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A revision of *Calodera* MANNERHEIM. II. A new species, new synonyms, and additional records

(Coleoptera: Staphylinidae: Aleocharinae)

With 9 figures

VOLKER ASSING

Summary

Based on material that has become available since the first part of the revision, various new records of *Calodera* species are presented. *C. zerchei* **sp. n.**, the first species from the Russian Far East, is described and distinguished from *C. desdemona* SHARP, a species recorded only from Japan. The following synonymies are proposed: *Calodera* MANNERHEIM, 1830 = *Ityocara* THOMSON, 1867, **syn. n.**; *Calodera aethiops* (GRAVENHORST, 1802) = *Aleochara (Calodera) perspicua* GISTEL, 1857, **syn. n.** *Calodera rubens* ERICHSON, the type species of *Ityocara*, is transferred to *Calodera* again. The sexual characters of *Calodera rubens*, *C. desdemona*, and *C. zerchei* are illustrated. In the Holarctic region, 17 species of *Calodera* are recognized, 11 of them Western Palaearctic, 3 Eastern Palaearctic, and 3 Nearctic. So far all the species from other regions which were previously attributed to *Calodera* and which have been (re-)examined have proved to belong to other genera, which suggests that *Calodera* is a Holarctic genus.

Keywords

Coleoptera - Staphylinidae - Aleocharinae - Oxypodini - *Calodera* - Palaearctic region - taxonomy - new species - new synonyms - new combination - new records.

Zusammenfassung

Eine Untersuchung von Material, das seit dem ersten Teil der Revision verfügbar wurde, ergab weitere Nachweise von *Calodera*-Arten. *C. zerchei* **sp. n.**, die erste Art aus dem Fernen Osten Russlands, wird beschrieben und von der nur aus Japan bekannten *C. desdemona* SHARP unterschieden. Zwei Synonymien werden begründet: *Calodera* MANNERHEIM, 1830 = *Ityocara* THOMSON, 1867, **syn. n.**; *Calodera aethiops* (GRAVENHORST, 1802) = *Aleochara (Calodera) perspicua* GISTEL, 1857, **syn. n.** *Calodera rubens* ERICHSON, die Typusart von *Ityocara*, wird wieder *Calodera* zugeordnet. Die Sexualmerkmale von *Calodera rubens*, *C. desdemona* und *C. zerchei* werden abgebildet. 17 *Calodera*-Arten sind aus der Holarktis bekannt, davon 11 aus der Westpaläarktis, 3 aus der Ostpaläarktis und 3 aus der Nearktis. Die Tatsache, dass alle bisher untersuchten, aus Regionen außerhalb der Holarktis beschriebenen *Calodera*-Arten nicht in diese Gattung gehören, deutet darauf hin, dass *Calodera* holarktisch verbreitet ist.

Introduction

Species of *Calodera* have been described or recorded from almost all major zoogeographic regions, most of them from the Palaearctic, the Nearctic, and the Australian region (BERNHAUER & SCHEERPELTZ, 1926). *Calodera* was described as early as 1830, and until the early 20th century, the majority of the oxypodine species with stout antennae, a slender pronotum, and an either distinctly microsculptured or densely punctate integument were attributed to this genus. However, as more genera of Oxypodini were described and more characters were examined, especially the mouthparts and the genitalia, numerous species were transferred from *Calodera* to other aleocharine genera. In fact, none of the recently revised *Calodera* species from regions other than the Holarctic has remained in the genus, which suggests that the genus probably has a Holarctic distribution.

Ten *Calodera* species are known to occur in the Western Palaearctic, the only region whose *Calodera* fauna has been comprehensively revised (ASSING, 1996). Only one species, *C. infuscata* BLATCHLEY, was known from North America until two more species, *C. parviceps* (CASEY) and *C. caseyi* ASSING, were recently transferred from *Amarochara* THOMSON to *Calodera* (ASSING, 2002). Two species have been described from the Eastern Palaearctic region, *C. desdemona* SHARP from Japan and *C. coccinea* MATSUMURA from Taiwan. The type of the former is here treated, that of the latter was looked for, but not found in the collections of Hokkaido University (MARUYAMA, pers. comm.). Including the species described or transferred to *Calodera* in the present paper, the genus now comprises 17 valid species from the Holarctic region, two of which have not been revised (*C. infuscata*, *C. coccinea*).

Material

Types and additional material from the following public and private collections were examined:

BMNH	The Natural History Museum, London (M. Brendell, S. Shute)
DEI	Deutsches Entomologisches Institut (L. Zerche)
HNHM	Hungarian Natural History Museum, Budapest (O. Merkl)
LCCM	Leicestershire County Council Museums (D. Lott)
MNHUB	Museum für Naturkunde der Humboldt-Universität, Berlin (M. Uhlig)
NHMB	Naturhistorisches Museum Basel, coll. Frey (E. Sprecher)
NMP	Národní Muzeum v Praze, Prague (J. Jelínek)
LMH	Landesmuseum Hannover
ZIN	Zoological Institute, St.-Petersburg (V. I. Gusarov)
cAss	author's private collection
cEss	private collection J. Esser, Berlin
cHen	private collection S. Hennicke, Greifswald
cLun	private collection S. Lundberg, Luleå
cMei	private collection A. Meißner, Berlin
cPut	private collection V. Puthz, Schlitz
cRen	private collection K. Renner, Bielefeld
cSch	private collection M. Schülke, Berlin
cSco	private collection P. Scholze, Quedlinburg
cWun	private collection P. Wunderle, Mönchengladbach

New records, synonymies, and species of Palearctic *Calodera*

Below, previously unrevised material is listed. Almost all *Calodera* species are rare and literature records of most species are not very reliable, since many of them have been shown to be based on misidentifications (ASSING, 1996). The examined material is commented on only when the known range of a species is extended or when the records are remarkable for other reasons.

