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A survey of the weevils of Ukraine. Bark and ambrosia beetles (Coleoptera: Curculionidae: Platypodinae and Scolytinae)

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Abstract

Our knowledge of Ukrainian bark and ambrosia beetles (Coleoptera: Curculionidae: Scolytinae and Platypodinae) is summarized as a baseline for future studies of the fauna, with a checklist including information on distribution, host trees, biology and taxonomy. One hundred twenty-two species are recorded from Ukraine, of which seven are recorded for the first time. One species is recorded for the first time from Europe. Previous records of 24 species are considered dubious and requiring confirmation. In contrast to the Palaeartic Catalogue (Knížek 2011b), we consider *Anisandrus maiche* to be first described by Kurentsov (1941) rather than by Eggers (1942); *A. maiche* (Eggers, 1942) is a junior synonym of *A. maiche* (Kurentsov, 1941).

Key words: Coleoptera, Curculionidae, Scolytinae, Platypodinae, Ukraine, checklist, new records

Introduction

The taxonomic rank of bark and ambrosia beetles is a still matter of debate. Most papers dealing with faunistics and/or applied forest entomology traditionally considered these groups as well-defined beetle families – Scolytidae Latreille and Platypodidae Shuckard – distinct from weevils both morphologically and ecologically. However, new molecular genetic data along with morphological analyses of immatures and adults support treating bark and ambrosia beetles as subfamilies within Curculionidae (Thompson 1992; Lyal 1995; Marvaldi 1997; Marvaldi *et al.* 2002; Alonso-Zarazaga & Lyal 2009; Jordal *et al.* 2011).

The known world fauna includes ca. 6000 species of Scolytinae, from 230 genera and 28 tribes and ca. 1400 species of Platypodinae from 38 genera and 3 tribes (Wood & Bright 1992a,b; Alonso-Zarazaga 2009). The recently published Catalogue of Palaeartic Coleoptera (Knížek 2011b) includes 956 species of Scolytinae, in 107 genera and 21 tribes. These tribes are grouped into two supertribes: Hylesinitae and Scolytitae. Palaeartic Platypodinae count 96 species of from 11 genera and 2 tribes, that being grouped into two supertribes Platypoditae and Tesserocerinitae (Knížek 2011a).

Historical collections of Scolytinae and Platypodinae in Ukraine. Studies of bark and ambrosia beetles fauna in modern Ukraine territory proceed more than 130 years and is detailed in the recent review of Nikulina (2012). The first paper on Scolytinae that contains direct references to bark beetles for Ukraine is a fundamental work issued by Lindemann (1875–1879). In separate parts of the book there are present indications of several species of Scolytines for Ukraine (Lindemann 1875). As a second pioneering work on scolytines of Ukraine the monograph by Shevyrew “Bark beetles” (Shevyrew 1887) should be named. However, scattered references to bark beetle distribution in western provinces of Ukraine, former parts of adjacent countries, can be found in rather numerous papers by Łomnicki (1866, 1868, 1870, 1880, 1891, 1904), Miller (1868), Król (1877), Eggers (1914a,b). Some reports on bark beetles of Central and Eastern Ukraine were provided by Cherkunov (1889) and Shevyrew (1889). In the next decades the need for detailed study of wood pests has been tightly connected with the new branch of forest management appeared in the beginning of the XIX century – steppe afforestation. First results of steppe forestries bark beetles studies were reflected in Shevyrew monograph “Description of insect pests of steppe forestries and methods of struggle them” (Shevyrew 1893b). During the XXth century, most studies of bark and ambrosia beetles were applied research that dealt with rather few number of species bringing damage to forest economy. Due to this fact faunistic reviews for bark and ambrosia beetles for most of Ukraine regions were not

published. To date faunistic reviews for bark and ambrosia beetles of Zakarpatska Prov., Sumy Prov., Crimea and South Eastern Ukraine are available (Rudnev 1953a; Rudnev 1962; Tregub *et al.* 2000; Nikulina & Martynov 2007), that are the subject for numerous additions with new data obtained during the ongoing research.

Although there are many papers on European Scolytinae and Platypodinae, the fauna of Ukraine, the largest country in Europe, hasn't previously been entirely surveyed. The current paper is the first attempt to analyze critically all literature data on distribution of bark and ambrosia beetles in Ukraine and to validate them through examination of the most important collections including type material.

