

## NEW RECORDS OF BARK BEETLES (COLEOPTERA, SCOLYTIDAE) FROM ESTONIA

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**Abstract.** Examination of bark beetles (Coleoptera, Scolytidae) in insect collections of Estonia carried out in 1993–97 confirmed the occurrence of 63 bark beetle species in Estonia. Faunistic records for seven species (*Hylesinus varius* (F.), *Hylurgus ligniperda* (F.), *Scolytus scolytus* (F.), *S. mali* (Bechst. & Scharf.), *Orthotomicus longicollis* (Gyll.), *Trypodendron proximum* (Nijj.), *Trypophloeus discedens* Palm) have to be added to the checklist of bark beetles of Estonia published in *Enumeratio Coleopterorum Fennoscandiae, Daniae et Baltiae* by Silfverberg (Helsinki, 1992). According to the literature reviewed, nine more species of bark beetles have been recorded from Estonia: *Hylastes ater* (F.), *H. angustatus* (Hbst.), *Scolytus carpini* (Ratz.), *Lymantor aceris* (Lind.), *Dryocoetes villosus* (F.), *Xyleborus monographus* (F.), *Trypophloeus asperatus* (Gyll.), *Pityophthorus pityographus* (Ratz.), and *P. glabratus* Eichh. However, these species do not occur in the Estonian insect collections and no recent finds have been recorded. Their occurrence in Estonia requires further investigation.

**Key words:** bark beetles, Estonia, fauna, insect collections, Scolytidae.

### INTRODUCTION

Faunistic information on bark beetles in the Baltic countries has been available since Fischer (1791), Seidlitz (1875, 1891), Sintenis (1900), Rathlef (1905, 1921), and some others published their works. Unfortunately, for many species the exact location has not been given in these lists, or it has been restricted only to the historical province of Livonia, which today covers South Estonia and the northern part of Latvia.

The bark beetle fauna of Estonia was intensively investigated in the 1920s and 1930s (Zolk, 1924, 1932, 1935, 1937; Määr & Voore, 1935; Leius, 1939). During this period, the biggest collection of Estonian bark beetles (over 6200 specimens), which now belongs to the Institute of Plant Protection, Estonian Agricultural University, was compiled. The first profound work on the Estonian bark beetle fauna (Zolk, 1932) includes 48 species. Later the same author (Leius,

1939; Zolk changed his surname to Leius in 1938) added seven species. Thus, before World War II the list of bark beetles of Estonia comprised 55 species.

In 1964 a key to bark beetles of Estonia was published (Rubel, 1964). This includes 68 species, of which 58 were noted as occurring in Estonia. This figure (58 species) has usually been relied upon until recently, although Remm (1967) reported 59 and Merivee & Remm (1973) 60 species of bark beetles for Estonia.

A recent list of Estonian bark beetles was presented by Silfverberg (1992) in *Enumeratio Coleopterorum Fennoscandiae, Daniae et Baltiae*. This list includes 64 species of scolytids supposed to occur in Estonia.

In 1993–97 we carried out an examination of Estonian insect collections with the purpose to clarify the species composition of the Estonian bark beetle fauna. The aim of this paper is to supplement and revise the list of bark beetles occurring in Estonia. Although some new records have been published earlier (Voolma & Õunap, 1994; Voolma et al., 1995, 1996, 1997; Õunap, 1996; Süda, 1996; Voolma, 1996), in the following account we record all changes in the checklist by Silfverberg (1992) concerning bark beetles of Estonia.

## MATERIALS AND METHODS

In 1993–97, the following insect collections containing bark beetles were examined: Estonian Institute of Forestry and Nature Conservation (Tartu), Estonian Museum of Natural History (Tallinn), Institute of Plant Protection of the Estonian Agricultural University (Tartu), Institute of Zoology and Botany (Tartu), Zoological Museum of the University of Tartu, and 15 private collections (T. Kesküla, S. Laanet, Ü. Luht, J. Luig, E. Merivee, G. Miländer, E. Mäe, V. Nagirnõi, H. Õunap, R. Pedmanson, U. Roosileht, K. Sarv, I. Süda, T. Talvi, A. Tamm). A total of more than 15 200 individuals of bark beetles were checked. Besides, a large amount of new material was collected from different parts of Estonia and added to the bark beetle collection of the Estonian Institute of Forestry and Nature Conservation (now affiliated to the Faculty of Forestry, Estonian Agricultural University). Taxonomically, the checklist of North European and Baltic Coleoptera by Silfverberg (1992) was followed.

