

Linzer biol. Beitr.	51/1	33-42	26.07.2019
---------------------	------	-------	------------

## **Three new species and additional records of *Oedichirus* (Coleoptera, Staphylinidae, Paederinae)**

Volker ASSING

**Abstract:** Three species of *Oedichirus* ERICHSON, 1839 are described and illustrated: *O. pauli* nov.sp. (North Vietnam), *O. puicus* nov.sp. (North Thailand), and *O. russipennis* nov.sp. (Indonesia: Papua: Yapen). A lectotype is designated for *O. terminatus* ERICHSON, 1843, a species described from Angola and subsequently reported also from the Mediterranean region. The sexual characters of *O. terminatus* are illustrated. Additional records of three species are provided.

**Key words:** Coleoptera, Staphylinidae, Paederinae, Pinophilini, *Oedichirus*, Oriental region, Palaearctic region, Vietnam, Thailand, Indonesia, Papua, taxonomy, new species, new records, lectotype designation.

### **Introduction**

Up until recently, *Oedichirus* ERICHSON, 1839 included some 325 species, most of which are distributed in the tropical regions around the globe (ASSING 2014; HERMAN 2013). HERMAN (2010) provided a list of the species known at that time. Very recently, ROUGEMONT (2018a-c) described 53 additional species from various zoogeographic regions and synonymized four names. According to checklists provided by ROUGEMONT (2018a-b), the genus is represented in the Oriental and Papuan regions by 57 and 16 species, respectively. It should be noted, however, that his concept of the zoogeographic regions, in particular the border between the Palaearctic and Oriental regions, is not identical to that adopted by other authors such as SCHÜLKE & SMETANA (2015).

Only four species had been reported from Vietnam: *O. chapmani* CAMERON, 1940, *O. longipennis* KRAATZ, 1859, *O. strictipennis* ROUGEMONT, 2018, *O. hochimini* ROUGEMONT, 2018. Eight named species were known from Thailand (ROUGEMONT 2018b).

According to SCHÜLKE & SMETANA (2015), *Oedichirus terminatus* ERICHSON, 1843, a species originally described from Angola, has been reported also from Crete, Morocco, and Egypt. Considering the distance between these records and the fact that numerous other species externally resembling *O. terminatus* have been described from the Afrotropical region, it seemed likely that the Mediterranean records were based on misidentification.

### **Material and methods**

The material treated in this study is deposited in the following collections:

MNB ..... Museum für Naturkunde, Berlin (J. Frisch, B. Jaeger)

NMP..... National Museum of Natural History, Prague (J. Hájek)  
 SMNS..... Staatliches Museum für Naturkunde, Stuttgart (W. Schawaller)  
 cAss..... Author's private collection  
 cWun..... Private collection Paul Wunderle, Mönchengladbach

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss), a Discovery V12 microscope (Zeiss), and a Jenalab compound microscope (Carl Zeiss Jena). The images were created using a digital camera (Axiocam ERc 5s) and Picolay software.

Body length was measured from the anterior margin of the mandibles (in resting position) to the posterior margin of the abdominal segment VIII, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head length from the anterior margin of the frons to the posterior margin of the head, the length of the pronotum along the middle, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra (at the sutural angles), and the length of the aedeagus from the apex to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

## Results

### *Oedichirus terminatus* ERICHSON, 1843 (Figs 12-16)

Type material examined: Lectotype ♂, present designation [in rather poor condition; dissected prior to the present study]: "6510 / *terminatus* Er., Angola. Schönl. / G. Fagel vid. 1962, *Oedichirus terminatus* Type / Hist.-Coll. (Coleoptera), Nr. 6510, *Oedichirus terminatus* Erichs., Angola, Schönlein, Zoo. Mus. Berlin / Lectotypus ♂, *Oedichirus terminatus* Erichson, desig. V. Assing 2019" (MNB). Paralectotype ♀: "Angola / Hist.-Coll. (Coleoptera), Nr. 6510, *Oedichirus terminatus* Erichs., Angola, Schönlein, Zoo. Mus. Berlin" (MNB).