Calodera nigrita MANNERHEIM

Germany: Niedersachsen/Bremen: 1 ex., "Hann." (LMH); 2 exs., "Hann.", 17.I.1915 (LMH); 1 ex., "Hann.", 22.IV.1921 (LMH); 1 ex., Bremen, Findorff, 29.V.1996, leg. Esser (cEss). **Nordrhein-Westfalen:** 1 ex., Umg. Düsseldorf, Mönchenwerth, 29.I.1939, leg. Ermisch (MNHUB). **Hessen:** 1 ex., Bad Hersfeld, NB 53, Obersberg, pitfall, 1976, leg. Puthz (cAss). **Sachsen-Anhalt:** 6 exs., Landkreis Wittenberg, Wittenberg, Elbwiesen, Hochwassergenist, 12.III.2000, leg. Schülke (cSch, cAss); 1 ex., Dessau, coll. Lokay (NMP); 1 ex., Magdeburg, coll. Lokay (NMP). **Berlin/Brandenburg:** 1 ex., Finkenkrug, 3.IV.1921 (cPut); 1 ex., Finkenkrug (HNHM); 3 exs., Frankfurt/O., Oder inundation, 17.III.1999, leg. Schülke, Wrase (cSch); 1 ex., Berlin env., leg. Boettcher, coll. Lokay (NMP); 4 exs., "Berolinum" (ZIN). **Sachsen:** 1 ex., Großenhain, Stölpchen, 4.IV.1974, leg. Reißler (MNHUB); 4 exs., Großenhain, Thiendorf, 24.IV.1965, leg. Reißler (MNHUB). **Austria:** 2 exs., Stockerau, Bernhauer (cAss, cPut).

Czech Republic: 4 exs., Toušň, leg. Lokay, coll. Lokay (NMP, cAss); 1 ex., Toušň, 10.IV.1910, Obenbg., coll. Rambousek (NMP); 1 ex., Celakov, 1906, leg. Rambousek, coll. Rambousek (NMP); 2 exs., M. Ostrava, leg. Jurecek, coll. Rambousek (NMP, cAss); 3 exs., Bohemia, Neratowice, coll. Lokay (NMP); 1 ex., Vosecek, 25.III.1906, leg. Rambousek, coll. Rambousek (NMP); 1 ex., Moravia, Dyje, leg. Fleischer (HNHM).

Slovenia: 1 ex., Parje, Parski jezero, 20.V.1998, leg. Drovenik (cAss).

Calodera lapponica J. SAHLBERG

Paralectotype (previously unexamined): 1 ex.: Muonio / J. Sahlb. / coll. Reitter / Paratypus [sic] *Calodera lapponica* J. Sahlberg 1876 [curator label] / *Calodera lapponica* J. Sahlb. Typ (HNHM).

Calodera protensa MANNERHEIM

Germany: Niedersachsen: 4 exs., "Hann.", 15.I.1916 (LMH, cAss); 1 ex., "Hann.", 5.II.1926 (LMH); 1 ex., Spiekeroog, ME 15, 6.-20.IV.1976, leg. Puthz (cAss); 1 ♂, Verden, Hohenaverbergen, Aller inundation, 27.XII.1998, leg. Esser (cAss). **Hessen:** 4 exs., locality not specified, 1906, leg. Scriba, coll. Lokay (NMP); 1 ex., Bad Hersfeld, NB 53, Obersberg-Erdfall, pitfall, 1979, leg. Puthz (cAss). **Mecklenburg-Vorpommern:** 1 ♀, Greifswald, Karrendorfer Wiese, 26.IV.1995 (cHen). **Sachsen-Anhalt:** 3 ♀ ♀, Steckby/Elbe, V.1998, leg. Scholze (cSco).

Czech Republic: 2 exs., Vosecek, 25.III.1906, leg. Rambousek, coll. Rambousek (NMP, cAss); 2 exs., Bohemia, Celákovice, 15.IV.1917, leg. Rambousek, coll. Rambousek (NMP).
Locality not specified or not identified: 2 exs., “Germ. mer.” (ZIN); 3 exs., “Harria” (ZIN).

Calodera uliginosa ERICHSON

Germany: Niedersachsen: 1 ex., Pr. Hannover, 4.I.1919 (LMH); 5 exs., “Hann.”, 15.I.1916 (LMH); 4 exs., “Hann.”, 5.II.1926 (LMH). **Berlin/Brandenburg:** 1 ex., Berlin env, leg. Boettcher, coll. Lokay (NMP); 2 exs., Finkenkrug, leg. Boettcher, coll. Lokay (NMP); 1 ex., Finkenkrug, 20.III.1921 (cPut); 1 ex., “Berlin”, leg. Weise (HNHM); 41 exs., Frankfurt/O., Oder inundation, 17.III.1999, leg. Schülke, Wrase (cSch, cAss). **Sachsen-Anhalt:** 1 ex., Magdeburg, coll. Lokay (NMP); 1 ♂, Steckby/Elbe, V.1998, leg. Scholze (cSco); 1 ex., Havelberg, Jederitzer Holz, 14.VIII.1997, leg. Scholze (cSco); 1 ♂, Landkreis Wittenberg, 3km E Listerfehrda, inundated field, 12.III.2000, leg. Schülke (cSch). **Sachsen:** 2 exs., Leipzig (cAss, cPut).