For the new species the following information is given: locality; UTM 10 × 10 km grid reference and name of the county (in brackets); specification of the collecting place (host tree, trap, etc.); date of collection; number of specimens and the name of the collector (leg.).

## RESULTS AND DISCUSSION

Over 15 200 specimens of bark beetles collected since the middle of the last century are preserved in the insect collections of museums, universities, research institutes, and private persons in Estonia. In 1993–97, a total of 15 285



specimens of bark beetles from 5 public and 15 private collections were checked. Among these, 15 167 correctly labelled specimens of 63 species have been collected from Estonia.

The examination of the collections showed that not all species listed by Silfverberg (1992) are present in the collections. Thus the occurrence of these species is not confirmed by collection material available in Estonia. On the other hand, recent investigations have revealed the occurrence of seven bark beetle species new for Estonia. Some of them were found in earlier collections but have been misidentified, some were collected recently. These records are listed below.

According to the literature, the following nine bark beetle species have been considered to occur in Estonia but actually were not found in the insect collections: *Hylastes ater* (F.) (Zolk, 1932, etc.), *H. angustatus* (Hbst.) (Szeliga-Mierzeyewski, 1942; Miländer, 1993), *Scolytus carpini* (Ratz.) (Lackschewitz & Mikutowicz, 1939), *Lymanator aceris* (Lind.) (Stark, 1952), *Dryocoetes villosus* (F.) (Zolk, 1924), *Xyleborus monographus* (F.) (Haberman, 1993), *Trypophloeus asperatus* (Gyll.) (Leius, 1939), *Pityophthorus pityographus* (Ratz.) (Haberman, 1971), and *P. glabratus* Eichh. (Merivee, 1961). All these species, except for *Xyleborus monographus* (F.), are listed also by Silfverberg (1992). It is quite possible that some of them have been misidentified. In any case, the occurrence of these species in Estonia requires further investigation.

### Bark beetle species new to Estonia

*Hylesinus varius* (Fabricius, 1775): Tallinn, Veskimägi (LF68), brushwood, 27.V.1954, 1 ex. V. Soo leg.; Kabli, Mõisaküla (LE42, Pärnu), clear-cutting, on grass, 08.VII.1969, 1 ex. V. Soo leg.; Taagepera forest district (ME12, Valga), under the bark of an ash branch, 24.VII.1976, 12 exx. and in funnel trap, 11.V.1983, 1 ex. H. Õunap leg.; Vaiste (FK67, Pärnu), under the bark of an ash, 18.VII.1978, 5 exx. K. Voolma leg.; Tähtvere forest district (ME86, Tartu), under the bark of an ash branch, 30.VII.1978, 10 exx. E. Pilt leg.; Metsa railway stop (LF34, Harju), 15.V.1984, 1 ex. and 02.V.1988, 1 ex. U. Roosileht leg.; Tartu (ME87), on a dead willow branch, 05.V.1985, 1 ex. I. Süda leg.; Pikkjärve (MF70, Jõgeva), under the bark of an ash branch, 31.V.1994, 3 exx. H. Õunap leg.; Kuri (FL13, Hiiumaa), from an ash billet, 23.VII.1995, 21 exx. H. Õunap leg.; Tohvri (EL80, Hiiumaa), on an ash, 24.VII.1995, 3 exx. K. Voolma leg.; Padise (LF36, Harju), under the bark of an ash, 24.VIII.1995, 4 exx. K. Voolma leg.; Järvselja (NE15, Tartu), on an ash log, 01.V.1996, 1 ex. I. Süda leg.; Siniküla 5 km NW (ME58, Jõgeva), in the bark of an ash billet, 01.VI.1996, 1 ex. I. Süda leg.; Visusti (ME79, Jõgeva), under the bark of an ash billet, 01.VI.1996, 7 exx. H. Õunap & I. Süda leg.; Kuremaa (ME71, Jõgeva), under the bark of an ash branch, 17.VI.1996, 3 exx. H. Õunap leg.; Kilgi (FK67, Pärnu), from the bark of an ash billet, 27.VII.1996, 21 exx. H. Õunap & I. Süda leg.

