

# The North European Species of *Simo* Dejean, 1821 (Coleoptera, Curculionidae)

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Palm, E.: The North European Species of *Simo* Dejean, 1821. (Coleoptera, Curculionidae).

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The taxon "*Simo hirticornis*" of various European authors has proved to be a mixture of two species: *S. hirticornis* (Herbst, 1795) and *Simo variegatus* (Boheman, 1843). The synonymy and diagnostic characters for both species are presented, and the spermathecae are illustrated. A number of localities for both species are listed.

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During my work with a handbook on the short-nosed weevils of Northern Europe, I discovered that two types (fig. 2) of spermathecae occurred in the available material of "*Simo hirticornis*". This inspired me to examine a great number of specimens, including type materials, and the conclusion became that two species occur in Northern Europe.

## Synonymy

The type material of *Curculio hirticornis* Herbst, 1795 is in the Museum für Naturkunde der Humboldt-Universität in Berlin. With the kind assistance of Lutz Behne, Eberswalde, I examined the 10 specimens in the Herbst collection under that name. All of them are marked "54420" on a separate label. Only one of them is labelled: "Simo Ht\* Hirticornis Ht.\* Hercyn. Pin.". This specimen is hereby chosen as lectotype and is labelled "*Simo hirticornis* (Herbst, 1795) Lectotypus. E. Palm desg.". There is one more conspecific specimen, but it is without dates. One of the specimens is labelled "Halle Erf.". I am uncertain about the identity of this specimen. It probably belongs to *Simo variegatus* (Boheman, 1843). One specimen is marked "S-Tyrol, Stentz". This is *Simo*

*variegatus*. 6 specimens have no dates and all belong to *Simo variegatus*.

*Otiorhynchus variegatus* (Boheman, in Schönherr, 1843) is in Naturhistoriska Riksmuseet, Stockholm, and with the kind assistance of Thomas Pape and Bert Viklund I had the opportunity to examine the type. It is labelled "Genevam Chevrier" on a red label. From the description it is known from Switzerland near Geneva by a Dom. Chevrier.

*Otiorhynchus depubes* (Boheman, in Schönherr, 1843) is also in Naturhistoriska Riksmuseet in Stockholm, and was examined. It is labelled "Alpes Helvetici Chevrier" on a red label. This specimen belongs to *Simo hirticornis*.

*Homorhynchus hirticornis* var. *setulifer* Reitter, 1913 is in the collection of the Budapest Museum, and with the kind help of Dr. O. Merkl, I received the type. It is now labelled with 5 labels. 1: (white label) "Cottische Alpen, Colle delle Finestre VII col. O. Leonhard", 2: (white label) "hirticornis v. Setulifer Tr.", 3: (white label with red edges) "Holotypus O. hirticornis v. setulifer Rtt.", 4: (white label) "v. setulifer Rtt. col. Reitter", and 5: (white label) "Simo variegatus (Boheman, 1843) E. Palm det.". This specimen belongs to *Simo variegatus*.

*Curculio simo* Olivier, 1807 (Olivier, 1807) should be present in the Paris Museum, if it still exists. In a letter, received 6.4.1995, N. Berti informs me, that the types of Olivier are difficult to find.

The following synonymy can thus be established:

*Simo hirticornis* (Herbst, 1795)

*Otiorhynchus depubes* (Boheman, 1843)

*Simo variegatus* (Boheman, 1843)

*Homorhynchus hirticornis* var. *setulifer* (Reitter, 1913), syn. nov.

*Simo* (*Curculio*) *simo* (Olivier, 1807) is of uncertain identity.

### Taxonomy

The two species are very alike. There are, however, a number of small differences, which are nearly always sufficient to separate the two species without dissection of the genitalia. Both species vary to some degree in all details, and all the characters mentioned should be considered. The spermathecae are markedly different (fig. 2).

*Simo hirticornis* (Herbst, 1795)

Size: 4,3-5,5 mm. The space between the antennae is smaller, but variable, 0,25-0,3 mm. In front two marked parallel keels along the holes of the antennal base, ending in non-parallel holes before the eyes. In lateral view rostrum is slender, especially in

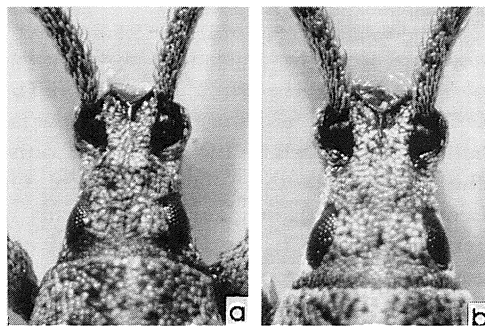


Fig. 1. Hovedet, set fra oven af a: *Simo hirticornis* og b: *S. variegatus*. Head, dorsal view of a: *Simo hirticornis* and b: *S. variegatus*. Foto: G. Brovad.