Locality not specified: 1 ♂, “Germ.” (ZIN).

Czech Republic: 5 exs., Jirina, leg. Václav, coll. Lokay (NMP, cAss); 1 ex., Mestecko, 20.IV.1919, coll. Lokay (NMP); 15 exs., Bohemia, Celákovice, 2.IV.1916, 30.IV.1916, 15.IV.1917, leg. Rambousek, coll. Rambousek (NMP, cAss).

Calodera riparia ERICHSON

Norway: 1 ex., Kongsberg, leg. Münster, coll. Rambousek (NMP).

Sweden: 1 ♂, 1 ♀, Skåne, Väderö, 20.VII.1982, leg. Lundberg (cLun).

Finland: 2 exs., Helsinki, leg. Sahlberg (HNHM, ZIN).

Germany: Nordrhein-Westfalen: 2 ♂ ♂, S Gronau, NSG Zwillbrocker Venn, *Molinia*, 9.III.1996, leg. Wunderle (cAss); 1 ♂, 1 ♀, Kreis Steinfurt, Emsdettener Venn, 6.III.1999, leg. Assing (cAss). **Niedersachsen:** 1 ♀, Lüneburger Heide, Niederhaverbeck, *Calluna* heathland, pitfall, 17.V.1997 (cAss). **Berlin/Brandenburg:** 3 ♂ ♂, 4 ♀ ♀, Nuthe-Nieplitz-Niederung, I./VII./X.1993, VI./VII.1994, 1.VI.1995, leg. Meißner (cMei); 7 exs., “Berolinum” (ZIN). **Sachsen:** 3 exs., Großenhain, Mühlbach, 25.II.1962, 17.IV.1963, 31.III.1965, leg. Reßler (MNHUB); 1 ♂, 1 ex., Großenhain, Stölpchen, 31.III.1973, 9.IV.1974, leg. Reßler (MNHUB); 1 ex., Großenhain, Stadtpark, 2.II.1974, leg. Reßler (MNHUB); 1 ex., Großenhain, Mauleis, 5.X.1961, leg. Reßler (MNHUB); 1 ex., Großenhain, Thiendorf, 25.IX.1064, leg. Reßler (MNHUB).

Austria: 1 ♂, 2 ♀ ♀, Vorarlberg, W Bregenz, Speichenwiesen, Bodenseeuf, inundated meadows, 14.V.1999, leg. Assing (cAss); 1 ♂, 1 ex., Stockerau, leg. Bernhauer coll. Lokay (HNHM, NMP).

Italy: 1 ex., Bolzano, 1879, leg. Reitter (HNHM); 1 ♂, Toscana, Padule del Fucecchio, IV.-V.1994, leg. Bordoni (cAss). **Italian or Austrian territory:** 1 ex., “Tyrol” (HNHM).

Czech Republic: 1 ♀, Hluboká, coll. Lokay (NMP); 1 ♀, Maněvici (Kovel), 19.VI.1916, coll. Lokay (NMP).

Bulgaria: 1 ♀, Sofia, 3.VI.1908, leg. Rambousek, coll. Rambousek (NMP).

The specimens from the Czech Republic and Bulgaria are the first records I have seen from these countries. However, since all of them are females, their identification cannot be regarded as absolutely reliable.

Calodera rufescens KRAATZ

Sweden: 1 ♂, 1 ex., Skåne, Revinge, 1.II.1975/ 22.I.1976, leg. Lundberg (cLun); 1 ex., Skåne, Benestad, 21.XI.1976, leg. Lundberg (cLun); 1 ex., Skåne, Vombsjön, 21.IV.1968, leg. Lundberg (cLun).

Germany: Niedersachsen: 2 exs., Nordgoltern near Hannover, 30.XII.1916 (LMH); 1 ♀, Verden, Hohenaverbergen, Aller inundation, 27.XII.1998, leg. Esser (cEss). **Hessen:** 1 ex., Bad Hersfeld, Fulda inundation near Beiershausen, 5.XI.1977, leg. Puthz (cAss). **Sachsen-Anhalt:** 1 ex., Havelberg, Jederitzer Holz, 14.VII.1997, leg. Scholze (cSco). **Berlin/Brandenburg:** 1 ex., Berlin, leg. Kraatz, coll. Lokay (NMP); 1 ♀, Berlin-Köpenick, Müggelsee, 13.IV.1997, leg. Esser (cEss); 1 ♀, Lkr. Uckermark, Ringenwalde, Götschendorf, 23.IV.95, Schülke & Grünberg (cSch); 1 ♂, Brandenburg, Nuthe-Nieplitz-Niederung, VII.1994, leg. Meißner (cMei). **Sachsen:** 8 exs., Leipzig, leg. Linke, colls. Lokay, Rambousek (HNHM, NMP).

Czech Republic: 1 ex., Neratovice, coll. Lokay (NMP); 1 ex., Jirina, leg. Václav (cAss); 2 exs., Bohemia, Hradec Kr., Kracik, leg. Rambousek, coll. Rambousek (NMP, cAss).

The presence of *C. rufescens* in the Czech Republic, as recorded in the literature (e. g. BOHÁČ et al., 1993), is here verified.

