OMOPHRON AEQUALE MORAWITZ, 1863

The species is very similar to *Omophron limbatum*. Although the puncturation on the pronotum of *O. aequale* is a little finer, it is denser than that of *O. limbatum*. Besides the already-mentioned features this species has denser and coarser puncturation on the side margins of the sternites 1 and 2. There are some differences also in the pattern of the surface, but it can be varied for both species. The species can be defined for certain only taking into account the form of the top of aedeagus.

Nowadays *Omophron aequale* is divided into 2 subspecies - O. *aequale aequale* and *O. aequale jacobsoni*. A more detailed description of the subspecies is presented below.

Omophron aequale aequale Morawitz, 1863

Description: length: 6.4 – 7.2 mm; width: 4.2 – 4.4 mm. This species has a better developed dark pattern of the upper part of the body: On the elytra the base segment of the pattern occupies the whole basic part and usually reaches to the elytral stria 15; the mid segment of the elytra surface pattern stretches to the elytral striae 14-15, the middle and the top segments of the pattern are wide, massive and almost merge together. Unlike *O. aequale jacobsoni* Sem. the top parts of the elytra of this species are less rounded. The elytral pattern is as presented in Fig. 1.1.

Distribution: PAR: JA; RU (Sakhalin Island)

Processed material: Japan: 1910 (2 Males, 5 Females, Lewis leg.); Aomori Prefecture, Aomori (1 Female, 4 Males, E. Suenson leg.) (ZMUC);

Chiba Prefecture, Funabashi, 16.07.1946 (3 Males, 3 Females, Tanaka leg.) (ETHZ); Honshu Island, Kyoto Prefecture, Kyoto & vic. (valleys), 10.1945 (1 Female, Darlington leg.) (BMNH); Hokkaido Prefecture, Sapporo, 05.-16.08.1880 (BMNH); Hokkaido, Bakkai Wakkanai city, 22.06.1001 (2 Male, A. Sato leg.) (DUBC), Hokodate (1 Female) (holotype) (ZIN); Kyushiu Island (1 Female); (ETHZ); Kanagawa Prefecture, Hiratsuka, 27.08.1962 (1, Tanaka leg.) (ZIN); Niigata Prefecture, Niigata, 04.-16.09.1891 (5 Males, 9 Females) (BMNH); Osaka Prefecture, Osaka, 02.01.1896. (1 Male, Lenz Vend leg.) (ETHZ); Saitama Prefecture, Kawaguchi lake, 13 VIII 1939 (1 Male, E. Suenson leg.) (ZMUC); Tokyo Perfecture, Tamagawa, 01.06.1913 (1, Gallois leg.) (ZIN); Tokio, (1 Male, Bodemeyer leg.) (ETHZ). **Russia:** Sakhalin Island, Aniva distr., Taranai vill., 30.07.2006 (1 Female, Legezin leg.) (DUBC).

Type locality: Hokadate, Japan. Holotype is deposited in ZIN.

References: Chaudoir, 1868; Gestro, 1892; Hurka, 2003; Kryzhanovskij, 1982; Kryzhanovskij et. al., 1995; Morawitz, 1863

***Omophron aequale jacobsoni* Semenov, 1922**
= *mongolicum* Semenov, 1922

Description: lenght: 6.5 – 6.9 mm; width: 4.1 – 4.5 mm. The dark pattern of this subspecies' surface is less developed; the base segment of the pattern on the elytra is discontinued in the area of the elytral striae 5 – 8. The middle segment of the pattern on the elytra is discontinued in the area about the elytral striae 7 – 10 and it is widely separated form the top line of the elytra pattern. Unlike *O. aequale aequale* Mor., the apex of the elytra of this species are more rounded. The elytral pattern is as presented in Fig. 1.2.

Distribution: PAR: CH: GUA, GUX, HAI, JIA, NMO, SCH, SHA, YUN, ZHE; MG; NC; RU: FE; SC

Processed material: China: Cheking, 4. VII 1919 (1 Female, E. Suenson leg.); Pinglu, 15. IX 1929 (1 Female, 2 Females, E. Suenson leg.) (ZMUC); Fujian province = „Futschau" - ?, 3.06.1903 (1 Male, Siemssen leg.) (ETHZ); **Mongolia:** Lake Bujr Naur (holotype of syn. *mongolicum*) (ZIN); **North Korea:** Kongosan mount, Wonson, 11. X 1929 (1 Female, E. Suenson leg.) (ZMUC); **Russia:** Primorje reg., Nahodka distr., Vasilievska, 06. VIII 1995 (2 Males) (DUBC); Suputinsk reserve, 22.-24. VIII 1970 (1 Female, Shabliovskij leg.) (DUBC); Partizansk, Suchansk forest district 09.08.1910 (1 Female, Elizarov leg.) (DUBC); Arsenjev distr., Anuchino vill., 02.08.2008 (6 Females, 8 Males, Legezin leg.) (DUBC); Ussurijsk, Sutschan (1 Male) (ETHZ); Lazovsk, 06.06.1997 (2 Females, 3 Males, Sundukov leg.) (MPUC); Ussurijsk distr., Kamenicka, 08.08.1989 (1 Female, Xvilja leg.) (MPUC); Xasan distr., Golubinij Utjos 42°24'51'' N, 130°44'54" E, 01.-08.07.2000 (1 Female, Melnik leg.) (MPUC); Vladimir Monomax, 18.06.1909, Djukin leg. (1, holotype), 18.06.1913 (16), 28.06.1913 (6), 29.07.1909 (42) (paratypes), Djukin leg., 18.06.1909 (3), 29.07.1909 (3), 03.07.1913 (2), 12.06.1913, (6), 04.09.1913 (4) (paratypes) (ZIN); Tumenj river near South Corea border, Cherskij leg., 03.07.1913, (2), 04.09.1913 (30) (paratypes), 03.07.1913 (3, Cherskij leg.), 12.06.1913 (31, Cherskij leg.), 18.06.1909 (1, Cherskij leg.), 03.07.29.07.1909 (20, Cherskij leg.) (ZIN); Prihankaysk distr., Lake Hanka, 30.05.08 (1, Cherskij leg.) (ZIN); Ussurijsk distr., Vinogradovka, 30.07.1929 (1, Kirichenko leg.) (ZIN); Suputinsk Nat. Res., 30.06.1960 (2, Filipov leg.) (ZIN); Usurijsk, collect. with light traps, 14.08.1969 (1, Shablokovskij leg.) (ZIN); Xasan distr., Andrejevka vill., collect. with light traps, 15.08.1985 (1, Sinev leg.) (ZIN); Barabash – Levada, 07.-19.07.1991 (1 Male, Shestoralov leg.) (ZMUM); Kajmanovka, 06.08.1992 (1 Male, Beloborodov leg.), 25.07.1992 (1 Male, Beloborodov leg.) (ZMUM); Ussurijsk distr., Kamenusha, 22.07.1982 (1, Nikitskij leg.), 25.07.1982 (1, Nikitskij leg.), 06.11.1984 (1, Nikitskij leg.) (ZMUM).

Type locality: Vladimir Monomax, Primorje. (Holotype is deposited in ZIN. Type locality of syn. *O. mongolicum* Sem. is Lake Bujr Naur,

Mongolia. Holotype of syn. *O. mongolicum* Sem. is deposited in ZIN).

References: Kryzhanovskij, 1982; Kryzhanovskij et. al., 1995; Semenov, 1922a; Tian & Deuve, 2000

***OMOPHRON AXILLARE* CHAUDOIR, 1868**

Description: lenght: 6 – 7 mm, width: 3.6 – 3.9 mm. *Colour* testaceous, shiny; sterna and base of venter piceous; sides and back of head, a broad transverse patch along base of prothorax, occupying two-thirds of the area, reaching at sides to marginal channel, and prolonged narrowly in front to a point at middle of apex, and an elytral pattern of a rather bright green (sometimes bluish).

Head is rather coarsely punctate at sides and back, smooth at sides of front and along middle line, clypeus nearly smooth but with some faint cross-striation, bisetose, unbordered.

Prothorax transversely depressed along base, rather coarsely but not very closely punctate, the punctures large and confluent at sides of base, which is bisinuate on each side, sides, very slightly rounded, marginal channel very shiny, nearly smooth, front angles rather shortly produced, though acute, hind angles right, median line fine, not nearly reaching either base or apex.

Elytra oval, convex, base unbordered, sides moderately widened behind shoulders; 15 punctate striate, punctures large and clear, intervals smooth, nearly fiat on disk, convex at sides. A fine but vague microsculpture is present. The elytral pattern is as presented in Fig. 1.4.

Comparisons: As to the body size and structural features, as well as to the form of aedeagus, this species is similar to *O. rotundatus* Chaud. The most peculiar difference is the rather great and massive dark pattern on the pronotum. This species is known only from mountaineous regions.

Distribution: PAR: AF; PA; IN: HP, UP, UTH; ORR: IN: PJ; BG

Processed material: India: Himachal Pradesh, Shimla District, Kotkhai, 5500 ft., 10.05.1924 (1 Female, Beeson leg.) (BMNH); Kangra District, Baijnath 3300 ft. (1 Female, Champion leg.) (BMNH); Uttarakhand, Almora District, Swal R Basin (1 Male, 1 Female, Champion leg.) (BMNH); Uttarkhand, Kumaon, Sarju Valley, 5000 ft., (3 Males, 11 Female, Champion leg.) (BMNH); Uttarkhand, Kumaon, Haldwani District (1 Female, Champion leg.) (BMNH); Uttarkhand, Kumaon, W Almora District, (1 Female, Champion leg.) (BMNH); Uttarkhand, Kumaon, Almora, 01.1920 (1 Male) (ETHZ); Dehradun district, Mussoorie (2 Males, 1 Female) (ETHZ); **Afganistan:** Nurestan, 20 km SW Waygal, 1500 m, 14.07.1972 (1 Female, 2 Males, Kabakov leg.) (ZIN); SW Chapa – Dara, 1300 m, 03.06.1974 (1 Female, 2 Males, Kabakov leg.) (ZIN); Kunar province, Dara-I-Pech, 2000 m, 24.05.1972 (1 Male, Kabakov leg.) (ZIN).

Type locality: „North India" **(**holotype is deposited in Muséum National d'Histoire Naturelle, Paris, France).