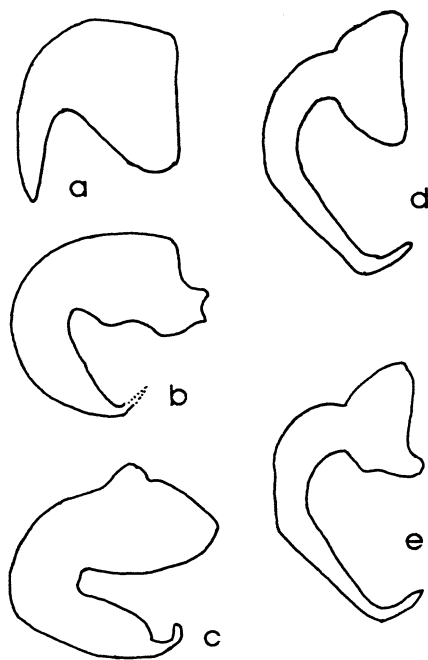


Fig. 2. Spermathecae hos a, b & c: *Simo hirticornis* og d & e: *S. variegatus*. Spermathecae of a, b & c: *Simo hirticornis* and d & e: *S. variegatus*.

the outer part (at the most slender point 0,5-0,65 mm). The area between the eyes and the antennal holes is heavily scaled (fig. 1a). The colour is slightly more brown, sometimes with a weak metallic shine. Elytrum a little broader, the shoulders more pronounced. Stripes 5 and 6 are often conjugated before the shoulder, and the space between 4th and 5th stripes is broadened over the shoulders. The spermatheca is plump (normally as fig. 2a), only very rarely bend 3 times, and if so, then third bending is unsclerotized (fig. 2b, 2c).

*Simo variegatus* (Boheman, 1843)

Size: 4,8-6,1 mm. The space between the antennae is larger, but somewhat variable, 0,3-0,4 mm. The two parallel keels in front are diffuse, sometimes absent, always ending parallel, but fading out towards the eyes. In lateral view rostrum is broader, especially the outer part (at the most slender point 0,6-0,75 mm). The area between the

eyes and the antennal holes is only heavily scaled near the eyes (fig. 1b). Colour a little more greyish white, not metallic. Elytrum a little narrower, the shoulders less pronounced. Stripes 5 and 6 are separated and parallel. Stripes 6 and 7 sometimes unite, as also appears in *S. hirticornis*. The spermatheca larger, slender, bending 3 times (fig. 2d, 2e).

## Material examined

*S. hirticornis* (Herbst, 1795):

**France:** Val, Carmonica, Cagno 4 sp. (C. Krüger, coll. Leonhard, DEI)\*; many ex. (C. Krüger, DEI); Val, Camonica, Mt. Glisenta many ex. (C. Krüger, DEI),

**Italy:** bor. Varcelli 3.6.1962 (G. A. Lohse, DEI)\*; Certosa di Pesio, Ligur. Alp. 20.7.1911 (Künemann, DEI)\*; Trieste (Leonhard, DEI); Tirolis/Meran (Leonhard, DEI); Piemont/Rima (Wingelmülle, DEI); Piemont (Stierlin, DEI),

**Austria:** Kärnten, Lieseregg 22.6.1992 (E. Palm)\*; Kärnten, Schmiednock 23.6.1992 (E. Palm)\*; Kärnten, Karawanken, Seebergsattel bei Eisenkappel 1750 m 22.6.1993 (L. Behne)\*; Wechselgb. (H. Wagner, DEI); Laksiker/Carinthia (=Kärnten) (Künemann, DEI),

**Croatia:** Agram (Leonhard, DEI)\*,

**Czech Republic:** Bohemia, Davle s. Prag, Eichenwald 28.5.1985 (L. Dieckmann, DEI)\*; Altvater (Letzner, DEI),

**Switzerland:** Alpes Helvetica (Boheman = *O. depubes*); St. Bernhard (Stierlin, DEI); Turloz (Stierlin, DEI); Mt. Rosa (Krüger, DEI),