Calodera cochlearis ASSING

Germany: Niedersachsen: 2 ♂ ♂, Kreis Lüneburg, Amt Neuhaus/Elbe, Elbaue, car-net, 6.VII.1995, leg. Renner (cAss). **Sachsen-Anhalt:** 1 ♂, Salzwedel, 8.VII.1993, leg. Renner (cRen).

Czech Republic: 3 ♂ ♂, 2 ♀ ♀, Toušeň, leg. Lokay, coll. Lokay (NMP, cAss); 1 ♂, Brandeis a.E. [= Brandýs n. L.], leg. Lokay, coll. Lokay (NMP); 1 ♂, Hluboká, leg. Lokay, coll. Lokay (NMP); 6 ♂ ♂, 8 ♀ ♀, 5 exs., Bohemia, Celákovice, 2.IV.1916, 30.IV.1916, 15.IV.1917, leg. Rambousek, coll. Rambousek (NMP); 4 ♂ ♂, 2 ♀ ♀, Bohemia, Celákovice, 2.IV.1916, leg. Rambousek, coll. Rambousek (NMP); 1 ♂, Bohemia, Zámky, IX.1916, leg. Rambousek, coll. Rambousek (NMP); 2 ♂ ♂, Bohemia (cAss, cPut).

The species, which was previously known only from Niedersachsen, Mecklenburg-Vorpommern, and the Czech Republic (ASSING, 1996; KÖHLER & KLAUSNITZER, 1998) is here recorded from Sachsen-Anhalt for the first time. In the Czech Republic, it is apparently more common than *C. aethiops* (GRAVENHORST).

***Calodera stiliformis* ASSING**

1 ♂, Germany, Nordrhein-Westfalen, Kreis Steinfurt, Emsdettener Venn, 6.III.1999, leg. Assing (cAss).

This is the second record of *C. stiliformis*, a species known only from two localities in the west of Nordrhein-Westfalen, Germany.

***Calodera ligula* ASSING**

Austria: 1 ♂, 4 exs., Vöslau, leg. Paganetti (NHMB, cAss).

Hungary: 1 ♂, Kalocsa, leg. Eppelsheim (HNHM); 1 ♂, Békés m., Kétegyháza, Kerek-szék, 90m, 22.X.1979, leg. Ádám (HNHM); 1 ♂, same locality, Festuco pseudovinae Quercetum, 14.XI.1982, leg. Ádám (HNHM); 1 ♂, Békés m., Sarkad, Remetei-erdo, 90m, Festuco pseudovinae Quercetum, 13.XI.1982, leg. Ádám (HNHM); 1 ♂, Kiskunsági N. P., Bugac, Nagybugac, 13.XI.1979, leg. Ádám & Hámori (HNHM); 1 ♂, Kiskunsági N. P., Lakitelek, 27.X.1977-16.III.1978, leg. Hámori (HNHM); 1 ♂, Nyírség, Bátorliget, 7.-10.VI.1949, leg. Kaszab & Székessy (HNHM); 1 ♂, Ócsa, Nagyerdő, III.1931, leg. Székessy (HNHM); 1 ♂, same locality, VII.1923, leg. Kaszab & Székessy (HNHM); 3 ♂, Mohács, 1908, leg. Kaufmann (HNHM, cAss).

Azerbaijan or Iranian territory: 1 ♂, "Talysch", leg. Reitter (HNHM).

Central Asian Republics: 2 ♂, 2 exs., Kazakhstan, Dzhambul ["Aulie Ata"] (HNHM, cAss); 2 ♂, 1 ex., "Turkestan", leg. Reitter, Leder (HNHM).

The species is here recorded from the area to the southwest of the Caspian Sea and from Kazakhstan for the first time. In Hungary, it was previously known only from the Neusiedler See area.

***Calodera aethiops* (GRAVENHORST)**

Aleochara (*Calodera*) *perspicua* GISTEL, 1857, **syn. n.**

Finland: 1 ♂, 1 ex., Helsinki, leg. Sahlberg (ZIN).

Great Britain: 1 ♂, Coedydd Aber NNR, Gwynedd, 3.VII.1984, leg. Lott (LCCM); 1 ♂, Leicestershire, Kegworth, 22.VI.1992, leg. Lott (LCCM).

Germany: Niedersachsen/Bremen: 2 ♂, 1 ex., Spiekerroog, 6.-20.IV.1976, leg. Puthz (cAss, cPut); 2 ♂, 2 ♀, Verden, Hohenaverbergen, Aller inundation, 27.XII.1998 (cEss); 1 ♂, 1 ♀, Leuchtenburg near Bremen, 14.I.1996, leg. Esser (cEss). **Nordrhein-Westfalen:** 1 ♂, Zwillbrocker Fenn near Zwillbrock, Kr. Vreden, 23./25.IV.1992, Schülke (cSch); 11 ♂, 17 ♀, Kreis Steinfurt, N Hopsten, Wiechholz, 6.III.1999, leg. Assing (cAss); 6 ♂, 9 ex., Kölner Bucht, Woringer Bruch, 26.X.1986, 4.VII.1996, 3.IX.1996, leg. Köhler (cKöh); 1 ♂, 1 ex., Brühl bei Köln, Staatsforst Ville, 24.V./14.VI.1989, leg. Köhler (cAss, cKöh); 1 ♂, 1 ex., Eifel, Gemünd, Kermeter, 6.V./26.VI.1990, leg. Köhler