References: Andrewes, 1926; Andrewes, 1929; Chaudoir, 1868; Gestro, 1892; Hurka, 2003; Kryzhanovskij, 1982

***OMOPHRON BRETTINGHAMAE* PASCOE, 1860**
= *laevigatum* Gestro, 1888

Description: lenght: 3.5 – 4 mm, width: 2.4 – 2.6 mm. *Colour* very dark metallic green, shiny; sterna piceous, clypeus and middle of front dark red; labrum, palpi, antennae, side margins of prothorax (wider at apex than at base) and elytra, apex of venter, and legs testaceous.

Head sparsely punctate, smooth in middle, clypeus smooth, bisetose, suture with an angle at middle, mentum with rounded lobes, rather sharp at apex, subocular ridge deep, extending well beyond buccal fissure, surface between it and eye coarsely punctate.

Prothorax rather finely and not very closely punc-tate, base bisinuate on each side, sides very gently and evenly rounded, margin smooth, a little refiexed, median line obsolete.

Elytra oval, convex, base unbordered, sides a little widened behind shoulders, margin narrowly refiexed; 15-striate-punc-tate. The 13th and 14th elytral striae are almost reduced, there are only some first punctures visible. The elytral pattern is as presented in Fig. 1.5.

Comparisons: *O. brettinghamae* Pasc. is similar to *O. gemmeum* Andr. In comparison with *O. brettinghamae* Pasc., the side margins of pronotum and elytra of *O. gemmeum* Andr. do not merge into one line. The side margins of pronotum and elytra of *O. gemmeum* are narrower; punctation on the pronotum is coarser. *O. gemmeum* has a visible middle segment of the elytra pattern, but in the case of *O. brettinghamae* it is almost reduced.

Distribution: PAR: NP (new locality); ORR: MY; BG; VT

Processed material: Nepal, Narayani Prov., Sauraha Ufer Rapti River, 180m, 27ţ34'80''N, 84ţ29'49''E, 18.04.2000, (1 Female, A. Skale leg.) (BMNH). During the research 9 specimens from the Oriental region (including the holotype) were processed as well.

Type locality: „Dacca" (holotype is deposited in BMNH).

References: Andrewes, 1929; Gestro, 1888; Pascoe, 1860

***OMOPHRON CHELYS* ANDREWES, 1921**

Description: lenght: ~4 mm, width: ~2.7 mm. *Colour* very dark metallic green, shiny; sterna piceous, clypeus, middle of front, and venter (except last segment) brown; labrum, palpi, antennae, side margin of prothorax, a pattern on elytra, and legs testaceous.

Head moderately punctate at sides and back, front nearly smooth, clypeus smooth, bisetose, suture very fine, forming; an obtuse angle in middle, mentum with a rounded tooth, epilobes projecting, subocular ridge extending beyond fissure, coarsely punctate in front, impunctate behind.

Prothorax transverse, convex, moderately and nearly uniformly punctate, base bisinuate on each side, sides gently and evenly rounded, with a smooth, explanate margin, slightly reflexed, median line obsolete.

Elytra oval, convex, base unbordered, sides slightly widened behind shoulders, with reflexed margin narrower than that of prothorax; 15-striate-punctate, striae evanescent towards apex; intervals flat and smooth. No microsculpture. The elytral pattern is as presented in Fig. 1.6.

Comparisons: *O. chelys* Andr. is similar to *O. brettinghame* Andr., which is distributed in the Oriental region. In comparison with this species *O. chelys* Andr. has a little bigger and more prolonged body form, coarser punctation on its head, pronotum and elytral striae.

Distribution: PAR: IN: SM

Processed material: India: Inde Anglaise Pedong, Region de Darjecling, 1935 (1 Female); Gopaldhara, 2500 ft., 03.06.1920 (1 Male, Stevens leg.) (Holotype) (BMNH).

Type locality: „Gopaldhara" (holotype is deposited in BMNH)

References: Andrewes, 1921; Andrewes, 1929; Hurka, 2003; Semenov-Tian-Shanskij, 1922

***OMOPHRON GEMMEUM* ANDREWES, 1921**
= *gemma* Andrewes, 1921, nec Casey, 1897

Description: lenght: 3.75 - 4, width: 2.7 – 2.8. *Colour* moderately bright metallic green, shiny; sterna piceous, venter rather lighter; clypeus and labrum dark red; palpi, antennae, middle of front,

side margins of prothorax and elytra, and legs testaceous.

Head moderately punctate, more sparsely on middle of front, clypeus smooth, bisetose, suture very fine, almost arcuate, mentum with rounded lobes, epilobes forming a sharp point at extremities, subocular ridge extending beyond fissure, coarsely punctate in front, impunctate behind.

Prothorax moderately punctate, rather sparsely on disk, base bisinuate on each side, sides evenly rounded, with smooth, slightly re- flexed margin, median line nearly obsolete.

Elytra oval, con-vex, base unbordered, sides slightly widened behind shoulder, with narrow reflexed margin; 15-striate-punctate intervals flat and smooth. No microsculpture. The elytral pattern is as presented in Fig. 2.2.

Comparisons: *O. gemmeum* Andr. is similar to *O. brettinghame* Pasc., which is widespread in the Oriental region. In comparison with the species *O. brettinghamae* Pasc., the side margins of pronotum and elytra of *O. gemmeum* Andr. do not merge into one line. The side margins of pronotum and elytra of *O. gemmeum* are narrower; the pronotum punctation is coarser. *O. gemmeum* has a visible middle segment of the elytra pattern, but in the case of *O. brettinghamae* it is almost reduced.

Distribution: PAR: IN: UP; ORR: IN: AS

Processed material: India: Uttarkhand, W. Almora, Kumaon, (1 Female, Champion leg.) (Holotype) (BMNH); Uttarkhand, W. Almora, Kumaon (2 Females, Champion leg.) (Cotype) (BMNH), (5 Males, 17 Females, Champion leg.) (BMNH); Haldwani distr., Kumaon (1 Male, 3 Females, Champion leg.) (BMNH); Nim Nadi, Dehra Dun., 09.04.1922 (1 Female, Cameron leg.) (BMNH); Haldwani distr., Seljam, 05.1921 (2 Females, Champion leg.) (BMNH); Uttarakhand, Haldwani (1) (Compared with type) (ETHZ). During the research 6 specimens from the Oriental region have been processed as well.

Type locality: W. Almora, Kumaon (holotype is deposited in BMNH).

References: Andrewes, 1921, Andrewes, 1921a; Andrewes, 1929; Hurka, 2003;

***OMOPHRON HAINANENSE* TIAN & DEUVE, 2000**

Description: lenght: 6.9 mm, width: 4 mm. Colour testaceous, dull, front of head pale yellow, sterna piceous, ventral side, patch of pronotum, patches on back and side of head, central pronotum and elytra dark green.

Head with narrower green patch along base, only extending to the half of eyes, front margin arcuate backward at sides.

Pronotum hardly depressed along base, moderately and irregularly punctate, but not so at sides. Sides very slightly rounded, faintly constricted near hind angles, which are nearly rectangular but rather blunt. Patch on pronotum ocuppying only the central half, attacking base, apical pointed but not extending frontal margin.

Elytra oval, strongly convex, base unbordered, sides distinctly but not strongly dilated behind shoulders; 15-punctate-striate, punctures moderate; intervals rather flat, not convex at sides, smooth, with isodiametric microsculpture.

Distribution: PAR: CH: HAI

Type locality: Hainan Island (no detailed data), South China, X-1980 (holotype is deposited in insect collection of South China Agricultural University, Guangzhou, China).

References: Tian & Deuve, 2000

***OMOPHRON INTERRUPTUM* CHAUDOIR, 1868**
=*interruptus,* Bänninger 1918

Description: Lenght: 6 – 6.5 mm; width: 4 – 4.25 mm. Color flavous, beneath testaceous, an ill-defined transverse patch on middle of prothorax

light brown; a narrow border at back of head and along internal margin of eye, a very small central basal patch on prothorax, and an elytral pattern very dark green.

Head flat, smooth, faintly striate near eyes, clypeus smooth, bisetose, widely emarginate in front, suture with an obtuse angle in middle, labrum emarginate, mentum small, deeply emarginate, lobes rounded, tooth acute, subocular ridge visible only as a short furrow behind buccal fissure, area behind eye lightly striate-punctate.

Prothorax coriaceous, moderately convex, base bisinuate, sides almost straight, hind angles not much rounded, median line distinct, the dark colour at base extending along it to apex.

Elytra short oval, moderately convex, base with an ill-defined border at sides, sides not much dilated behind shoulder, border minutely and incon-spicuously dentate in front; 15-punctate-striate, intervals, flat and smooth on disk, convex, narrower, and slightly rugose at sides. A fine microsculpture is present. The elytral pattern is as presented in Fig. 2.4.

Distribution: PAR: NP; ORR: BG
Data from Nepal was taken from: http://www.flickr.com/photos/coleoptera-us/4547873289/. Label data: "Nepal, Sauraha, Rapti Riverleg. A.Skale, 2000; det. W.Lorenz, 2002".

Processed material: 3 individuals from Oriental region

Type locality: „Dacca" **(**holotype is deposited in Muséum National d'Histoire Naturelle, Paris, France).

References: Andrewes, 1929; Bänninger 1918; Chaudoir, 1868

***OMOPHRON LIMBATUM* (FABRICIUS, 1777)**

= *dubium* (Herbst, 1779) (*Carabus*); *coccinelloides* (Petagna, 1819) (*Nitidula*); *ab. disjunctum* Dalla Torre, 1877; *kanalense* Fauvel, 1882; *maculipenne* (Pic, 1901); *corcyreum* Sahlberg, 1903; *sokolari* Roubal, 1909; *baenningeri* Krausse, 1915 nec Dupuis, 1912; *solskyi* Zaitzev, 1916; *confluens* Chobaut, 1923; *ab. kraussei* Csiki, 1927

Description: lenght: 6.5- 6.2 mm, width: 3.6 – 4.3 mm. This is the species that has the features of the genus. The green pattern on pronotum and elytra characteristic of the genus can be very varied. Different colour variations have been allotted various names, but they have not yet acquired the status in nomenclature. As well as the pattern on the body surface, also the punctate of the pronotum and abdomen, and the microsculpture of elytra are very varied. The frons with microsculpture and the clypeus may be longitudinally plicated. Plication is usually characteristic of the *O. limbatum* F. spicemens from the regions of Central Asia. These specimens usually have not very dense punctation on their rather smooth abdominal sternites, as well as many other differences.