**Germany:** Rheinland/Pfalz: Moorbach Stadtforst, Kreis Trier abundant 14.6.1992 (E. Palm)\*; Sct. Andreasberg/Harz (E. Palm)\*; Hamburg area (H. Meybohm)\*; Haake 6.7.1891 (Koltze, DEI); Thür.: Neidenberga 2.7. 1967 (L. Dieckmann, DEI)\*; MA: Sülldorf, Kr. Wanzleben 26.5.1978 (L. Behne)\*; Süplingen, Kr. Haldensleben 12.8.1984 (L. Behne)\*; SU: NSG Vessertal 3.6.1987 (L. Behne)\*; Ammelshein bei Leipzig 2 ex. 15.6.1958 (Michalk, DEI)\*; Thale, Bodetal/Harz 27.5.1978 (L. Beh-

ne)\*; Harz/Rübeland 1.-2.8.1980 (L. Behne)\*; Oberlausitz, Bernstadt 9.6.1919 (Uhmann, DEI)\*; Sax, mer. NSG: Rothstein bei Löbau 26.5.1984 (L. Behne)\*; Kyffhäuser, Kelbra, Kr. Artern 2 ex. 26.6.1978 (L. Behne)\*; Thür. Kreis Gotha Friedrichsroda, Erfurt 9.8.1977, 15.8.1977 (L. Behne)\*; Thür., Kyffhäuser-Denkmal 19.6.1954 (L. Dieckmann, DEI)\*; Suhl/Thüringen 25.5.1904 (Künemann); Südl. Hannover 7.6.1896 (Alfken) (coll. Künemann, DEI); Harz 12 ex. (Kraatz, DEI); Clausthal (Koltze, DEI); Albendorf 1.7.1871 (Koltze, DEI),

**Poland:** Schlesien (Letzner, DEI); Riesengebirge (Letzner, DEI); Hessberg (Letzner, DEI); Naplatken (Schlesien) (Letzner, DEI); Mark Brandenburg; Nd (Nieder) Laus., Forst Sorau (Neresheimer, DEI); Glatzer Schneeberg (Letzner, DEI); Reinerz (Letzner, DEI); Glatz (Letzner, DEI),

**Sweden:** Sk.: Pilshult 1992 (E. Palm)\*; Kullaberg (G. Gillerfors); Forsaker 1969 (R. Baranowski); Maltesholm 1970 (R. Baranowski); Hörröd 1981 (R. Baranowski); Skäralid (J.-R. Bergvall) (Nylander, coll.); Mala (J.-R. Bergvall) (Nylander, coll.); Hall.: Rolftorp (G. Gillerfors); Dagsås (G. Gillerfors); Fjärås (G. Gillerfors); Åkulla (G. Gillerfors); Skällinge (G. Gillerfors); Mästacka (G. Gillerfors); Sml.: Hornsö 5 ex. 1995 (E. Palm)\*; (G. Gillerfors); (B. Andersson); Möckhult 1984 (R. Baranowski); Nybro (B. Andersson); Strömsrum (B. Andersson); Abbetorp (A. Ekström); Vg.: Göteborgstrakten (J.-R. Bergvall) (Nylander, coll.); Borås (A. Ekström); Ög.: Boxholm 1995 (E. Palm)\*,

**Denmark:** SJ: Sønderkov pr. Kollund summer 1943 (E. J. Larsen, ZMUC); EJ: Rugballegård ved Vejle 41 ex. juni 1877 (de Tegnagel, ZMUC); 17 ex. juli 1878 (J. P. Jensen, ZMUC); Vejle 10 ex. (Fabritius, ZMUC); Nim 11 ex. 25.5.1939 (N. Høeg, ZMUC); Moesgård 3 ex. 1.8.1911 (V. Hansen, ZMUC); Marselisborg 7 ex. 26.7.1912 (V. Hansen, ZMUC); 26.7.1912 (O. G. K. Kristensen, ZMUC); WJ: Fanø 28.6.1896 (J. Andersen, ZMUC); NEJ: Høstemark (V. Mahler); F: Høje Bøge 2.7.1938 (Christiani, ZMUC); LFM: Sundby Storskov 22.6.1986