(cAss, cKöh). **Rheinland-Pfalz:** 1 ♂, Pfalz, Schaidt, Bienwald, NWR Mörderrhäufel, 30.V.1996, leg. Köhler (cKöh). **Mecklenburg-Vorpommern:** 1 ♂, 1 ♀, Hiddensee, N Vitte, Boddenseite, Moos u. Ufergenist, 24.IV.1993, M. Schülke (cSch). **Sachsen-Anhalt:** 21 ♂♂, 35 ♀♀, 22 exs., Wittenberg, Elbwiesen, flood debris, 12.III.2000, leg. Schülke (cSch, cAss); 1 ♂, Landkreis Wittenberg, 3km E Listerfehrda, inundated arable land, 12.III.2000, leg. Schülke (cSch); 1 ♂, Salzwedel, 8.VII.1993, leg. Renner (cRen). **Berlin/Brandenburg:** 4 ♂♂, 2 ♀♀, 2 exs., Berlin, Tiefwerder, Uferdetritus, 3.I.1961, leg. Puthz (cAss, cPut); 3 ♂♂, 1 ♀, 3 exs., Lkr. Uckermark, Ringenwalde, Weg nach Götschendorf, 23.IV.95, Schülke & Grünberg (cSch), 1 ♂, Nuthe-Nieplitz-Niederung, II.1993, leg. Meißner (cMei); 3 exs., "Berolinum" (ZIN); 3 ♂♂, 14 exs., Frankfurt/O., Oder inundation, 17.III.1999, leg. Schülke & Wrase (cSch); 1 ♂, 11 exs., Landkr. Barnim, Brodowin, Nettelgrund, *Quercus* and *Alnus* litter, 19.III.2000, leg. Schülke (cSch); 1 ♂, Landkr. Märkisch Oderland, Oderbruch, Oder riverbank, 3.V.2000, leg. Schülke (cSch). **Thüringen:** 14 ♂♂, 4 ♀♀, Bad Frankenhausen, Esperstedter Ried, car-net, 26.V.2001, leg. Wunderle (cAss). **Sachsen:** 1 ♂, Meißen, 8.III.81 (DEI). **Locality not specified:** 1 ex., "Germ." (ZIN).

Carpathians: 2 ♂♂, [locality not indicated] (cAss).

In a widely neglected article, GISTEL (1857) published a jumbled mixture of descriptions of numerous animal species from various phyla, among them *Aleochara* (*Calodera*) *perspicua* (type locality: "Bayern"). With few exceptions, Gistel's types are lost. The only *Calodera* species matching the size ("1''' lang") indicated in the otherwise vague original description and recorded from Bavaria is *C. aethiops*. In order to dispose of Gistel's nomen dubium, the following synonymy is here proposed: *Calodera aethiops* (GRAVENHORST, 1802) = *Aleochara* (*Calodera*) *perspicua* GISTEL, 1857, syn. n.

Calodera rubens ERICHSON, 1837 (Figs. 1-3)

Calodera rubens ERICHSON, 1837: 304f.

Ityocara rubens: THOMSON (1867: 239f.), GANGLBAUER (1895), BERNHAUER & SCHEERPELTZ (1926), LOHSE (1974).

Type examined: Holotype ♀: *rubens* Er., Berol. Er./ 5323/ Hist.-Coll. (Coleoptera) Nr. 5323 (1. Ex.) *Calodera rubens* Er. Berolin. Er., Zool. Mus. Berlin/ Holotypus *Calodera rubens* Erichson, rev. Assing 1998 (MNHUB).

Additional material examined:

France: 1 ♂, 2 exs., Rouen (DEI); 11 ♂♂, 1 ex., Bordeaux, leg. de Vauloger (DEI); 1 ♀, "Hague, Fr. mer." (NHMB); 1X, Var, La Garde, IV. 1957 (cAss).

Germany: 2 ♂♂, "Berol. Kraatz" (MNHUB); 5 ♂♂, 1 ♀, 2 exs., Berlin (DEI, cAss); 1 ♂, 1 ♀, Brieselang, 12.III.22 (MNHUB); 1 ♂, 1 ♀, Brieselang, 20.IV.22 (MNHUB); 1 ♂, 2 exs., Brieselang (DEI); 2 ♂♂, 2 exs., Berlin, Finkenkrug (DEI, NHMB, cAss); 2 exs., Mark Brandenburg, Forst Bredow (DEI); 1 ♂, Thüringen, Esperstedter Ried near Bad Frankenhausen, car-net, 26.V.2001, leg. Wunderle (cWun).

Österreich: 1 ♀, Niederösterreich, Ulrichskirchen, leg. Moczarski (DEI).

Italy: 1 ex., Friuli (UD), Muzzana, 9.XII.1986, leg. Seriani (cWun); 1 ♂, Emilia, S. Asqeta (?), 11.III.1906, leg. Fiori (cAss); 1 ♂, Emilia, locality illegible, 28.VI.1896, leg. Fiori (cAss); 1 ♂, Toscana, Padule di Fucecchio, II.1972, leg. Bordini (cWun); 1 ♂, 1 ex., same data, but 1.III.1994 (cWun).