Comparisons: In appearance and structural peculiarities the species is very similar to *O. aequale* Mor. This species has characteristic finer and sparser puntation on the side margines of the sternites 1 and 2. There are some differences also in the pattern of the surface (see Fig. 1.3), but it can vary in both species. This species can be certainly stated only taking into account the top form of the aedeagus.

Distribution: PAR: AB; AF; AG; AL; AR; AU; BE; BH; BU; BY; CR; CT; DE; EN; FR; GB; GE; GG; GR; HU; IN; IT; KI; KZ; LA; LT; MC; MD; MO; NL; NT; PL; PT; RO; SE; SK; SL; SP; ST; SV; SZ; SY; TA; TD; TM; TRa; TRe; TU; UK; YU; WS

Processed material: Asia Central, Wernyi (6) (ETHZ); **Azerbaijan**: Yardymly, Avash, 1200 – 1500 m, 14.-17.06.1996 (1 Male, 2 Females, Schawaller leg.) (SMNS); Lankaran (1) (ZIN); Lankorancaj, 26.08.1932 (3, Znajko leg.) (ZIN); Lerik, 12.06.1976 (3, Petrenko leg.); 15.07.1909 (2, Kirichenko leg.) (ZIN); Giljanchay, Naxich (1, Znajko leg.) (ZIN); **Austria**: (2, Miller leg.) (ZIN);

Chech Republic: Stredocesky distr., Rakovnik (1 Male, Pprochazka leg.) (ETHZ); South Moravia, Lednice, Pavlł, 24.V 1954 (3 Males, 3 Females, M. Stiprais leg.) (DUBC); Moravia (1 Female, Reitter leg.) (MZBS); **France**: Bord de l'Ardčche, Arbas (2 Females, Negre leg.) (MZBS); **Germany**: Sommerda distr., Vogelsberg munip., Grhzg. Hessen (1 Male, Schlitz leg.) (ETHZ); Hamburg (2) (ZIN); Brandenburg, Postdam, 24.04.1907 (ZIN); **Greece:** Thassos Crisso Akroyiali, nr. Potamia, 01.08.1972 (1 Male, Russell leg.) (BMNH); **Hungary:** Neusiedler lake (30) (ZIN); **Moldova**: Vall. Duberland (1, C. Montandon leg.) (ETHZ); Cahul distr., Roshu vill., Prut river., 02.08.1981 (1 Female, Karchova leg.); 12.-13.07.1991 (1 Female, Matalin leg.) (MPUC); **Kazakhstan**: Aktobe Province, Temira, 27.V 1999 (1 Male) (DUBC); Uralsk obl., Tamir, 06.1904 (1, Kubanskij leg.), 14.05.1905 (1, Cvarov B. leg.) (ZIN); Uralsk, 08.05.1906 (1, Cvarov B. leg.) (ZIN); Xarkin, 13.06.1951 (1, Zinovjev leg.) (ZIN); left coast of river Ural, 26.05.1951 (15, Arnoldi L. leg.); 03.07.1951 (1, Arnoldi L. leg.) (ZIN); Ural river coast, 10.07.1951 (1, Gurjeva leg.) (ZIN); Turgaysk obl., 1892 (1, Tanzen R. leg.) (ZIN); **Kyrgyzstan**: At-Bashi river, 07.06.1987 (1 Male, Chernjaxovskij leg.) (MPUC); **Latvia**: Kuldīgas distr., Alsunga 28. VII 2005 (4 Males, 7 Females, U. Valainis leg.) (DUBC); Daugavpils distr, Silene, Riču lake, 21.VI 2005 (1 Male, 2 Females, A. Bukejs leg.), Ilgas, 25.-30.VI.1998 (2 Males, 1 Female, A. Barševskis leg.), 13.VI.1997 (4 Males, 4 Females, A. Barševskis leg.), 14.06.1997 (1 Male, 4 Females, A. Barševskis leg.) (DUBC); Jelgavas distr., Dalbe, 21.07.1957 (1 Female, M. Stiprais leg.) (DUBC); Jēkabpils distr., Dunava, 04. IX 2004 (3 Females, A. Barševskis leg.) (DUBC); Tukuma distr., Engures., Bērzciems 23.05.1992 (6 Males, 8 Females, M. Kalniņš leg.) (LUBIC); Preiļu distr., Rušons lake 13.08.1952 (1 Female, Z. Spuris leg.) (LUBIC); Rīgas distr., Silcielms 06.08.1992 (1 Male, R. Matrozis leg.) (LUBIC), Jūrmala, Ķemeri 29.06.1952 (1 Male, Z. Spuris leg.) (LUBIC); Riga distr., Melluzi, 14.07.1928 (2, Sumacov G. leg.) (ZIN); Ventspils distr., Usmas lake, Moricsala, 26.VI11983 (3 Males, 7 Females) (LDM); **Lithuania**: Alitus distr., Neman river, 13.06.1969 (1 Female, Gruntal leg.) (MPUC); Alytus distr., Varena, Coast lake Gribaulja, 01.08.1984 (1, Moksavichius leg.) (ZIN); **Poland**: Świętokrzyskie Province, Kielce, (1 Male, J. Netolitzky leg.) (ETHZ); Masovian voiv., Pultusk, Lokvica (1, Zhikarev P. leg.) (ZIN); **Russia**: Karachay-Cherkess Rep., Zagedan vill, Laba river, 1500 m, 13.07.1994 (1 Male, Matalin leg.) (MPUC); Moskovskaja obl., Istrink distr., Pavlovskaja Sloboda vill., Beljanka riv., 06.1960 (1 Female, Sharov leg.) (MPUC); 16.06.1968 (1 Male, Sharov leg.) (MPUC); Istrink distr., Istrinsk reservoir, 22.07.1996 (1 Female, Makarov leg.) (MPUC); Rjazanskaja obl., Okskij Nat. Res., Brjukin Bor vill., Pra river, 21.08.1997 (1 Male, 1 Female, Kotolenec leg.) (MPUC); Spasskij distr., Pra river, Orehovo vill., 20.08.1982 (1 Male, Gongarev leg.) (MPUC); Vladimirskaja obl., Xvoscovo, Ushna river, 27.07.1971 (1 Female, Semenov leg.) (MPUC); Volgogradskaja obl., 50 km NE from Ilovlja river., 12.-15.06.2001 (1 Male, 1 Female, Skomoroxov leg.) (MPUC); Voronezh obl., Xopersk Nat. Res., Xoper river, 30.07.1974 (1 Female, Sharov leg.) (MPUC); Voronezh obl., Borisoglebsk, Telerman, Xoper river, 10.07.1981 (1 Male, Orlov leg.) (MPUC); Orenburg Oblast, Orenburg, 01.-03.08.05 (38 Males, 40 Females, Klinenko leg.) (DUBC); Lomzinsk obl., Vizna vill., Narevch, 07.05.1915. (4, Barovskij V. leg.) (ZIN); 29.05.1915 (5, Barovskij V. leg.) (ZIN); Leningrad obl., Kingisepp (Yamburg), 28.05.1904 (1) (ZIN); Yamburg, Romanovka, 29.06.1906 (1, Barovskij V. V. leg.) (ZIN); Kaliningrad obl., Ribachij, 08.06.1956 (2, Kryzhanovskij O. L. leg.) (ZIN); Moscow obl., Moscow (2) (ZIN); Ubpljnaja coast, 12.04.1915 (1, Lugnjin V. leg.) (ZIN), Voskresensk, Istra river (1, Brzhezickaja E. V. leg.) (ZIN); Jaroslavl obl. (1) (ZIN); Voronezh obl., Borisoglebsk, Khopyor river, 08.08.1973 (9, Fomitchev leg.) (ZIN); Khopyor Nature Preserve, 03.07.1941 (1, Ogliblin A. leg.) (ZIN); Ryazan obl., Ryazan, Gremjachka 31.07.1903 (13, Semenov P. P. leg.) (ZIN), 01.08.1903 (21, Semenov P. P. leg.) (ZIN); Penza obl., Prokazna, 21.06.1919 (2, Oslufjev leg.) (ZIN); Rozhdestvensk, 12.06.1937 (66, Chekanovsk leg.) (ZIN); Saratav obl. (2, Xristof leg.) (ZIN); Samara obl, Stavropolj (1, Ponjatovskij A. leg.) (ZIN); Kavkaz (152); 08.06.1909 (1, Sumakov leg.) (ZIN); Krasnodar krai, The Republic of Adygea, Maykop, 17.07.1933 (1, Arnoldi K. leg.) (ZIN); Belgorod