Material and methods

Most of the material considered in the paper is resulted from more than twenty years of collecting Scolytines in Ukraine by the authors. All natural and climatic zones of Ukraine were investigated in respect of bark beetle fauna. Besides the results of all principal Ukrainian bark beetle collections and many private collections examination were compiled during work on the paper.

Material was collected by standard collecting methods from different substrates, sweeping and at light. Infested twigs and sawed tree trunks were incubated to rear out the scolytine progeny. Besides traditional collecting methods, Petrov window traps were used. Petrov traps consist of the four transparent plastic sheets A4, 0.3–0.4 mm thick, arranged in the form of cross with the blue bag plastic funnel serving as a collecting jar filled either with water or ethanol (in different dilution) to attract ambrosia beetles (Fig. 1). Beetles killed with ethylacetate were preserved dry or in 96% ethanol. Mounted beetles were determined by comparison with type material or using keys (Pfeffer 1995). Systematics and nomenclature are following Knížek (2011a, b).

Abbreviations and depositories. Provinces of Ukraine: **ČER**—Chernivtsi, **ČNG**—Chernigiv, **CRI**—Crimea, **ČRK**—Cherkasy, **DNI**—Dnipropetrovsk, **DON**—Donetsk, **IFR**—Ivano-Frankivsk, **KHE**—Kherson, **KHM**—Khmelnitsky, **KHR**—Kharkiv, **KIR**—Kirovograd, **KYI**—Kyiv, **LUG**—Lugansk, **LWI**—Lviv, **MYK**—Mykolajiv, **ODE**—Odesa, **POL**—Poltava, **RIV**—Rivne, **SUM**—Sumy, **TER**—Ternopil, **VIN**—Vinnytsya, **VOL**—Volyn, **ZAK**—Zakarpatska, **ZAP**—Zaporizhzhya, **ŽIT**—Zhytomyr; **(i)**—introduced.

Depositories: **DMLU**—State Museum of Environment, National Academy of Sciences (Lviv, Ukraine); **DONNU**—Department of Zoology and Ecology collection, Faculty of Biology, Donetsk National University (Donetsk, Ukraine); **IPP**—Institute of Plant Protection, Ukrainian Academy of Agricultural Sciences (Kyiv, Ukraine); **KES**—Kharkiv Entomological Society (Kharkiv, Ukraine); **KColl**—Collection of A.M. Kravchenko (Volyn Prov., Ukraine); **KUMN**—Museum of Nature, Karazin Kharkiv National University (Kharkiv, Ukraine); **MColl**—Collection of S.A. Mosyakin (Simferopol, Ukraine); **NMW**—Natural History Museum in Vienna (Austria); **NSPU**—Gogol Nizhyn State Pedagogical Institute (Nizhyn, Ukraine); **APP**—private collection of A.V. Petrov (Moscow, Russia); **RColl**—Collection of Roztochcha Nature Reserve (Lviv Prov., Ukraine); **SIZK**—Schmalhausen Institute of Zoology (Kyiv, Ukraine); **UZNU**—Zoological Museum, Uzhgorod National University (Uzhgorod, Ukraine); **VColl**—Collection of D.V. Vlasov (Yaroslavl, Russia); **ZIN**—Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia); **ZMUM**—Zoological Museum of Moscow State University (Moscow, Russia).

Results

After extensive field work, examination of museum collections and critical review of literature data we defined 122 species of Scolytinae of 37 genera and 15 tribes in the fauna of Ukraine. A single species from subfamily Platypodinae is recorded.

New records and nomenclatural changes. *Anisandrus maiche* (Kurentsov, 1941) was indicated as new to Europe and Ukraine (Nikulina *et al.* 2007b), and recently recorded for Moscow Province of Russia (Nikitsky 2009). This Far Eastern ambrosia beetle is obviously an invasive species expanding its range from East Siberia. Krivolutskaia (1996) has recorded it for West Siberia, but we have not examined specimens from this region. Apparently, the modern range of *A. maiche* is expanding westward, and shortly this polyphagous pest would be expected to appear in Central Europe. In

contrast to Palaearctic Catalogue opinion (Knížek 2011b) we consider *A. maiche* to be first described by Kurentsov (1941) rather than by Eggers (1942); the monograph by Kurentsov (1941) provided a valid detailed description of the species under its name in genus *Xyleborus* (p.192) and a key to distinguish *A. maiche* from other oriental Xyleborines (p.193). *A. maiche* (Eggers, 1942) thus is a junior synonym of *A. maiche* (Kurentsov, 1941).