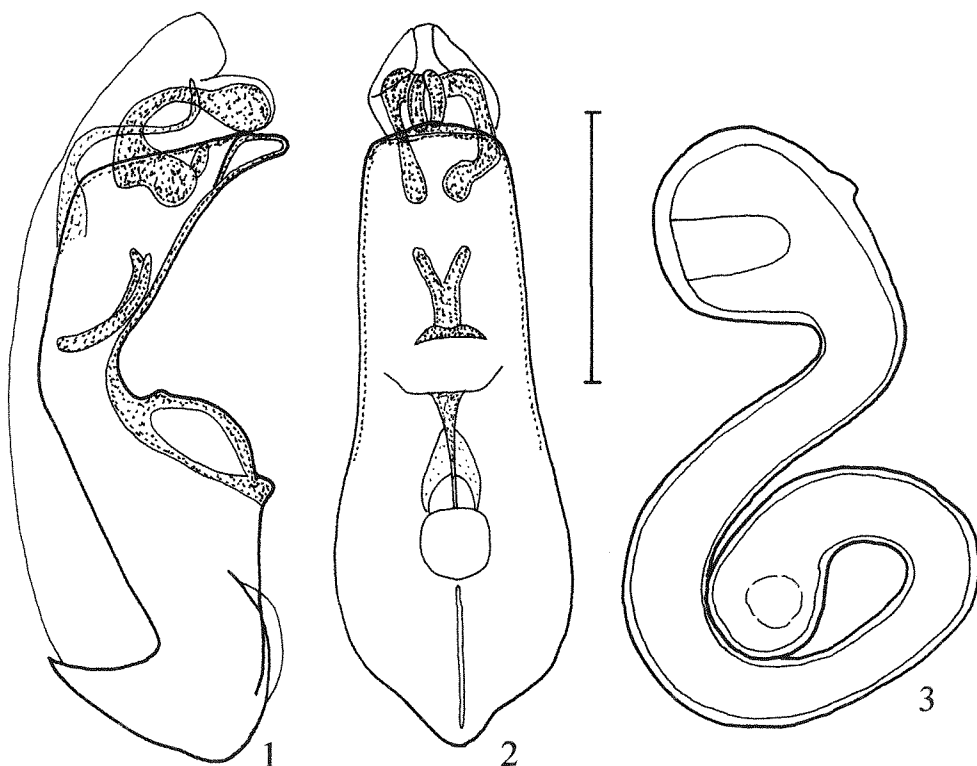
Slovakia: 1 ex., “Sv. Jur. Šúr”, 28.III.1923, leg. Roubal (MNHUB); 1 ex., Svätý Jur, 25.X.1929, leg. Depta (cWun).

Bosnia-Herzegovina: 1 ex., locality not specified, leg. Brenske (DEI).

Albania: 2 ♀ ♀, Pulaj [“Latif, Pulaj”] (NHMB).

Discussion

When THOMSON (1867) described the genus *Ityocara*, he included only *Calodera rubens* ERICHSON, the type species by monotypy. A second species, *Ityocara laticollis*, was described by THOMSON in SAHLBERG (1870), but later recognized as a synonym of *Oxyopoda funebris* KRAATZ (MUONA, 1975). No further species have been attributed to the genus, whose systematic status has never been questioned.



Figs. 1-3: *Calodera rubens* ERICHSON: median lobe of aedeagus, lateral view (1); median lobe of aedeagus, ventral view (2); spermatheca (3). Scale: 1-2: 0.2 mm; 3: 0.1 mm.

According to THOMSON (1867) and subsequent authors (e. g. GANGLBAUER, 1895; BERNHAUER & SCHEERPELTZ, 1926; LOHSE, 1974), *Ityocara* is separated from *Calodera* by the absence of an anterior transverse impression on the abdominal tergite VI and by the presence of genal carinae. However, the depth and presence of a transverse impression on the abdominal tergite VI has been shown to be subject to intrageneric variation in several other oxypodine genera, e. g. *Euryalea* THOMSON and *Amarochara* THOMSON (ASSING, 2002; ASSING & WUNDERLE, 1997), and there is some evidence that the absence of such an impression represents the plesiomorphic character state. The same is apparently true of the presence of distinct genal carinae (ASSING, 2002), which would additionally be supported by the observation that rudiments of such carinae are present also in *C. protensa*.

On the other hand, a comparative study of *Ityocara rubens* and species of *Calodera* revealed a high similarity in virtually all significant characters, especially in the morphology of the antennae, in the mouthparts, and in the sexual characters (Figs. 1-3). While *Calodera* species share a distinctive morphology of the antennae and of the genitalia, several other characters are subject to considerable intrageneric variation. This is particularly true of the posterior constriction of the head, which may be pronounced and narrow (e. g. *C. riparia*), wide (e. g. *C. nigrita*), or virtually absent (e. g. *C. protensa*, *C. caseyi*); these character states are linked by transitions.

Several characters, i. e. the weakly convex pronotum, the absence of a distinct posterior constriction of the head, the presence of at least rudimentary genal carinae, as well as the puncturation and microsculpture of the forebody and the abdomen, suggest that *I. rubens* may be most closely related to *C. protensa*. (In fact, both species are so similar that they were quite frequently confused in the collections examined.)

The final argument is an ecological one. Like the *Calodera* species, *I. rubens* occurs in moist habitats (moist leaf litter in swamps, in the vicinity of ponds, etc.), is mostly found in early spring, and is rarely collected (HORION, 1967).

In conclusion, there are four arguments questioning the generic status of *Ityocara*:

1. The characters distinguishing *Ityocara* from *Calodera* are presumably plesiomorphic and generally of limited systematic significance in the Oxypodini.
2. Regarding the morphology of the antennae, mouthparts, and genitalia, *I. rubens* is a typical *Calodera*.
3. It seems very likely that if the generic status of *Ityocara* were maintained, this would render *Calodera* a paraphyletic taxon.
4. The ecology of *I. rubens* resembles that of other *Calodera* species.