obl., Belgorod (2) (ZIN); Irkutsk obl., Irkutsk (1) (ZIN); Dnipropetrovsk (Yekaterinoslav) obl., Dnepropetrovsk (2, Zhaldasha leg.) (ZIN); Tambovsk obl., Kozlovj (1 Female) (ZIN); Republic of Dagestan, Derbent (*ab. disporit colorum*) (2 Females) (ZIN); Brjanskaja obl., Bezhinsk, 29.06.1916 (1, Kostilev leg.) (ZMUM); Kaluga obl., near Kaluga, 15.09.1928 (1, Vorobjov leg.), 19.07.1928 (1, Vorobjov leg.) (ZMUM); Lepickaja obl., Dolgorukovo, 26.07.1933 (2) (ZMUM); Moskovskaja obl., Zvenigorodsk, 20.08.1938 (2, Krizhanovskij leg.) (ZMUM); Smolenskaja obl., Smolensk (1) (ZMUM); Tambovskaja obl., Tambov, 1864 (1) (ZMUM); Tulskaja obl., Kolcovo vill., Oka riv., 07.1940 (1, Nikulin leg.) (ZMUM); Volgogradskaja obl., Kamishin, 02.06.1951 (14, Fanfilov leg.), 22.06.1951 (10, Fanfilov leg.) (ZMUM); Volgogradskaja obl., Volgograd, 1928 (2, Nikulin leg.) (ZMUM); Volgograd, 16.06.1951 (1, Aleksejev leg) (ZMUM); Volgogradskaja obl., Tingut forestry, 22.06.1952 (1) (ZMUM); **Spain:** Granada, Orgiva-Trevelez Rd., 11 km. N.E. of Orgiva R. Poqueira, 1000 m, 27.05.1967 (1 Male, Bacchus & Levey leg.) (BMNH); Cangas (1 Male, 5 Females) (BMNH); Cuenca (3 Males, 6 Females, Champion leg.) (BMNH); Millas, Pyren.-Orien. (1 Male, 3 Females, Champion leg.) (BMNH); El Barco de Valdeorras (1 Female, Champion leg.) (BMNH); Andalusia, Cadiz, San Roque, (2 Females, J. De Ferrer leg.) (MZBS); Barcelona, Circa, 26.03.1905 (1 Female, Mas de Xaxars leg.) (MZBS), Catalonia, Guilleries, 06.07.1929 (1 Female, Villarubia leg.) (MZBS); Catalonia, Balenya, 17. VIII 1926 (1 Male, Vilarrubia leg.) (MZBS); Catalonia, Mollet, Girona, Sant Pere Pescador (1 Female, De Grigorio leg.) (MZBS), San Hilario de Sacalm, VII 1945 (2 Males, Bvtlert leg.) (MZBS); Srra. De Cazorla, V 1953 (1 Male, 2 Females) (MZBS); Barna, Llobregat 17.05.1926 (1 Female) (MZBS); **Sweden:** Ring Sjo, 12.06.1938 (1 Female) (BMNH); Jämjė Blekinge, 17. VI 1957 (2 Females, A. Nielsen leg.) (ZMUC); **Switzerland**: Graubunden canton, Bonaduz (1 Female) (ETHZ); **Tunisia**, Jendouba Governorate, Ain Draham, B. V. (1 Male, Bodemeyer leg.) (ETHZ); **Turkey:** Taslicay, 29.09.1960 (1 Male, Brown leg.) (BMNH); **Ukraine:** Poltova obl., Poltova (1, Lukjanovich leg.) (ZIN); Ogloblin, 07.06.1910 (1); Zolotonosha, 1908 (3, Kuzerjackij V. leg.) (ZIN); Kharkiv obl., Kharkiv (1) (ZIN); Zakarpatskaja obl., Svaljavi, 01.08.1974 (1, Kryzhanovskij O. L. leg.) (ZIN); Kiev obl., Kiev, 30.04.1917 (2, Luchnik V. N. leg.) (ZIN); Saperkoe pole (2, Zhuxareva leg.) (ZIN); Dnjepra floodlands, 16.04.1917 (1, Luchnik V. N. leg.) (ZIN); Kiev, Puscha-Vodica, 04.05.1917 (1, Luchnik leg.) (ZIN); Luhansk obl., Baronok vill., 25.08.1929 (5, Talickij leg.) (ZIN); Luhansk, 25.08.1924 (2, Tolickij leg.) (ZIN); Kirovohrad obl., Kirovohrad (3, Kirichenko leg.) (ZIN); Denetsk obl., Artemivsk (2) (ZIN); Sumy obl., Konotop 03.05.1913 (2) (ZIN); Chernihiv obl., Baturyn, 26.05.1905 (1) (ZIN); Dnipropetrovsk obl., Dnepropetrovsk (2) (ZIN); **Ukraine:** Kharkiv obl., Kharkiv, 09.1929 (1) (ZMUM). **Uzbekistan**: Bukhara Province, Bukhara, Hissar Mountains, (3 Males, 4 Females) (ETHZ); Samarqand Province, Tshupan Ata (1 Male) (ETHZ); Semirjtsch., Aksay-Tal (1 Female) (ETHZ); Fergana Province, Fergana, Kugarm-Su river, 13.05.1925 (1, Dobrzhanskij leg.) (ZIN); Tashkent Province, Tashkent, 01.06.1917 (1, Pulikovskaja K. leg.) (ZIN); Namangan Province, Namangan, 10.05.1903 (1, Jankovskij leg.) (ZIN); Tajikistan, 10 km E Dusti, 28-25.11.1982, on light (1, Dubatolov leg.) (ZIN); Karotegin, Varzob, 21.06.1938 (1, Gusakovskij leg.) (ZIN); Iran, Teheran Province, Karaj, 3 km N of Dam, 1650 m, 10.08.1970 (1) (ZIN); Wldlf. Park Vicinity of Dasht, 650 m, 27-30.07.1970 (1) (ZIN); Afganistan, Khinjan district, Khenjan, 1200 m, 02.08.1972 (2, Kabakov leg.) (ZIN).

Type locality: "Germania borealis" **(**holotype is deposited in ZMUC).

References: Bänninger, 1915; Bänninger, 1918; Bänninger, 1956; Csiki, 1927; Chobaut, 1923; Fauvel, 1882; Gestro, 1892; Herbst, 1779; Hurka, 2003; Krausse, 1915; Kryzhanovskij, 1982; Kryzhanovskij et. al. 1995; Lindroth, 1992; Petagna, 1819; Pic, 1901; Roubal, 1909; Sahlberg, 1903; Semenov-Tian-Shanskij, 1922; Semenov-Tian-Shanskij, 1926; Valainis, 2009; Zaitzev, 1916

OMOPHRON OBERTHUERI GESTRO, 1892

Description: lenght: 3.5 – 4.25; width: 2.4 – 2.6 mm. *Colour* dark metallic green, shiny, underside piceous; labrum, palpi, antennae, marginal

channel of prothorax, a pattern on elytra, and legs testaceous. The marginal channel of the elytra is testaceous throughout (rarely interrupted at middle).

Head moderately convex, closely punctate, more sparsely on middle of front, clypeus bisetose, a few punctures at its base, suture rounded, mentum uneven and pitted, lobes rounded, epilobes projecting.

Prothorax very wide, moderately convex, trans-versely depressed in front of base, moderately and rather closely punctate, sides gently and evenly rounded, with fairly wide, smooth, refiexed margin, hind angles right, median line obsolete.

Elytra oval, convex, base unbordered, sides hardly widened behind shoulder, with refiexed border a little narrower than that of prothorax; 15-striate-punctate, intervals quite flat and very smooth, no microsculpture. The elytral pattern is as presented in Fig. 2.5.

Comparisons: The pattern on the elytra of *O. oberthueri* Gestro is similar to that of *O. piceopictum* Wrase, but *O. oberthueri* is much smaller in size, it has denser and coarser puncturation on the pronotum and deeper elytral striae.

Distribution: PAR: IN: UP, UTH; SM; ORR: IN: WB

Processed material: India: Pedong, Darjeeling, 11.1935 (4 Males, 19 Females, Durel leg.) (BMNH); Sikkim, Gopaldhara, (11 Male, 31 Female, Stevens leg.) (BMNH); Gopaldhara, Darjiling, 3440-4720 ft., 04.10.1919 (1 Male, 1 Female, Stevens leg.), 06.10.1919 (1 Male, 2 Females, Stevens leg.), 03.11.1919 (1 Female, Stevens leg.), 07.11.1919 (18 Males, 40 Females, Stevens leg.), 08.11.1919 (14 Males, 54 Females, Stevens leg.), 10.11.1919 (33 Males, 58 Females, Stevens leg.) (BMNH); Sikkim, Dikchu, Tista Vall., 14.03.1920 (2 Females, Stevens leg.) (BMNH); Uttarkhand, Sarju Vall., Kumaon, 5000 ft. (5 Males, 8 Females, Champion leg.) (BMNH); Uttarkhand, W. Almora, Kumaon, (52 Males, 121 Female, Champion leg.) (BMNH); Uttarkhand, W. Almora, Kumaon, 03.1918 (1 Female, Champion leg.) (BMNH); Uttarkhand, West Almora, Kumaon (1) (ZIN); Sikkim, 200m., Valley at Tista Bridge, 8.-15.12.1934 (1 Male, 1 Female) (BMNH); Brit. Bhutan, Pedong (2 Females) (BMNH); Namsoo, Darjeeling, 2,100 ft., 11.1920 (2 Females, Stevens leg.) (BMNH); Sikkim, Namsk, 11.1920 (1 Male, 3 Females, Stevens leg.) (BMNH); West Batho(c), Uttarkhand, Kumaon, 05.1920 (1 Male, 3 Females, Champion leg.) (BMNH); West Bengal, Darjeeling district, Pedong, (1, Desgodins leg.) (extype) (ETHZ); West Bengal, Hasimara, Barodabri, 05.1961 (1, Korovin leg.) (ZIN); Darjeeling district, Pedong (27) (ETHZ); Sikkim, Gopaldhara, H. Stevens leg. (2); Sikkim (1) (ETHZ);

Type locality: Pedong, Sikkim (holotype is deposited in **Genoa** Natural history **Civic Museum).**

References: Andrewes, 1926; Andrewes, 1929; Bänninger, 1918; Gestro, 1892; Hurka, 2003

***OMOPHRON PARVUM* TIAN & DEUVE, 2000**

Description: lenght: 4.1 – 4.3 mm; width: 4.3 – 4.6 mm. Head moderately convex, sides bordered; labrum transverse, emarginate in front margin, six setose; clypeus bisetose, front margin narrowly but strongly bordered; penultimate joint of labial palpi plurisetose on inner margin; penultimate joint longer than distal one; penultimate joint of maxillary palpi with row of 4-6 apical setae, shorter than distal joint; mentum with rounded lobes, subocular ridge well defined, coarsely punctate in front;

Pronotum moderately convex, transverse, moderately and rather closely punctate, sides gently and evenly rounded, with fairly wide, smooth, reflexed margin, hind angles acute, median line obsolete; reflexed margin of pronotum wider than that of elytra.
Elytra oval, strongly convex, base unbordered, hind hardly widened behind shoulder, so the contour hardly broken at junction of pronotum and elytra, reflexed margin wider in front, slightly

narrower in hind. Elytra with 15 striae, but striae 13 and 14 obsolete, just appearing near the base, other elytral striae disappearing at sides and behind. Striae shallow, with sparsely and moderately punctate, intervals flat, smooth, without microsculpture.

Comparisons: This species belongs to the *chelys*-species group. Similar to *O. brettinghamae* Pasc. Comparing with *O. brettinghamae* Pasc. the green patch on pronotum is narrower, margin of the green pattern on elytra is less sinuate and has smaller stria punctures.