**Comment:** The original description of *O. terminatus* is based on an unspecified number of syntypes from Angola. Two syntypes, a male and a female, were located in the historical collection of MNB. The male is designated as the lectotype. Its habitus and male primary and secondary sexual characters are illustrated in Figs 12-16.

According to SCHÜLKE & SMETANA (2015), the species has been reported also from Crete and North Africa (Egypt, Morocco). Considering that numerous species externally resembling *O. terminatus* have been described from Africa (FAGEL 1970), it would seem most unlikely that the material recorded from the Mediterranean should be conspecific with a species described from Angola. The only available material externally similar to *O. terminatus* and from close to the Mediterranean region were three specimens from Oman (cAss). They clearly do not belong to *O. terminatus*. A revision of the type material of other species described from regions close to the Mediterranean would be required to clarify the identity of the specimens reported from the West Palaearctic region.

### *Oedichirus longipennis* KRAATZ, 1859

Material examined: Thailand: 1♂, Lamphun, Ban Lam Chan, Tambon, Phla Tu Pa, light trap, 23.X.2016, leg. Rossi (cAss).

**Comment:** The vast distribution of this species ranges from the West Himalaya to South India, Sri Lanka, Java, Sulawesi, and South Japan (ROUGEMONT 2018b).

***Oedichirus coorgensis* ROUGEMONT, 2018**

**Material examined:** India: 1♂, 1♀, Goa, Canacona distr., Cortigao Sanctuary, 100 m, primary forest, 6-10.I.1997, leg. Schulz & Vock (cAss).

**Comment:** The original description of this recently described species is based on a unique male from Karnataka state, South India (ROUGEMONT 2018b).

***Oedichirus birmanus* FAUVEL, 1895**

**Material examined:** Thailand: 1♀, Doi Inthanon, Mae Aum, 18°31'N, 98°30'E, 1640 m, moist evergreen forest, leaf litter and sweeping vegetation, 11.I.2014, leg. Ob (cAss); 1♀, Doi Inthanon, Kew Mae Pan Waterfall, 18°33'N, 98°29'E, 2190 m, litter sifted, 15.I.2014, leg. Ob (cAss); 1♀, Doi Inthanon, 1800 m, 14.V.2006, leg. Grimm (SMNS); 1♂, Doi Pha Hom Pok, Pong Nam Dang waterfall, 20°00'N, 99°10'E, 710 m, litter sifted, 26.I.2014, leg. Ob (cAss); 1♀, Doi Pha Hom Pok, Bhoo Muan waterfall, 20°02'N, 99°14'E, 800 m, leaf litter sifted, 25.I.2014, leg. Ob (cAss)..

**Comment:** *Oedichirus birmanus* was originally described from Myanmar and subsequently reported from several localities in Thailand, including Doi Inthanon (ROUGEMONT 2018b).

***Oedichirus abbreviatus* ASSING, 2014**

**Material examined:** China: 1♂, Yunnan, Gaoligong Mts NNR, 2.1 km E Kongshu, 25°43'N, 98°40'E, 2100 m, wet debris in bamboo grove sifted, 1.VII.2016, leg. Hájek & Růžička (NMP).

**Comment:** This species was previously known from two localities in Gaoligong Shan (ASSING 2014).

***Oedichirus pauli* nov.sp. (Figs 1-6)**

**Type material:** Holotype ♂: "N-Vietnam - pass 8 km NW Sa Pa, 22°21'10"N, 103°46'01"E, 2010 m, second. forest, 12.VIII. 2013, V. Assing [7b+2] / Holotypus ♂ *Oedichirus pauli* sp.n. det. V. Assing 2019" (cAss). Paratypes: 1♂: same data as holotype, but leg. Wunderle (cWun); 1♂: "N-Vietnam - 7 km NW Sa Pa, 22°20'58"N, 103°46'47"E, 2000 m, primary forest, 29.VII. 2013, Wunderle [2+2]" (cAss).

**Etymology:** This species is dedicated to my friend and long-time field companion Paul Wunderle (Mönchengladbach), who collected two of the type specimens.