(O. Martin, ZMUC); Møn (Schiødte, ZMUC); NWZ: Stokkebjerg Skov 21.5.1991 (E. Palm)\*; Hejrebjerg Skov 1983 (E. Palm); Skarriksø (Schiødte, ZMUC); Skarresø N. 4 ex. 29.5.1983 (E. Palm)\*; Vinskov 1994 (E. Palm); St. Møsten 13.6.1995 (E. Palm)\*; SZ: Mogenstrup (Schiødte, ZMUC); 10.7.1991 (E. Palm); 13.6.1933 (J. Andersen, ZMUC); 4 ex. 1.6.1958, 6.8.1961, 7.1967 (F. Bangsholt, ZMUC); Næstved (Rosenberg, ZMUC); Næsbyholm Skov 13.6.1986 (E. Palm); NEZ: Geel Skov 29.4.1894, 25.7.1909 (Rosenberg, ZMUC); 5.8.1900 (U. Thomson, ZMUC); 4 ex. 24.7.1913 (N. Høeg, ZMUC); 15.7.1928, 12.8.1929 (O. G. K. Kristensen, ZMUC); Rude Hegn 2 ex. 11.5.1893, 10.7.1898, 6 ex. 15.5.1939 (Rosenberg, ZMUC); Ravnholt 3.10.1888 (Engelhart); Færgelunden, Frederikssund 17.5.1984 (P. Kry Poulsen, ZMUC); Ulvemosen/Jægerspris 9 ex. 7.6.1912 (A. West, ZMUC); Grib Skov (V. Mahler); Jægerspris 8.6.1912 (J. Andersen, ZMUC); 10.6.1912 (Rosenberg, ZMUC); Teglstруп Hegn 15.6.1958 (J. Petersen, ZMUC).

*S. variegatus* (Boheman, 1843):

**France:** Alpes Maritimes, St. Martin-Vésudie 2 ex. 22.7.1914 (W. Liebmann, DEI)\*; Alpes Maritimes, Terme di Vald'Isère 11.7.1911 (coll. Künnemann, DEI)\*; Val, Casmonica, Cogno (G. Krüger, coll. O. Leonhard, DEI)\*; many ex. (Künnemann, DEI); Corsica (Koltze, DEI),

**Italy:** Cottische Alpen 1908, Mte. Albanian VII 2 ex. (coll. Leonhard, DEI) (v. *setulifer*); 3 ex. (Leonhard, DEI); Fiesole (Flach, coll. Koltze, DEI); Valle Stura Sambuko am T Stura di Demonte 1100 m, 13.7.1994 (-Stüben) (ex. coll. P. Sprick); Lazio; Mt. Circeo N-Hang 50-500 m, 27.12.1994 (Assing) (ex. coll. P. Sprick),

**Slovakia:** Bratislava 25.6.1982 (L. Dieckmann, DEI)\*,

**Switzerland:** ad Genevam (coll. Boheman); Schaffhausen (Stierlin, DEI); Bernt (=Bern) (Stierlin, DEI); Besc more ex. (Rottenberg, DEI); Imele (Stierlin, DEI);

Silten Wallis 5.7.1909 (Künnemann, DEI),

**Austria:** Burgenland, Umg. Winden, Leithagebirge: Zeilerberg 3.7.1988 (H. Günther, coll. P. Sprick)\*; Bisamberg (H. Wagner, DEI); Karawanken, Ledenitzen 20.6.1962 (W. Liebmann, DEI); Carinthia (Kärnten), Mallnitz 25.7.1923 (W. Liebmann, DEI)\*; inf. (Austria inferior = Nieder-Österreich), Mödling 2 ex. (H. Wagner, DEI)\*,

**Germany:** München 30.5.1883 (Kraatz, DEI); Eimsen (Kreis Hildesheim) 25.4.1995 (Lehmhus); Hannover-Ahlen 1.6.1993 (coll. P. Sprick); Nordwestfalen: Porta Westfalica, Borkhausen 7.1982 (G. Jonowski) (coll. P. Sprick); Laucha (Unstrut) (Schenkling, DEI); Kyffhäuser, Bad Frankenhausen 2 ex. 15.5.1994 (E. Palm)\*; Kyffhäuser-Denkmal, 19.6.1954 (L. Dieckmann, DEI)\*; Kyffhäuser, Schlachtberg 18.6.1954, 16.6.1963, 2 ex. 12.8.1971 (L. Dieckmann, DEI)\*; Kelbra, Kyffhäuser, Artern, 2 ex. 26.6.1978, 3 ex. 2.7.1978 (L. Behne)\*; Kyffhäuser, Frankenhausen, Katzenburg 11.5.1983, 5 ex. 10.5.1983 (L. Behne)\*; Thür.: Leutental 15.6.1983 (L. Behne)\*; Bad Kösen 3.5.1959 (L. Dieckmann, DEI)\*; Waffenrod, Kreis Hildburghausen SU: 20.6.1978 (L. Behne)\*; Dehlitz bei Weissenfels 8.5.1958 (L. Dieckmann, DEI)\*; Sülldorf, Kr. Wanzleben more ex. on *Prunus domestica* 19.5.1951 (Bollmann); MA: Benzingerode/Werningerode 14.5.1994 (E. Palm)\*; RO: Hiddensee, Kloster 6.7.1970 (L. Dieckmann, DEI)\*,