Distribution: PAR: CH: GUX

Type locality: Xixiangtang, west suburb of Nanning, the capital city of Guangxi Zhuang Autonomous Region, South China **(**holotype is deposited in the insect collection of South China Agricultural University).

References: Tian & Deuve, 2000

***OMOPHRON PICEOPICTUM* WRASE, 2002**

Description: lenght: 4.5 – 5.7 mm; width: **2.8-3.5 mm**. Color: Dark redish piceous (without a green metalic tinge) colour, shiny. Sternum and first abdominal sternites piceous, last sternite rather lighter. Clypeus redish brown and labrum testaceous with greenish golden tinge. Palpi, antennae, legs, side margins of prothorax and elytra testaceous (the last two mostly with a greenish golden tinge.

Head fairy flat, coarsely punctate laterally and posteriorly, more sparsely on middle of frons, the punctures sometimes longitudinally confluent, sides distinctly bordered, the border somewhat dilated and reflexed.

Pronotum very transverse, moderately convex, sides evenly rounded at about middle and faintly sinuate or straight before the right or somewhat acuate hind angles. Base bisinuate on each side. Puncturation rather coarse and not very close, somewhat irregular, with some small impuctate areas. Reflaxed margin wide and smooth. Median line obsolete.

Elytra short-oval, moderately convex, base underbordered, sides hardly widened behind shoulders, lateral contour in dorsal view is hardly broken at junction of pronotum and elytra, with reflexed border, near base only a little narrower than that of pronotum, then becoming much narrower posteriorly. The elytral pattern is as presented in Fig. 2.6.

Comparisons: The *O. piceopictum* belongs to the group of species with the elytral striae evenescent laterally or posteriorly (with exception of last outer stria) and here to a subgroup of species with 15 striae on elytra and striae 1 – 14 evenescent toward apex: *O. oberthueri* Gestr. and *O. chelys* Andrew.. *O. oberthueri* is smaller, without microsculpture, the 14th elytral striae disappears at one fifth from the base. *O. chelys* the first segment of the male protarsi is in the form of an enormous oblong plate, practically as long as 2-5 together, and twice as wide as the tibia. Beside this diferences in comparison to *O. piceopictum* the species mentioned here have a different elytral pattern and a different median lobe.

Distribution: PAR: CH: SCH

Processed material: China, W Sichuan (Ya'an Pref., Baoxing Co.) Jiajin Shan, riv vall., 3 km S Qiaogi, 78 km NNW Ya'an, 30^{o}40 N/102^{o}45 E, 1900 m (riv. bank), 11.07.1999 (1, Wrase D. W. Leg.) (Paratypus) (ZIN).

Type locality: China, W.Sichuan (Ya'an Pref., Baoxing Co.) Jiajin Shan, riv. vail. 3 km S Qiaoqi, 78 km NNW Ya'an, 30°40N/102°45E, 1950 m (holotype is deposited in Wrase privat collection, Berlin, Germany).

References: Wrase, 2002

***OMOPHRON PSEUDOTESTUDO* TIAN & DEUVE, 2000**

Description: lenght: 6.5 – 7.0 mm; width: 4.3 – 4.6 mm. Colour: testaceous, underside excluding sternites piceous, sternites brown, a patch on each side of pronotum somewhat coriaceous, the patch on median area of pronotum, with a narrow projection in middle to frons margin, and the elytral pattern dull green, epipleura of elytra and pronotum yellowish.

Head moderately convex, clypeus quadrisetose, joint 1 of antennae bisetose at apex, 3-4 joints plurisetose along outer margin; penultimate joint of labial palpi plurisetose in the inner side, penultimate joint of maxillary palpi with several apical setae, distal joint glabrous; subocular ridge rugose in front.

Pronotum moderately convex, transverse, somewhat bordered on basal half of lateral margin; green pattern narrow, reaching base, but not extending to front margin; punctuation on pronotum rather dense on the green patch except the central area, more coarsely in front and at base. A obvious break in the contour at the junction of pronotum and elytra.

Elytra very convex, oval, bordered at base, 15-punctate-striae, striae very deep, punctures rather small. Intervals of elytra with an irregularly row of tiny punctures. Striae 3-4, 7-8, and 11 ended at before 1/4 from apex; intervals 14 and 15 not interrupted by the green patch

Comparisons: Close allied to *O. testudo* Andrew., but clypeal sulcus arcuate at middle, subocular ridge not extending near to gular suture, and intervals 14 and 15 not interrupted by the green patch. Comparing with *O. maculosum* Chaud., the green pattern is more dull, patches on pronotum narrower, but extending base of pronotum and body a little bigger.

Distribution: known only from type locality – (Jianhong, Yunnan province in South China).

Type locality: Jianhong, China (holotype is deposited in South China Agricultural University, Guangzhou, China).

References: Tian & Deuve, 2000

***OMOPHRON ROTUNDATUM* CHAUDOIR, 1852**

= *rotundatum* (Bänninger, 1915)

Description: lenght: 6.0 – 6.5 mm; width: 3.8 - 4.4 mm. The patch on the pronotum usually does not reach the base margin, but in top it slightly streches over the middle part. On the basic margin of elytra the spots are small, reaching only the elytral striae8 – 9; sometimes they are hardly visible or completely reduced. The middle segment of the elytra pattern is interrupted or, more rarely, narrowed in the area about the elytral striae 7-9; the top segment is shortened, reaching only the elytral striae 7, 8. The specimens that have the elytra pattern similar to that of *O. limbatum* (F.) are found very rarely. Elytral interval between elytral striae in the basic part usually are slightly convex. The vertex of the head between punctures has marked longitudinal plications. Puncturation on the sides of the sternites 1 and 2 is sparse, sometimes difficult to see, but it never disappears (contrary to the data presented by Bänninger (1956)).

As to the body size and structural features, including also the form of aedeagus, the species is similar to *O. limbatum* (F.). The dark pattern of the *O. rotundatum* Chaud. surface is less developed and the surface microsculpture usually is coarser than that of *O. limbatum* (F.), especially of females. The most peculiar difference is the comparatively smaller and darker pattern on the pronotum. The elytral pattern is as presented in Fig. 2.3.

The southeast border of the distribution of the species is not clear. O. L. Krizhanovskij (1982) doubted correctness of the data (Andrewes, 1929) on the distribution of this species in Southern China and Wietnam; he considered those data referring to *O. saigonense* Chaud. There are the data (Tian & Deuve, 2000) also on

the finding of *O. rotundatum* Chaud. in Hainan Island, but, as the authors themselves have pointed out, the morphologic features of the definite specimen do not correspond to the description of the speices given by Andrewes (1929). Still, having compared the specimen with the holotype of the species (Chaudoir, 1852), the authors have included it into the species *O. rotundatum* Chaud.

Distribution: PAR: AB; AF; AR; IR; IQ; IS; KZ; LB; PA; SY; TD; TM; TRa; UZ; CH: HAI; XIN; IN: HP

Processed material: Caucasus, Arexeststhal, Leder Reitter (2 Males) (ETHZ); **Afganistan:** Panjao, 25.07.1948 (1 Male, Haarlov leg.) (BMNH); El Hedjaz, 1915 (2 Females, Mellingen leg.) (BMNH); Tr. Casp., Aschabad (1 Female) (BMNH); Transkasp., Kuschka (1 Female) (BMNH); Bamyan Province, Panjab (1 Female, N. Harlov leg.) (ZMUC); **Armenia**: Caucasus, Kasikoporan (1 Male, 4 Females) (ETHZ); Aresh Distr., Geok-Tapa (1 Male) (ETHZ); Geok-Tapa, A. Schelkownikow leg. (2 Males, 1 Female); Geok-Tapa, L. Mesmin leg. (1 Male, 3 Females); Geok-Tapa, Clermont leg. (3 Females) (ETHZ); Marmarik River valley, Tarkjarlu vill., 1900 m, 40º37'N, 44º31' E, 23.06.1997 (1 Male, Melnik leg.) (MPUC); **Azerbaijan**: Ganja, (16 Males, 26 Females) (ETHZ); Lankaran, Talish, 02.06.1936 (3, Arnoldi leg.) (ZIN); Nakhichevan Autonomous Republic, Ordubad Province, Arakas 05.1882 (1, Xristoer leg.) (ZIN); Nahich, 27.06.1933 (1, Znajko leg.); **China**: Tian-Schan (1 Male) (ETHZ); **Iran**: Elburs – Gebirge, Nord – Persien, Rudbar, 800 m, B.v. Bodemeyer (1 Male, 1 Female) (ETHZ); Kopet. Dagh (1 Female) (ETHZ); Kerman Province, Sargad, 28.08. – 04.09.1898 (21, Zarubnij U. leg.) (ZIN); Sistan and Baluchestan Province, Sistan, 10. – 11.04.1901 (1, Zarubnij leg.) (ZIN); 24. – 26.04.1901 (2, Zarubnij leg.), Sistan and Baluchestan province, Samukan, 1893 (3) (ZIN); **Iraq**: Bagdad, 1915 (2 Males, 3 Females) (BMNH); Mesopotamia, Mosul, 05.1909 (1 Female, Hauser leg.) (BMNH); Assur, Mesopot, Pietschmann, Mesopot exp. Nat., O. V, (1 Male, 1910) (ETHZ); Mesopotamia, Mossui, (4 Males, 4 Females) (ETHZ); **Kazakhstan**: Aktobe Province, Kargalinsk, 23.06.1908 (1, Malchevskij leg.) (ZIN); West Kazakhstan Province, Aksaj, 13.04.1909 (2) (ZIN); **Kyrgyzstan**, Fergana, Tashkumar, Kara-Suu, 700 m, 22.07.1991 (1 Male, Danilevskij leg.) (MPUC); Chuy Province, Bishkek, 11-12.07.1913 (1, Chernavin leg.) (ZIN); Zhambyl Province, Taraz (1, E. Fischer leg.) (ZIN); **Tajikistan**: Kurgan – Tube, Dzhilikul, 18 V 2000 (2 Females) (DUBC); Sughd Province, Khujand, 06.1977 (1 Male, Kukuruza leg.) (MPUC); Khatlon Province, Saricashma, 29.06.1986 (1 Male, Semenov leg.) (MPUC); Darvoz district, Pamir mount., Vanch river vall., 2000 m, 28.05.1980 (1 Female, Mihailov leg.) (MPUC); Khatlon Region, Kulob 08.1933 (1, Popov leg.) (ZIN); Dushanbe, 28.06.1939 (1, Jevrikiva leg.), 14.06.1939 (1, Kizanovskij leg) (ZMUM); **Turkmenistan**: Mary Province, Mary, Coll., Hauser, (2 Males, 05.1900) (ETHZ); Mary, Coll., Hauser, (1 Female, 04.1900) (ETHZ); Transcaspien, Kuscha ? , Koshantchikoff leg. (2 Males, 3 Females, 25.-26.06.1912) (ETHZ); Mary Province, Badkhiz, Morgunavka vill., 06.05.1976 (1 Male, Chernjaxovskij leg.) (MPUC); Mary Province, Badkhiz, Turanga gorge, 19.05.1970 (3 Males, Tihomirova leg.) (MPUC); Ashgabat, Kaaxkinsk, Dushak vill., 400 m, 21.06.1992 (2 Males, Danilevskij leg.) (MPUC); Cardzuj Province 20.05.1905 (1, Sumakov leg.) (ZIN), 02.06.1905 (1, Sumakov leg.) (ZIN), 15.07.1905 (1, Fisher A. leg.) (ZIN); Ahal Province, Kopetdah Chandir river, Tubli gorge 25.07.1935 (1, Arnoldi leg.) (ZIN); Eylandt (1) (ZIN); Lebap Province, Repetek, 19.06.1905 (1, Sumakov leg.) (ZIN); **Uzbekistan:** Bukhara Province, Bukhara, Hissar Mountains, (12 Males, 7 Females) (ETHZ); Fergana Province, Margelan (1 Female) (ETHZ); Bukhara (2 Males, 1 Female) (BMNH); Bukhara Province, Bukhara, Hissar Mountains (1) (ZIN); Bukhara Province, Bukhara (2, Staudinger leg.) (ZMUM); Kaukasus, Elisabethpol (1 Female) (BMNH); Asia Centr., Hissar, Buchara (1 Male) (BMNH); Surhundarja, Termez, Dzhar – Kurgan, Katta – Kum, 21. IV 2004 (7 Males, 16 Females) (DUBC); Bukhara Province, Bukhara (1 Male) (MPUC); Surkhandarya Province, Termez, Ugkizilbsk reservoir, 28.08.1990 (1 Female, Semenov leg.) (MPUC); Tashkent Province, Tashkent, 06.05.1925 (1 Female, Kirpov leg.) (MPUC); Tashkent Province, Tashkent (2) (ZIN);