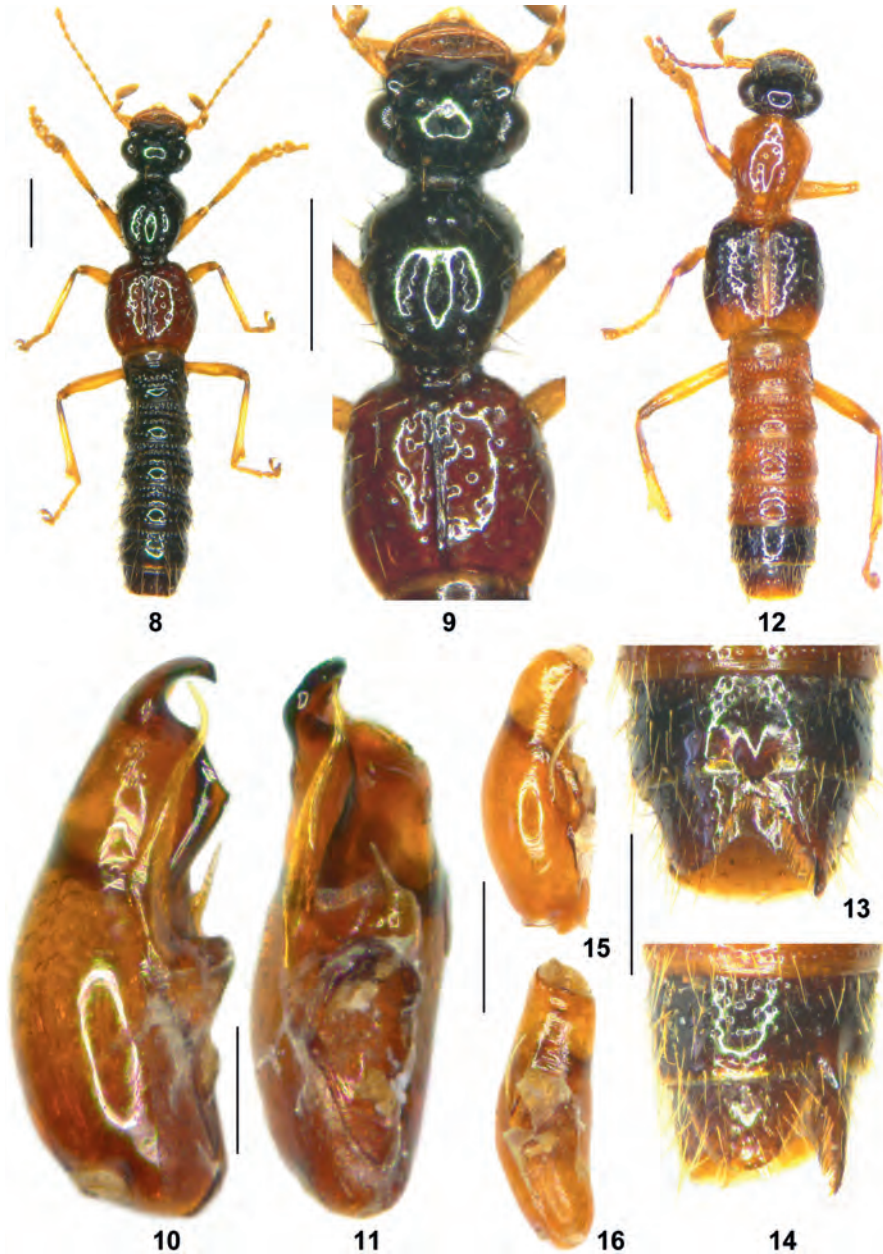
**Description:** Moderately large species; body length 7.8-9.5 mm; length of fore-body 3.3-3.8 mm. Habitus as in Fig. 1. Coloration: body uniformly black; legs, antennae, and maxillary palpi yellowish.

**Head** (Fig. 2) transverse, broadest across eyes; lateral contours behind eyes converging, weakly convex, posterior angles obsolete; dorsal surface with irregularly spaced coarse punctures, median portion of frons impunctate. Eyes strongly convex, as long as, or slightly longer than distance from posterior margin of eye to posterior constriction of head. Antenna approximately 2.8 mm long.