*Hylurgus ligniperda* (Fabricius, 1787): Mooste (NE04, Põlva), 20.V.1992, 1 ex., 26.VI.1993, 2 exx., 06.VII.1993, 1 ex., 18.V.1994, 1 ex., 01.VI.1994, 1 ex., and 09.VI.1995, 1 ex. K. Voolma leg. All specimens were caught using ground traps baited with a blend of resin turpentine and ethanol (Voolma, 1994).

*Scolytus scolytus* (Fabricius, 1775): Abruka Island (EK84, Saaremaa), under the bark of an old elm, 01.VI.1994, 1 dead female, and 15.VII.1997 1 dead male. I. Süda leg.

*Scolytus mali* (Bechstein & Scharfenberg, 1805): Tartu (ME86), reared from the branch of an apple-tree, 14.IV.1973, 16 exx. A. Riis leg., 30.IV.1973, 11 exx. A. Riis leg. and under the bark of an apple-tree, 06.VI.1979, 16 exx. K. Voolma leg.; Tartu (ME87), reared from the billet of a plum-tree, 04.VI.1996, 20 exx. I. Süda leg.

*Orthotomicus longicollis* (Gyllenhal, 1827): Parnika (MD58, Valga), under the bark of a dead old pine, 30.VII.1996, 2 exx. I. Süda leg.

*Trypodendron proximum* (Niijima, 1909): Aruküla (LF98, Harju), 17.X.1965, 1 ex. J. Mieländer leg.; Inju (MF66, Lääne-Viru), in forest litter, 05.X.1970, 1 ex. V. Soo leg.; Kohala (MF78, Lääne-Viru), 29.IV.1992, 1 ex. E. Mäe leg.; Mooste (NE04, Põlva), in pheromone traps, 26.IV.1995, 5 exx., 09.V.1995, 1 ex. and 16.V.1995, 1 ex. K. Voolma leg., on a spruce stump, 23.IV.1996, 3 exx. I. Süda leg.; Pala (NF00, Jõgeva), in a spruce log, 13.VI.1995, 1 ex. K. Voolma leg.; Jaaniveski (LF52, Rapla), in a pheromone trap, 18.V.1996, 3 exx. K. Voolma leg.; Kiidjärve (ME94, Põlva), under the bark of a pine log, 06.VI.1996, 7 exx. K. Voolma leg.; Aardla (ME86, Tartu), in the bark of a lying spruce, 03.VII.1997, 2 exx. H. Õunap leg.

*Trypophloeus discedens* Palm, 1950: Järvselja (NE15, Tartu), 02.VII.1947, 3 exx. E. Evald leg. and on the bark of a felled aspen stem, 02.VI.1996, 5 exx. I. Süda leg.; Helme (ME33, Valga), from the branch of an aspen, 04.VIII.1960, 3 exx. E. Merivee leg.

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## UUSI ANDMEID EESTI ÜRASKLASTE KOHTA (COLEOPTERA, SCOLYTIDAE)

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Eesti entomoloogilistes kollektioonides leidub üle 15 200 eksemplari üraseklasi. Selle materjali läbitöötamine kinnitas 63 ürasekilligi esinemist Eestis. Käesolevas artiklis on esitatud leiuanndmed Eesti fauna seitsme uue ürasekilligi kohta, mis puuduvad senistes faunistilistes nimestikes, sealhulgas kataloogis “Enumeratio Coleopterorum Fennoscandiae, Daniae et Baltiae” (Helsinki, 1992). Need on *Hylesinus varius* (F.), *Hylurgus ligniperda* (F.), *Scolytus scolytus* (F.), *S. mali* (Bechst. & Scharf.), *Orthotomicus longicollis* (Gyll.), *Trypodendron proximum* (Nij.) ja *Trypophloeus discedens* Palm.