Samarqand Province, Toxta-Karagar, 03-07.07.1996 (1 Female, Verigin leg.) (ZIN); Surkhandarja Province, Shirabad 28.05.1912 (1, A. Kirichenko leg.) (ZIN).

Type locality: „Mesopotamia" **(**holotype is deposited in Muséum National d'Histoire Naturelle, Paris, France).

References: Andrewes, 1929; Bänninger, 1915; Bänninger, 1918; Bänninger, 1956; Chaudoir, 1852; Chaudoir, 1868; Gestro, 1892; Hurka, 2003; Kryzhanovskij, 1982; Kryzhanovskij et. al., 1995; Semenov-Tian-Shanskij, 1926; Tian & Deuve, 2000; Valainis, 2009; Zaitzev, 1916;

***OMOPHRON SMARAGDUS* ANDREWES, 1921**

Description: lenght: 6.0 – 7.0 mm; width: **4.0 - 4.4 mm**. Colour: testaceous, sterna and front margin of prothorax piceous; back and sides of head, a wide transverse patch on prothorax, extending to base and covering its central third, extending aiso to a broad point at middle of apex, and an elytral pattern rather bright green.

Head flat, front nearly smooth, sides and back rather closely striate-punctate, clypeus uneven, quadrisetose, indistinctly bordered, widely emarginate, suture with an angle at middle, lobes of mentum rounded, epilobes not projecting, subocular ridges extending little beyond fissure, area in front of them finely rugose-striate.

Prothorax moderately convex, rather coarsely coriaceous, coarsely punctate along base, more finely on disk and along front margin, base only slightly sinuate near hind angles, sides a little rounded at about middle and faintly sinuate before angles, median line fine but distinct, not reaching extremities.

Elytra oval, convex, base unbordered, sides rather strongly dilated behind shoulders; 15-punctate-striate, the punctures very distinct, intervals rather flat on disk, more convex at sides, a row of minute punctures down the centre of each. A fine microsculpture is present. The elytral pattern is as presented in Fig. 3.1.

Comparisons: In general appearance strikingly like *O. maculosus* Chaud.. Head less rugose, more conspicuously punctuate, the punctures less confluent; prothorax very obviously punctuate and much less roughly coriaceous (in *O. maculosus* the punctures hardly show except along front margin), the green patch larger, the testaceous colour at base and sides separated (or almost to); elytra rather more strongly rounded behind shoulder, the minute puncturation of intervals much less evident, striae rather deeper and more strongly punctuate, front and middle patches not interrupted on interval 13.

Distribution: PAR: IN: UP, UTH

Processed material: India: Uttarkhand, Kumaon, Ranikhet (1 Male, Champion leg.) (Holotype) (BMNH), (1 Male, 1 Female, Champion leg.) (Cotypes) (BMNH); Uttarkhand W. Almora, Kumaon, (1 Female, Champion leg.) (BMNH); Uttarkhand Kuamon, Saryu Valley, 5000 ft. (3 Males, 3 Females, Champion leg.) Uttarkhand, Kuamon (Compared with type) (1 Female) (ETHZ); Uttarkhand, Ranikhet (1 Female, Champion leg.) (BMNH); Uttarkhand, West Bhatoe, Kumaon, 4000 ft. (2 Females, Champion leg.) (BMNH); Inde Anglaise Pedong, Region de Darjecling, 1935 (1 Female) (BMNH)

Type locality: India, Kumaon, Ranikhet (holotype is deposited in BMNH).

References: Andrewes, 1921; Andrewes, 1929; Hurka, 2003

***OMOPHRON TESTUDO* ANDREWES, 1919**

Description: lenght: 7.0 – 7.5 mm; width: **4.5 – 5.0 mm**. Colour: testaceous, underside (except apex) piceous, a patch on each side of disk of prothorax light brown ; back and sides of head, a transverse rectangular basal patch on pro-thorax, with a narrow projection in middle to front margin, and an elytral pattern green. Treating the elytra

as green, including suture to near apex, there are two very irregular fasciae, an apical patch, the whole of the marginal channel

Head flat, front nearly smooth, finely striate near eyes, vertex and sides coarsely punctate, clypeus bisetose, slightly emarginate and bordered, a transverse furrow across the middle, suture with an angle at middle, mentum with rounded lobes, epilobes narrow, not projecting beyond lobes, subocular ridge extending nearly to gular suture, the surrounding area finely rugose, and also (behind eyes) finely striate.

Prothorax moderately convex, transversely impressed at base, coarsely but not roughly coriaceous, coarsely punctate along base, rather sparsely in front, sides gently rounded in front and faintly sinuate behind, median line fine but distinct, not reaching margins.

Elytra ovate, convex, base unbordered, sides strongly dilated behind shoulder; 15-punctate-striate, the punctures small, indistinct at sides, intervals convex, more so at sides, with an exceedingly minute row of punctures along the middle of each. A fine microsculpture is present. The elytral pattern is as presented in Fig. 3.2.

Comparisons: *O. testudo* Andr. is similar to *O. guttatum* Chaud. which is distributed in Oriental region, but *O. testudo* Andr. Is larger and more nearly circular.. Head of *O. testudo* Andr. more roughly sculptured, more coarsely punctuate, clypeal suture with an angle in the middle, instead of semicircular, sides of prothorax more rounded, base flattened, surface more coarsely but less puncture. Intervals of elytra more convex, surface more shiny, front fascia extending inwards to interval 5 only (in *O. guttatum* Andr. it reaches 4), hind fascia and testaceous apical area wider, the latter with a more jagged front margin, punctures on prosternum and episterna fewer.

Distribution: PAR: IN: SM (new locality); ORR: VT; LO; MY

Processed material: India: Sikkim, Bashuk Rain Forest, 20.07.2002 (DUBC). During the research 6 specimens from the Oriental region have been processed as well.

Type locality: Indo China (holotype is deposited in BMNH.

References: Andrewes, 1919; Andrewes, 1929;

OMOPHRON VIRENS ANDREWES, 1929

Description: lenght: 6 5 mm; width: **4 mm**. *Colour* testaceous yellow, sterna and front margin of prothorax piceous; back and sides of head, a transverse patch on prothorax, extending to base and covering the central half, extending also to a broad point at middle of apex, and an elytral pattern rather bright green.

Head flat, front smooth, some vague striae near eyes, vertex and sides punctate, clypeus quadrisetose, a little emarginate and vaguely bordered in front, clypeal suture angulate, labrum slightly emarginate, mandibles short and very sharp at apex, mentum with rounded lobes, the epilobes not projecting, subocular ridge extending beyond buccal fissure, the area in front of it coarsely, though rather vaguely, striate-punctate.

Prothorax moderately convex, rather shiny, not or only very slightly coriaceous, strongly punctate along front and hind margins, disk nearly and sides quite smooth, sides only faintly rounded and base faintly sinuate near hind angles, median line short but distinct.

Elytra ovate, convex, base unbordered, sides moderately dilated behind shoulder; 15-punctate; striate, the punctures clearly marked and rather close together intervals moderately convex, equally wide throughout, each with a row of punctures so fine as to be visible only under a strong lens. A fine microsculpture is present. The elytral pattern is as presented in Fig. 2.1.