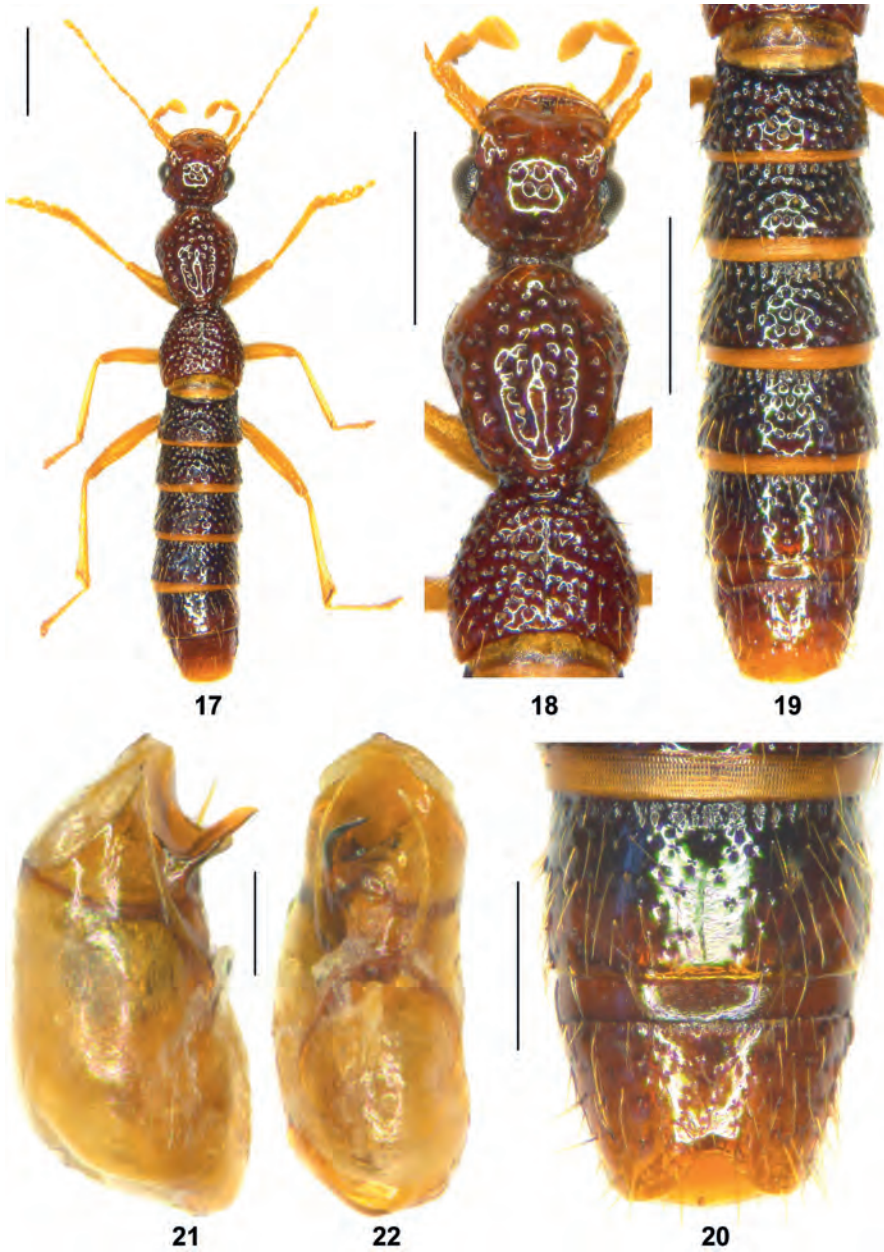
**Pronotum** (Fig. 2) 1.12-1.14 times as long as broad and approximately 1.05 times as broad as head, widest anteriorly and distinctly tapering posteriorly; punctuation coarse and irregularly spaced; postero-median portion impunctate.



**Figs 1-7:** *Oedichirus pauli* (1-6) and *O. russipennis* (7): (1) habitus (holotype); (2) forebody; (3, 7) male abdominal segments VII-VIII in ventral view; (4) male abdominal segments VII-VIII in latero-ventral view; (5-6) aedeagus in lateral and in ventral view. Scale bars: 1-4: 1.0 mm; 5-7: 0.5 mm.