For the reasons outlined above, *Ityocara rubens* is here transferred to *Calodera* and the following synonymy is proposed: *Calodera* MANNERHEIM, 1830 = *Ityocara* THOMSON, 1867, syn. n.

As mentioned above, *Calodera rubens* is often confused with *C. protensa*. To facilitate its identification, the genitalia are illustrated in Figs. 1-3.

According to HORION (1967), the distribution of the species is disjunct and ranges from the south of North Europe to the north of South Europe, from France and southern England in the west to the Carpathians in the east, with an isolated record from the Caucasus. However, due to the frequent misidentifications, literature records are not very reliable, and the distribution of *C. rubens* requires revision.

***Calodera desdemona* SHARP, 1888 (Figs. 4-6)**

Calodera desdemona SHARP, 1888: 286.

Type examined: Holotype ♂: *Calodera desdemona* Type D. S. Yokohama [written on mounting label] / Yokohama / Japan. G. Lewis 1910-320 / Type (BMNH).

Redescription

Externally somewhat resembling a small specimen of *C. rufescens*. 3.1 mm. Coloration: pronotum, elytra, posterior margins of abdominal segments, and abdominal apex reddish brown; head and remainder of abdomen darker brown; legs and antennae testaceous.

Head of similar shape as in *C. rufescens*; microsculpture very shallow; puncturation slightly more distinct than in average *C. rufescens*; eyes less prominent and slightly smaller than in *C. rufescens*, in dorsal view distinctly shorter than temples; posterior constriction of head present, but distinctly wider than in *C. rufescens*, approximately 0.65 times as wide a maximal width of head. Antenna of similar general morphology as in *C. rufescens*, but with shorter and less slender antennomeres II and III and with somewhat more transverse antennomeres IV - X.

Pronotum weakly transverse, 1.05 times as wide as long and 1.15 times as wide as head; otherwise of similar shape and puncturation as in *C. rufescens*.

Elytra at suture approximately as long as pronotum; puncturation denser than in *C. rufescens*.

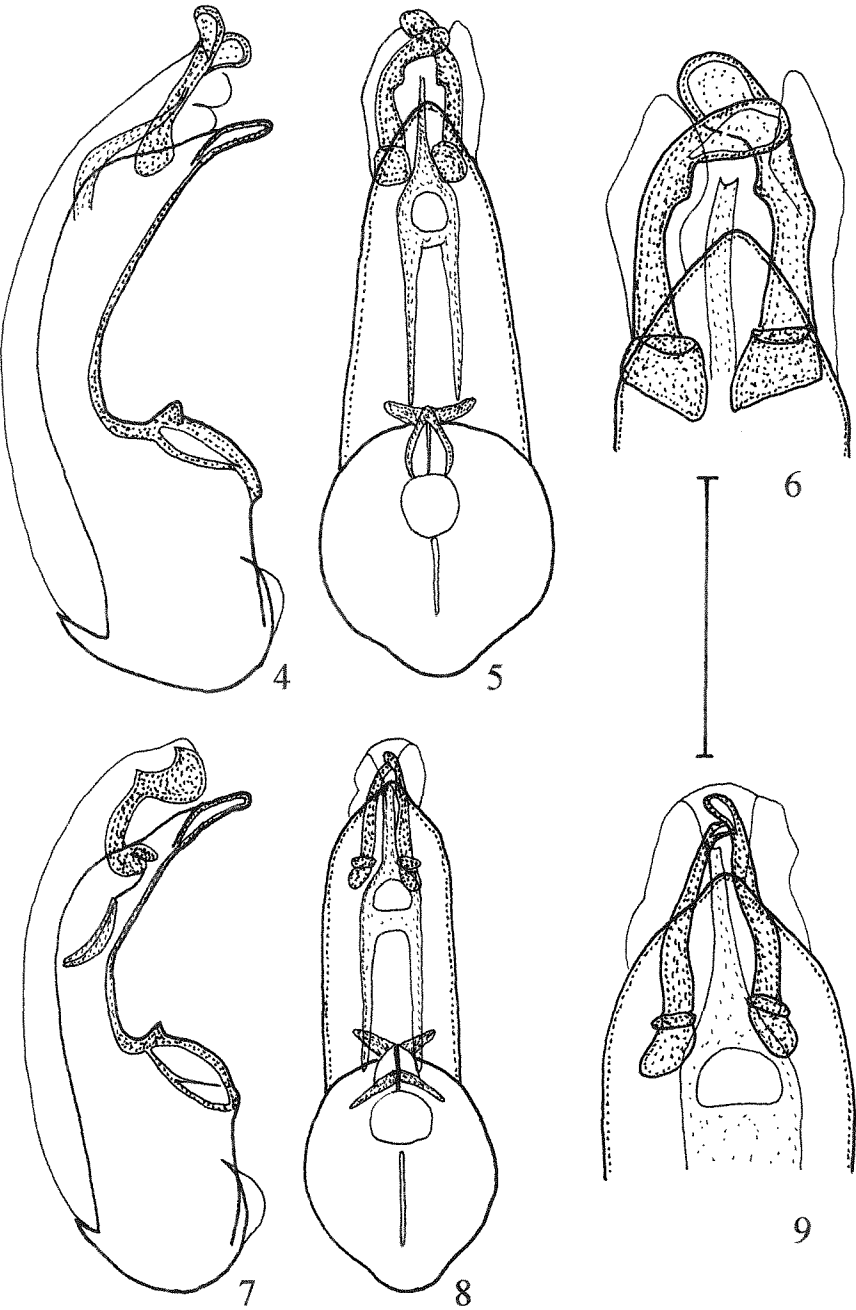
Abdomen with similar puncturation and microsculpture as in *C. rufescens*; tergites IV - VI without distinct microsculpture and with well-defined and relatively dense puncturation.