Comparisons: afar as pattern goes, the *O. virens* Andr. bears a strong likeness to *O. lunatus Bänn.*, but it will be readily distinguished by its green

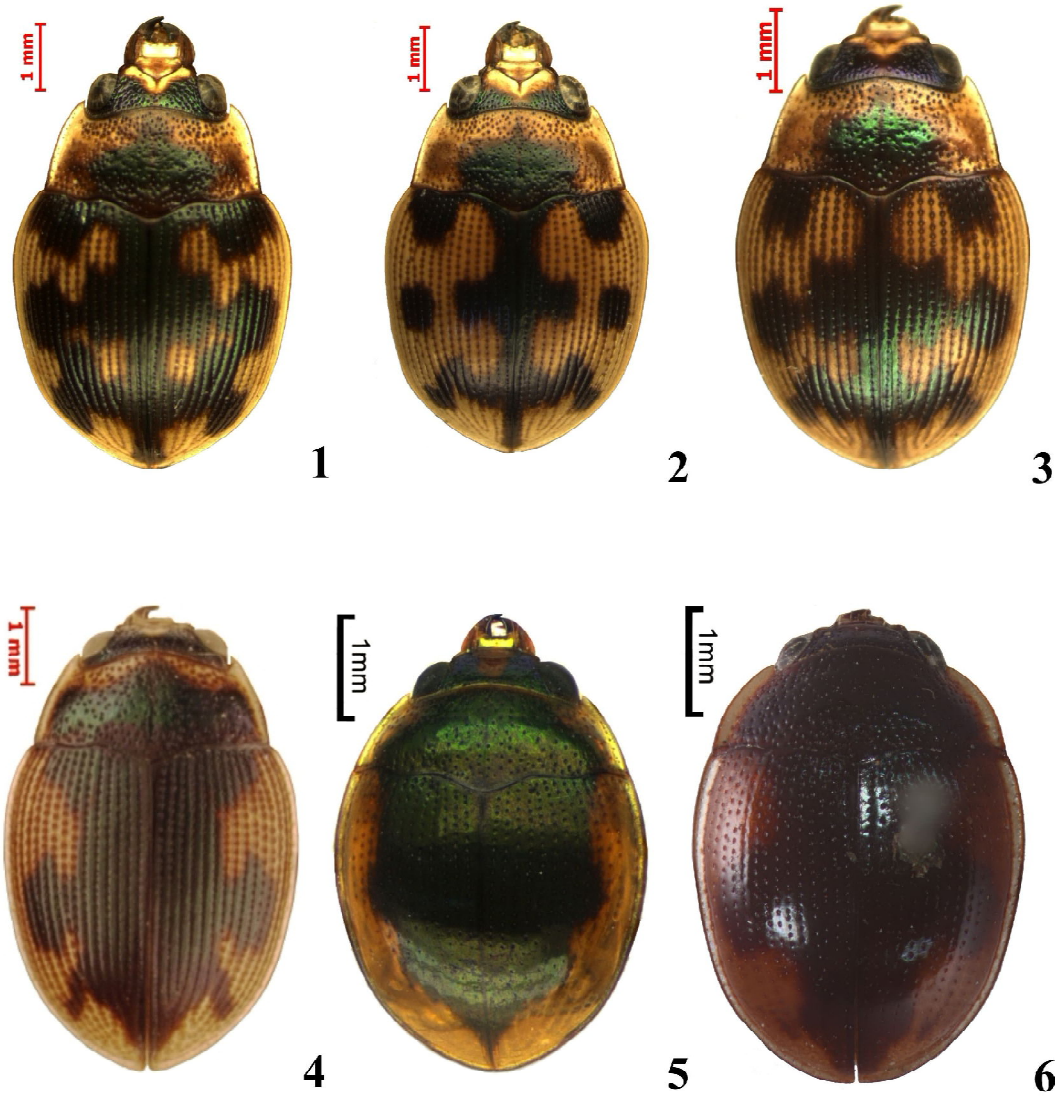

Fig. 1. Variations of body shape and patern in different species of genus *Omophron* Latr. 1. – *O. aequale aequale* Mor.; 2. – *O. aequale jacobsoni* Sem.; 3. – *O. limbatum* (F.); 4. – *O. axillare* Chaud.; *O. brettinghamae* Pasc.; *O. chelys* Andr.

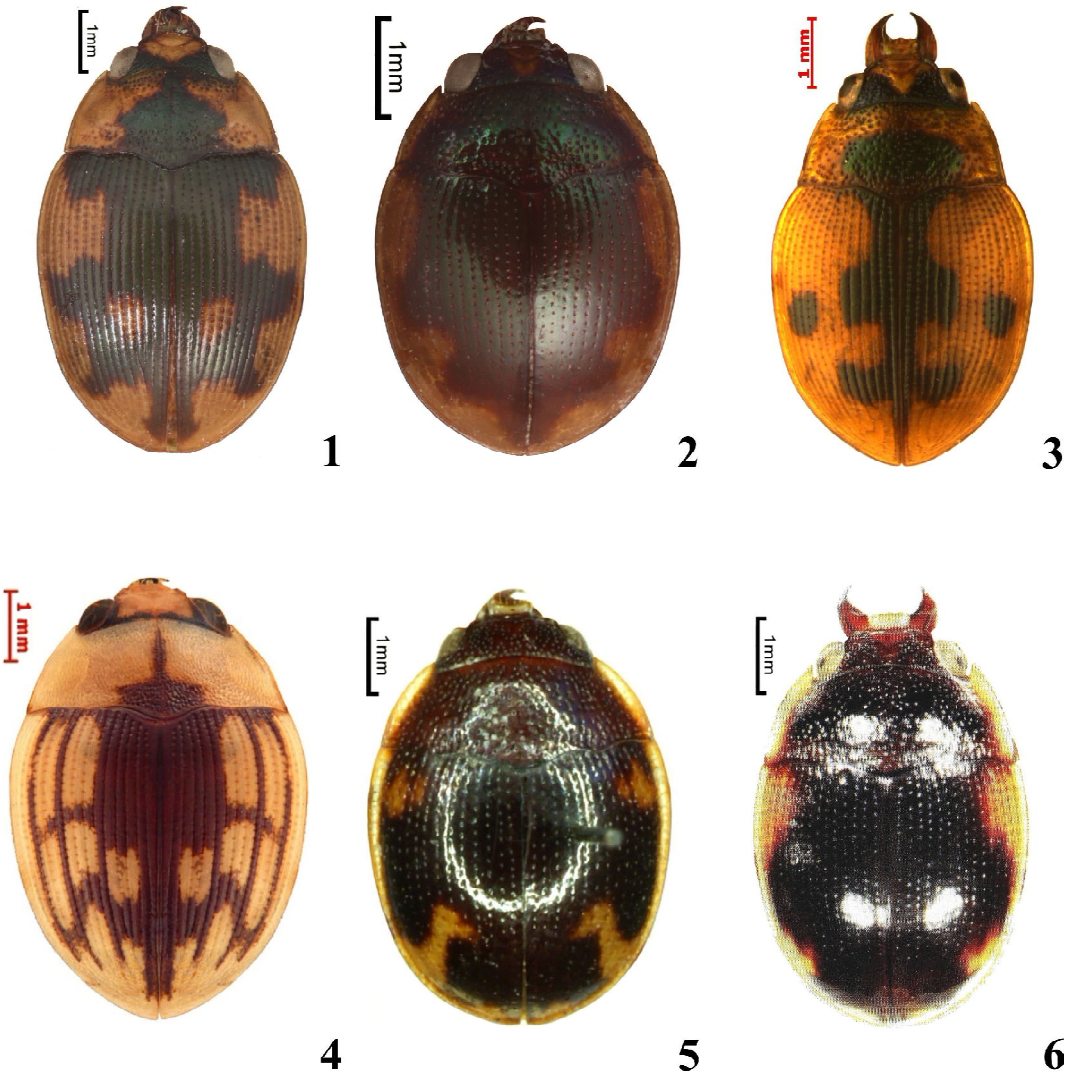

Fig. 2. Variations of body shape and patern in different species of genus *Omophron* Latr. 1. – *O. virens* Andr.; 2. - *O. gemmeum* Andr.; 3. - *O. rotundatum* Chaud.; 4. - *O. interruptum* Chaud. (U. Schmidt photo); 5. - *O. oberthueri* Gestro (A. Anichtchenko photo); 6. - *O. piceopictum* Wrase (photo from Wrase, 2002)