**Figs 8-16:** *Oedichirus russipennis* (8-11) and *O. terminatus*, lectotype (12-16): (8, 12) habitus; (9) forebody; (10-11, 15-16) aedeagus in lateral and in ventral view; (13) male abdominal segments VII-VIII in ventral view; (14) male abdominal segments VII-VIII in latero-ventral view. Scale bars: 8-9, 12: 1.0 mm; 13-16: 0.5 mm; 10-11: 0.2 mm.



**Figs 17-22:** *Oedichirus puicus*: (17) habitus; (18) forebody; (19) abdomen; (20) male abdominal segments VII-VIII in ventral view; (21-22) aedeagus in lateral and in ventral view. Scale bars: 17-19: 1.0 mm; 20: 0.5 mm; 21-22: 0.2 mm.

Elytra (Fig. 2) short, approximately 0.6 times as long as pronotum, depressed, and with distinctly convex lateral contours; humeral angles completely obsolete; punctuation coarse. Hind wings completely reduced.

Abdomen (Fig. 1) slightly broader than elytra; punctuation not arranged in transverse rows, coarse and rather dense on tergites III-VI, sparser and less deep on tergites VII-VIII; anterior impressions of tergites III-VI without distinct longitudinal keels; near anterior margins of tergites III-VII narrowly with pronounced reticulate microsculpture, remainder of tergal surfaces with very shallow and fine microsculpture composed of transverse striae; microsculpture of tergite VIII composed of distinct isodiametric or weakly transverse meshes; posterior margin of tergite VII without palisade fringe.

♂: sternite VII (Figs 3-4) posteriorly with a pair of parallel oblong keels, posterior margin weakly concave in the middle; sternite VIII (Figs 3-4) strongly asymmetrically impressed and without setae in the middle, posteriorly with deeply concave posterior excision, laterally with a long spine-shaped process on the right and a short tooth-shaped process on the left (ventral view); aedeagus 1.5 mm long, asymmetric, and shaped as in Figs 5-6.

**Comparative notes:** Based on the similar external characters, on the similar modifications of the male sternites VII and VIII, and on the similar general morphology of the aedeagus, *O. pauli* is undoubtedly closely allied to *O. schuelkei* ASSING, 2014 and *O. abbreviatus* from Yunnan, China. It is reliably distinguished from them by the male primary and secondary sexual characters. For illustrations of *O. schuelkei* and *O. abbreviatus* see ASSING (2014).

The only other micropterous *Oedichirus* species recorded from Vietnam is *O. strictipennis* (male unknown), which differs from *O. pauli* by a more oblong pronotum with sinuate lateral margins, denser and less coarse punctuation of the head and the pronotum, distinctly and more extensively blackish femoral apices and tibial bases, and by longer and more slender elytra. For illustrations of *O. strictipennis* see ROUGEMONT (2018b).

**Distribution and natural history:** *Oedichirus pauli* was collected in two localities near Sa Pa in North Vietnam. The specimens were sifted from litter, moss, and roots in a secondary deciduous forest with bamboo and bushes and in a degraded primary subtropical cloud forest at an altitude of approximately 2000 m. One of the paratypes is somewhat teneral.

### ***Oedichirus puicus* nov.sp. (Figs 17-22)**

**Type material:** Holotype ♂: "N-Thailand, NWW Chiang Mai, Doi Pui, 1600-1685 m, 22.-23.V.2006, leg. R. Grimm / Holotypus ♂ *Oedichirus puicus* sp.n. det. V. Assing 2019" (SMNS). Paratype ♂: same data as holotype (cAss).

**Etymology:** The specific epithet is derived from the name of the mountain where the type locality is situated.

**Description:** Body length 6.4-6.7 mm; length of forebody 2.9-3.0 mm. Habitus as in Fig. 17. Coloration: forebody brown; abdomen blackish with the apex (segments VIII-X and posterior portion of segment VII) reddish-brown to reddish; legs, antennae, and maxillary palpi yellowish.