♂: sternite VIII indistinctly pointed in the middle; median lobe of aedeagus smaller than in *C. rufescens* and with subapical structures of characteristic shape (Figs. 4-6).

♀: unknown.

Comparative notes

C. desdemona is distinguished from its Palearctic congeners by the male sexual characters, from *C. rufescens*, *C. riparia*, *C. aethiops*, *C. ligula*, *C. cochlearis*, *C. stiliformis*, and *C. uliginosa* additionally by the wider posterior constriction of the head, from the similar species of the *C. aethiops* complex also by the much smaller eyes, slightly larger size, and less distinct microsculpture of the abdomen. All other species of Palearctic *Calodera* are either much larger, darker, or lack the posterior constriction of the head and have a completely different puncturation.



Figs. 4-9: *Calodera desdemona* SHARP (4-6) and *C. zerchei* sp. n. (7-9): median lobe of aedeagus, lateral view (4, 7); median lobe of aedeagus, ventral view (5, 8); apical part of median lobe of aedeagus, ventral view (6, 9). Scale: 4, 5, 7, 8: 0.2 mm; 6, 9: 0.1 mm.

Distribution

C. desdemonae has become known only from the type locality Yokohama, Japan.

Calodera zerchei sp. n. (Figs. 7-9)

Holotype ♂: RUSSIA: Primorskiy Kray, Ryazanovka, 14 km SW Slavyanka, 42.48 N / 131.12 E, Bachufer, 16.IV.1993, 59 m, leg. L. Zerche / Holotypus ♂ *Calodera zerchei* sp. n. det. V. Assing 2001 (DEI).

Description

Externally similar to *C. desdemonae*, but distinguished as follows:

2.8 mm; on the whole slightly smaller than *C. desdemonae* and darker, whole body blackish, with the abdominal apex slightly lighter, the legs and antennomeres IV - XI brown, and the basal antennomeres yellowish.

Head with more distinct microsculpture and with shallow median impression, otherwise (including posterior constriction) of similar morphology as in *C. desdemonae*.

Pronotum of similar shape and relative size as in *C. desdemonae*, but with more distinct microsculpture and less distinct puncturation.

Elytra at suture slightly shorter than pronotum; microsculpture more distinct and puncturation sparser and coarser than in *C. desdemonae*.

Abdomen with puncturation much finer and less well-defined than in *C. desdemonae*; microsculpture visible on all tergites, though somewhat more distinct on tergite VII than on tergites IV - VI.

♂: sternite VIII weakly pointed in the middle, marginal setae slightly shorter than in *C. desdemonae*; median lobe of aedeagus smaller than in *C. desdemonae* and with subapical internal structures of different morphology (Figs. 7-9).

♀: unknown.

Etymology: The species is dedicated to the collector of the holotype, my dear colleague Lothar Zerche (DEI).

Comparative notes: For distinction from its most similar congener, *C. desdemonae*, see description above. From all other Palearctic congeners, *C. zerchei* is separated by the morphology of the subapical internal structures of the aedeagus and by the presence and the relative width of the posterior constriction of the head.

Distribution and bionomics: The type locality is situated in the south of Primorskiy Kray, where the holotype was collected on the bank of a stream. A female from the surroundings of Samarka in Primorskiy Kray was examined, but not designated as paratype, as there are considerable doubts (larger eyes, longer elytra, less distinct microsculpture) that it is conspecific with the holotype.

Species described in *Calodera* from regions other than the Holarctic

Calodera aearia BROWN, 1880

Material examined: 3 exs., locality not specified, det. Fauvel; 3 exs., Auckland, det. Fauvel (MNHUB).

Calodera australis FAUVEL, 1877

Material examined: 1 ex. (poor condition, without antennae and elytra), Adelaide, coll. Schaufuss (MNHUB).

Calodera dilatata BERNHAUER, 1921

Type examined: 1 ex.: Argent., Hornadita, 3400, XI.20, Weiser/ Cotypus/ *Calodera dilatata* Brh./Sammlung Wendeler (MNHUB).

Calodera spectrum FAUVEL, 1866

Material examined: 2 exs., Chile (ZIN).

Calodera pectoralis SOLIER, 1849

Material examined: 5 exs., Chile (ZIN).

Calodera truncata FAIRMAIRE & GERMAIN, 1861

Material examined: 3 exs., Chile (ZIN).

Calodera inflata FAUVEL, 1866

Material examined: 1 ex., Chile (ZIN).

None of the specimens examined belongs to *Calodera*. *C. spectrum*, *C. truncata*, *C. inflata*, and *C. pectoralis* have been transferred to *Spanioda* Blackwelder (PACE, 1987, 1999). The correct generic affiliations of the remaining species are unknown to me.

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Author's address:

Dr. VOLKER ASSING
 Gabelsbergerstr. 2
 D-30163 Hannover
 Germany
 e-mail: vassing.hann@t-online.de