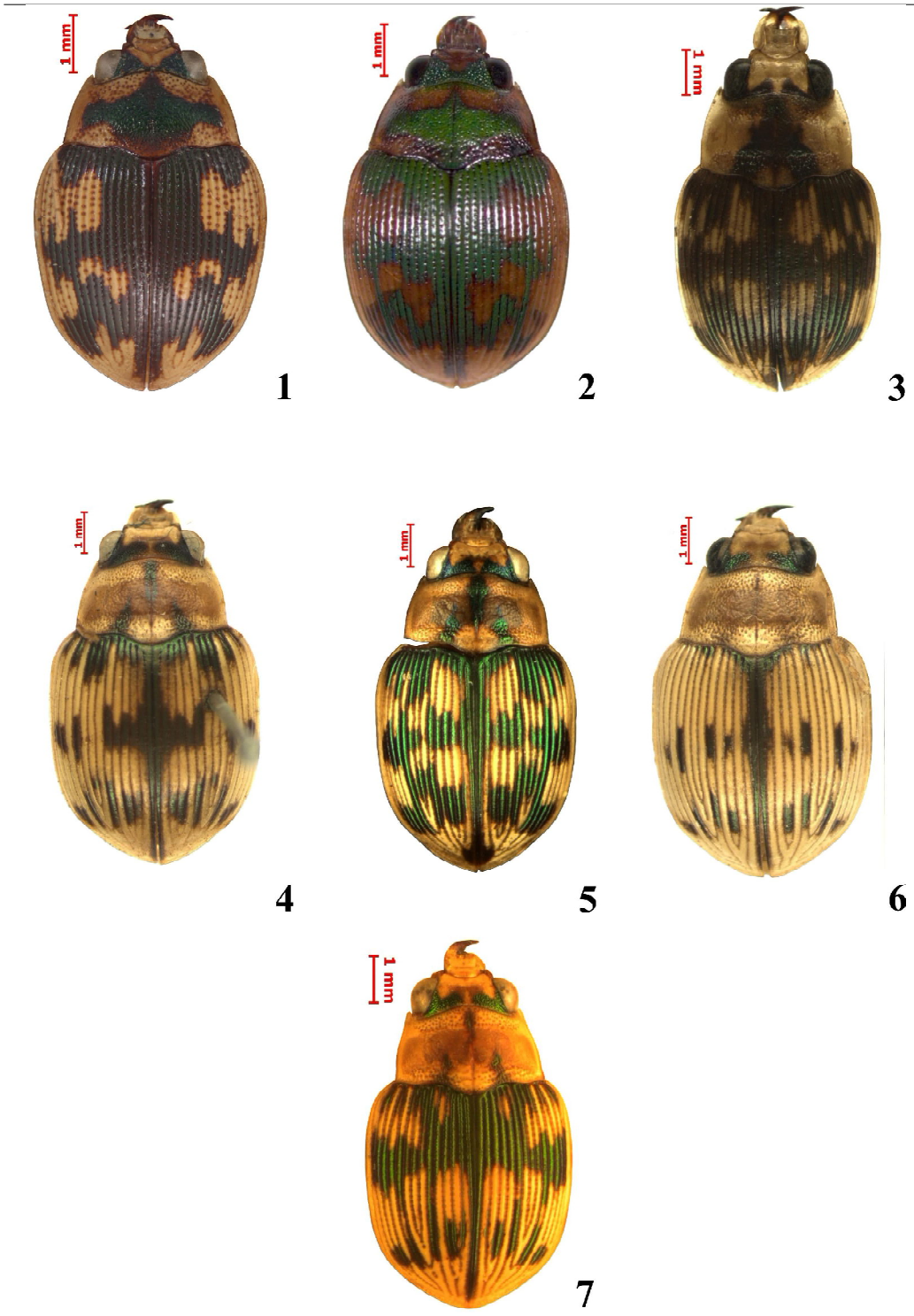

Fig. 3. Variations of body shape and patern in different species of genus *Omophron* Latr. 1. – *O. smaragdus* Andr.; 2. - *O. testudo* Andr.; 3. - *P. multiguttatum* Chaud.; 4. – *P. variegatum variegatum* Oliev.; 5. – *P. variegatum sardoum* Reitt.; 6. – *P. variegatum boiteli* Alluaud; 7. - *P. variegatum seurati* Alluaud.

colour, more elongate form, quadrisetose clypeus, and nearly smooth elytral intervals

Type locality: Uttarkhand, Kumaon, Haldvani (holotype is deposited in BMNH)

Distribution: PAR: IN: UTH; UP

Processed material: Uttarkhand, Kumaon, Haldvani distr., (1 Female, Champion leg.) (Holotype) (BMNH).

References: Andrewes, 1929; Hurka, 2003

OMOPHRON *YUNNANENSE* TIAN & DEUVE, 2000

Description: lenght ~5.5 mm; width: ~3.8 mm. Colour testaceous, patterns on head, pronotum and elytra dark green; feebly shiny; the patch on pronotum wide, extending sides margin; base of elytra is green to stria 11, intervals 1-2 green to preapex; the front fascia reaching stria 11, very narrow on intervals 8-9, mid fascia extending to stria 12, hind fascia only reaching stria 10.

Head moderately convex, clypeus bisetose, smooth, strongly transverse, front margin hardly bordered, slightly emarginate, and with the median membraneous base of labrum visible; clypeal sulcus very fine, almost arcuated underside of head rugose, without punctures in central area, but punctate at sides, subocular ridge nearly straight, coarsely punctate in front, glabrous in hind, rugose; tooth of mentum distinct.

Pronotum strongly transverse, moderately convex, coarsely punctate; widest at base, with fairly wide, smooth reflexed margins; sides almost straight, slightly contracted just before hind angles, hind angles subrectangular; median line feeble; base margin obliquely bisinuate; a weak break in the contour at the junction of pronotum and elytra.

Elytra convex, bordered at base, striae rather shallow, moderately and uniformly punctate, intervals smooth. Protarsi of male with joint 1 a little expanded, as long as joints 2 + 3; prosternum well bordered laterally and with moderately sparsely punctate; mesosternum rather longer, flat, glabrous; metasternum punctate; metacoxae bisetose, sternites 5-7 bisetose.

Comparisons: Among other species this species stands out because of the extended green spot on the pronotum, well marked mesisternum, peculiar pattern on the elytra and the form of aedeagus.

Distribution: PAR: CH: YUN

Type locality: Jinghong, Yunnan Province, Southwest China, (holotype is deposited insect collection of South China Agricultural University, Guangzhou).

References: Tian & Deuve, 2000

SUBGENUS *PHRATOR* SEM.

***PHRATOR MULTIGUTTATUM* CHAUDOIR, 1850**
= *tessellatum* Dejean, 1826; *somalicum* Alluaud, 1935

Description: lenght 7.1 – 8.45 mm; width: 4.3 – 4.8 mm. The body is elongate oval, extended. Mandibles are markedly extended, their upper outer corner is widened. The elytra have 14 elytral striae; punctures are shallow, intervals between elytral striae with microsculpture. The surface of pronotum is plicated, front and back margins are densely and rather coarsely punctured. The legs are long, hind-legs tarsus are not more than 1.5 times shorter than the elytra. The lower side of body and legs are light yellow-brown. The lower side of body has dark green-brown pattern of irregular form. The patch on the pronotum stretches from the front to the base margin. The elytral suture at the base margin is suspended in V-form. The elytral pattern is as presented in 3.3.

Comparisons: *P. multiguttatum* Chaud. is similar to *P. variegatum* Oliv., but the form of elytra is less rounded, maxillar palpi of *P. multiguttatum* Chaud. are shorter. *P. variegatum* Oliv. has

characteristic **isodiametric** microsculpture, but *P.multiguttatum* Chaud. transversal. Some differences are also noticeable in the patterns of elytra and pronotum.

Distribution: PAR: EG; AFR: DRC, ER; ET; KY; SO; SU, TA, UG

Processed material: Processed material from Palearctic was published in Valainis, 2009. During the research 67 specimens from the Afrotropical region have been processed as well.

References: Alluaud, 1935; Chaudoir, 1850; Dejean, 1826; Hurka, 2003; Valainis, 2009

***PHRATOR VARIEGATUM* OLIVIER, 1811**

Description. The body is elongate oval, margins of the pronotum and the elytral shoulder form an obtuse angle. The mandibles are markedly prolonged, their upper outer corners are widened. The elytra have 14 deep elytral striae, puntures are shallow, intervals between the elytral striae are squeezed out. The surface of pronotum is slightly plicated, front and back margins are closely punctate. The margins of sternites 1 and 2 are without puncturation. Legs are long, hind-legs tarsus are not more than 1.5 times shorter then the elytra. The lower side of body and legs are dark yellow-brown. The surface of body has dark green metallic pattern, which differs significantly on the level of subspecies. Nowadays four subspecies of *P. variegatum* Oliv. are usually distinguished, which mainly differ in the form and colouring of the surface pattern.

Phrator variegatum variegatum Olievier, 1811
= *heydeni* Krausse, 1915

Description: 7.6 – 8.8 mm; width: 4.3 – 5.1 mm. The surface pattern has marked metallic shine. The spot on pronotum consists of three parts with subtle borderlines. The side margins of pronotum are almost transparent. The green spot on the head consists of two parts, both parts merge together opposite to the centre line of the pronotum at the base of head. The elytral pattern is as presented in Fig.3.4.

Distribution: PAR: SP; PT

Processed material: Processed material from Palearctic was published in Valainis, 2009.

Type locality: "Spain" (holotype is deposited in Muséum National d'Histoire Naturelle, Paris, France).

References: Alluaud, 1935; Hurka, 2003; Krausse, 1915; Olievier, 1811; Valainis, 2009

***Phrator variegatum sardoum* Reitter, 1907**

Description: 7.5 – 8.7 mm; width: 4.2 – 4.9 mm. The elytral pattern is well-developed, dark green, without metallic shine the elytral pattern consists of three segments. The body surface and legs are brown. The three-piece spot on the pronotum has marked borders, its corners have sharp margins. There are dark green spots around the eyes on the head, which almost merge in the centre part. The elytral pattern is as presented in Fig. 3.5.

Comparisons: in comparison with *P. variegatum variegatum* Oliv. this subspecies has slightly larger elytral patterns, brighter green color and more pronounced microculpture.

Distribution: PAR: IT (Sardinia)

Processed material: Italy: Sardinia, Terranova (5 Males, 8 Females, Chandler leg.); Sardinia (1 Male, 1 Female, Reitter leg.) (Cotype) (BMNH). For the rest of the material processed see Valainis 2009.

References: Alluaud, 1935; Hurka, 2003; Reitter, 1907; Valainis, 2009

***Phrator variegatum boiteli* Alluaud, 1935**

Description: ~7.6 mm; width: ~3.9 mm. The pattern on elytra is not marked, it is almost reduced. It has remained in the form of elongate spots in the middle and top parts of elytra, as well as in the form of a dark line with 1 interval width in the area of the elytral suture. In the base

part of elytra the line is very narrow and indistinct Intervals between elytral striae are markedly smooth. The body surface and legs are light brown, almost yellow. The elytral pattern is as presented in Fig. 3.6.

Comparisons: in comporison with other subspecies, *P. variegatum boiteli* Alluaud has very bright color and almost reduced elytral pattern. In comparison with *P. variegatum seurati* Alluaud, the spot on the pronotum and elytral pattern is more distinct.

Distribution: PAR: TU (East)

Processed material: Apstrādātais materiāls no Palearktikas reģiona publicēts Valainis, 2009.

Type locality: Tunisia, Bizerte (holotype is deposited in ZMUC).

References: Alluaud, 1935; Hurka, 2003; Valainis, 2009

***Phrator variegatum seurati* Alluaud, 1935**

Description: ~7.6 mm; width: ~3.8 mm. The elytral pattern has well-marked basic and middle segments that reach up to the interval 13 without interruption. The top segment has remained only in the form of separate elongate spots. The pattern on elytra as in Fig. 3.7.

Comparisons: similar to *P. variegatum sardoum* Reitt., but it will be readily distinguished by its different elytral pattern. The transversal brown spot on the pronotum is less distinct if compared to *P. variegatum boiteli* Alluaud. The clypeus is less convex in its base part.

Distribution: PAR: TU (West)

Processed material: ISNB: Tunisia: Ouchtata, 06.1946 (1 Male, Demoflys leg.)

Type locality: Oued Mellah, Oued Zouara, Tunis.

References: Alluaud, 1935; Hurka, 2003; Valainis, 2009

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