Head (Fig. 18) transverse, broadest across eyes; lateral contours behind eyes converging,

weakly convex, posterior angles obsolete, immediately behind eyes with the postero-lateral carina forming a distinct angle; dorsal surface with coarse and rather dense punctures across middle and at posterior margin, frons with fine and sparse punctures, across vertex with an extensive transverse spot without punctation. Eyes strongly convex, slightly longer than distance from posterior margin of eye to posterior constriction of head. Antenna approximately 2.0 mm long.

Pronotum (Fig. 18) 1.16-1.18 times as long as broad and approximately 1.05 times as broad as head, widest anteriorly and distinctly tapering posteriorly; punctation coarse and somewhat irregularly spaced; posterior portion with longitudinal impunctate patches.

Elytra (Fig. 18) short, 0.55-0.57 times as long as pronotum, depressed, and with distinctly convex lateral contours; humeral angles completely obsolete; punctation coarse. Hind wings completely reduced.

Abdomen (Fig. 19) slightly broader than elytra; punctation not arranged in transverse rows, coarse and dense on tergites III-VI, sparser and finer on tergites VII-VIII; anterior impressions of tergites III-VI without distinct longitudinal keels; near anterior margins of tergites III-VII narrowly with pronounced microsculpture, remainder of tergal surfaces without microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VII (Fig. 20) unmodified; sternite VIII (Fig. 20) with moderately deep, rather broad, and symmetric posterior excision, otherwise unmodified; aedeagus 1.0 mm long and shaped as in Figs 21-22.

**Comparative notes:** Using the key to the species recorded from Thailand in ROUGEMONT (2018b), *O. puicus* would key out together with *O. uncifer* ROUGEMONT, 2018. It is distinguished from this species by the bicoloured body (*O. uncifer*: body black), by the shape of the ventral process of the aedeagus (*O. uncifer*: ventral process stouter, shorter, and apically hooked), and by the shape of the posterior excision of the male sternite VIII (U-shaped in *O. uncifer*). For illustrations of *O. uncifer* see ROUGEMONT (2018b).

**Distribution and natural history:** The type locality is situated in Doi Pui, a mountain some 10 km to the northwest of Chiang Mai, North Thailand. Aside from the altitude (1600-1685 m), ecological data are not available.

### ***Oedichirus russipennis* nov.sp. (Figs 7-11)**

**Type material:** Holotype ♂: "West-Papua, Japen, Ambeiduru, ca. 1000 m, südl. z.T. Primärwald, 20.07.95 leg. Stüben / Holotypus ♂ *Oedichirus russipennis* sp.n. det. V. Assing 2019" (cAss).

**Etymology:** The specific epithet (adjective: red-winged) alludes to the reddish elytra, one of the characters distinguishing this species from other Papuan congeners.

**Description:** Body length 7.3 mm; length of forebody 3.6 mm. Habitus as in Fig. 8. Coloration: head, pronotum, and abdomen black; elytra dark-reddish; legs yellow with the femoral apices and the tibial bases narrowly and weakly infuscate; antennae yellowish-brown; maxillary palpi brown.

Head (Fig. 9) transverse, broadest across eyes; dorsal surface with eight coarse punctures on either side; median portion extensively impunctate; integument without microsculpture. Eyes large and strongly convex. Antenna 2.2 mm long.



Pronotum (Fig. 9) 1.13 times as long as broad and as broad as head, widest anteriorly and distinctly tapering posteriorly, strongly convex in cross-section; punctation coarse, sparse, and irregularly spaced; in posterior two-thirds with a series of five coarse punctures on either side of middle, anterior to these series with a median pair of close coarse punctures; in lateral and postero-median portions largely impunctate.

Elytra (Fig. 9) approximately 0.9 times as long as pronotum, distinctly convex in cross-section, and with strongly convex lateral contours; humeral angles weakly marked; punctation coarse and sparse, somewhat arranged in irregular series. Hind wings not examined.

Abdomen (Fig. 8) narrower than elytra; tergites III-VII with very coarse and partly confluent punctation at anterior margins; tergite III with two transverse rows of moderately dense coarse punctures on disc; tergites IV-VI with three transverse rows of coarse and very dense punctures on disc; tergite VII with three transverse rows of moderately coarse punctures on disc; posterior margin of tergite VII with narrow palisade fringe.