**Poland:** Asten (Schlesien) 2 ex. (Letzner, DEI),

**Denmark:** LFM: Møns Klint 5 ex. 23.5.1992 (E. Palm)\*; 8.7.1930 (Sv. G. Larsson, ZMUC); (Schaltz, ZMUC); 2 ex. 2.6.1873 (Schiødte) (ZMUC); Aborresø 5.4.1948 (J. Petersen, ZMUC); NWZ: Nekselø 28.8.1993 (O. Mehl).

\* = genital preparation.

DEI = Deutsches Entomologisches Institut, Eberswalde.

ZMUC = Zoological Museum of Copenhagen.

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## Sammendrag

Under mit arbejde med kortsnudebillerne har det vist sig, at der under navnet *Simo hirticornis* (Herbst, 1795) gemmer sig to arter. Typerne er undersøgt, og den i det nordlige Europa almindeligste art beholder navnet *hirticornis*. Den anden skal hedde *Simo variegatus* (Boheman, 1843). De er meget lig hverandre, men kan adskilles ved følgende:

1. Spermatheca kort og buttet (fig. 2a-c), normalt som fig. a, ekstremer er vist på fig. b og c. Her er de små vedhæng ikke sklerotiserede. 5. og 6. stribeløber ofte

sammen lidt før roden, hvis ikke, bøjer 5. stribeløber lidt udad, således at stribemellemrummet bliver bredere end de øvrige over skuldrene. Vingedækkerne lidt bredere, skuldrene lidt mere fremstående. Panden foran øjnene med tydelige, opstående kiler langs følehornsgrubernes kanter. Afstanden mellem disse, målt på det smalleste sted, 0,25-0,30 mm (fig. 1a). Behåringen på hovedet mellem øjnene og til dels også på pronotum, temmelig lang (synlig ved betragtning fra siden). Området mellem øjnene og følehornsgruben tæt dækket med 4-5 rækker skæl. Lidt mindre (4,3-5,5 mm)..... *hirticornis*

- Spermatheca lang og slank og bøjet 3 gange (fig. 2d og e). 5. og 6. stribeløber hver for sig helt til roden, hele vejen parallelt med 4. Vingedækkerne lidt smallere, skuldrene kun svagt fremstående. Panden foran øjnene med et tværintryk, kilerne langs følehornsgrubernes kanter fladende ud, så de ikke virker opstående. Afstanden mellem følehornsgruberne, målt på det smalleste sted 0,3-0,4 mm (fig. 1b). Behåringen på hovedet mellem øjnene, og på pronotum, er meget kort eller helt manglende (synlig ved betragtning fra siden). Området mellem øjnene og følehornsgruben kun tæt skælklædt i området nær øjnene. Lidt større (4,8-6,1 mm)..... *variegatus*

## References

- Herbst, J. F. W., 1795. *Natursystem aller bekannten in- und ausländischen Insekten*. Käfer. VI (p. 327).
- Olivier, A. G., 1807. *Entomologie, ou Histoire Naturelles des Insectes* Tome V (p. 361, Tvl. 31, fig. 472).
- Palm, E., in press. Nordeuropas snudebiller. De kortsnudearter (Coleoptera, Curculionidae). - *Danmarks Dyreverden* 7.
- Schönherr, C. J., 1843. *Genera et Species Curculionidum cum synonymia hujus familiae: Species novae aut hactenus minus cognitae, descriptionibus A. Dom Leonardo Gyllenhal, C. H. Boheman, et entomologis aliis illustratae*. VII:361.
- Reiter, K., 1913. Bestimmungstabellen der ungezähnten *Otiorynchus*-Arten. - *Wiener entomologische Zeitung* 32:75.