♂: sternite VII (Fig. 7) unmodified; sternite VIII (Fig. 7) with pronounced posterior excision of trapezoid shape, middle of this excision with a dense fringe of long golden bristles; aedeagus 0.9 mm long and shaped as in Figs 10-11.

**Comparative notes:** *Oedichirus russiceps* is distinguished from other Papuan congeners by the coloration of the body alone. Most Papuan *Oedichirus* species have the body black, one is reddish, and one is black with a reddish pronotum. Based on the similar external characters, including the conspicuous punctation of the abdomen, on the similar modifications of the male sternite VIII, and on the similar general morphology of the aedeagus, *O. russipennis* is closely allied to *O. novaguinea* WENDELER, 1926, a bicoloured species with the head, elytra, and abdomen black, and the pronotum red. For illustrations of *O. novaguinea* see ROUGEMONT (2018a).

**Distribution and natural history:** The type locality is situated in Yapen, an Indonesian island off the northwestern coast of New Guinea. The holotype was collected in a primary forest at an altitude of approximately 1000 m.

### Acknowledgements

I am indebted to the colleagues indicated in the material section for the loan of material. Benedikt Feldmann (Münster) proof-read the manuscript.

### Zusammenfassung

Drei Arten der Gattung *Oedichirus* ERICHSON, 1839 werden beschrieben und abgebildet: *O. pauli* nov.sp. (Nordvietnam), *O. puicus* nov.sp. (Nordthailand), und *O. russipennis* nov.sp. (Indonesien: Papua: Yapen). Für *O. terminatus* ERICHSON, 1843 wird ein Lektotypus designiert. Die ursprünglich aus Angola beschriebene Art wurde auch aus dem Mittelmeerraum gemeldet. Die männlichen Sexualmerkmale von *O. terminatus* werden abgebildet. Weitere Nachweise von drei Arten werden gemeldet.

## References

- ASSING V. (2014): On the *Oedichirus* fauna of China (Coleoptera: Staphylinidae: Paederinae). — Linzer Biologische Beiträge **46** (2): 1229-1240.
- FAGEL G. (1970): Revision des genres *Procirrus* LATREILLE, *Palaminus* ERICHSON, *Oedichirus* ERICHSON et voisins de la fauna africaine. — Annales du Musée Royal de l'Afrique Centrale, Tervuren, Série IN-8: 1-444.
- HERMAN L.H. (2010): Generic revision of the Procirrina (Coleoptera: Staphylinidae: Paederinae: Pinophilini). — Bulletin of the American Museum of Natural History **347**: 1-78.
- HERMAN L.H. (2013): Revision of the New World species of *Oedichirus* (Coleoptera: Staphylinidae: Paederinae: Pinophilini: Procirrina). — Bulletin of the American Museum of Natural History **375** (1): 1-137.
- ROUGEMONT G. DE (2018a): New Papuan *Oedichirus* (Staphylinidae, Paederinae, Pinophilini). — Linzer Biologische Beiträge **50** (1): 435-446.
- ROUGEMONT G. DE (2018b): New oriental *Oedichirus* (Staphylinidae, Paederinae, Pinophilini). — Linzer Biologische Beiträge **50** (1): 461-536.
- ROUGEMONT G. DE (2018c): New species and records of African and Lemurian *Oedichirus* ERICHSON (Staphylinidae, Paederinae, Procirrina). — Linzer Biologische Beiträge **50** (1): 447-460.
- SCHÜLKE M. & A. SMETANA (2015): Staphylinidae, pp. 304-1134. — In: LÖBL I. & D. LÖBL (eds), Catalogue of Palaearctic Coleoptera. New updated Edition. Volume 2. Hydrophiloidea – Staphylinoidea. Revised and updated edition. — Leiden: Brill: xxvi + 1702 pp.

Author's address: Dr. Volker ASSING  
Gabelsbergerstr. 2  
D-30163 Hannover, Germany  
E-mail: vassing.hann@t-online.de