Besides this interesting record, we report here five more species new for the fauna of Ukraine, namely: *Tomicus destruens* (Wollaston), *Polygraphus punctifrons* Thomson, *Crypturgus mediterraneus* Eichhoff, *C. subcribrosus* Eggers, and *Xyleborinus attenuatus* (Blandford). One additional species, *Hypothenemus hampei* (Ferrari), does not breed in natural conditions in Ukraine, but is regularly introduced to Ukraine with coffee grains from India and Brazil. Despite not able to become an established species due to absence of the host plant (*Coffea* sp.) and climatic conditions, it is regularly collected at customs.

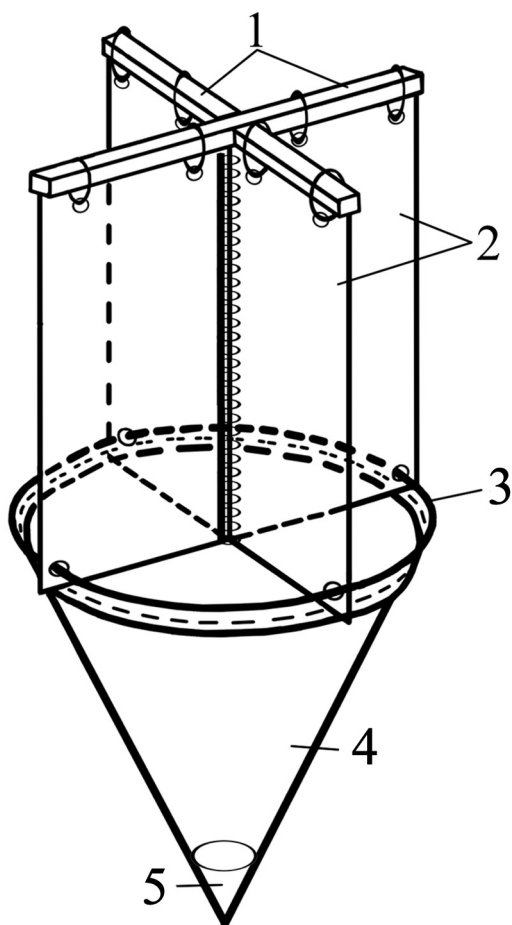


FIGURE 1. Left, construction of Petrov window traps; right, window trap in arboretum of the Donetsk Botanical garden, May 2010. Legend: 1. wooden slats, 2. plastic sheets, 3. wire ring, 4. plastic funnel, 5. water or ethanol.

X. attenuatus has been recorded from all climatic zones and is known from nine administrative provinces of the country (Nikulina *et al.* 2007a). *T. destruens* is deemed here to be an invasive species, since the unique find of that species refers to 1981 (Khaustov & Nikulina 2008). However, precise identification of *T. destruens* from very similar *T. piniperda* became possible only recently owing to papers by Kohlmayr *et al.* (2002), Faccoli (2006) and Kirkendall *et al.* (2008). Considering occurrence of *T. destruens* in Crimea, one can suggest it has bred in the southern coast of the peninsula since introduction along with Mediterranean pine species, *Pinus halepensis* and *Pinus pithyusa*, at least several centuries ago. Alternatively *T. destruens* might be a native in Crimea breeding on *Pinus stankewiczii* which is known from Sudak and Sebastopol, but after introduction of related *Pinus halepensis* in the culture *T. destruens* become more abundant. Both these phylogeographic hypothesis might be tested using molecular markers that is matter of further study. Taxonomic status of *C. subcribrosus*, that is very similar to Palaearctic *C. cinereus*, was established by morphological and molecular analysis (Jordal & Knížek 2007) and we

have proved here occurrence and breeding of both species in Ukraine. *C. mediterraneus*, breeding in the southern coast of Crimea, was probably also mixed with *C. cinereus* Herbst. *Polygraphus punctifrons* Thomson is also newly recorded in Ukraine, it is closely related to *P. poligraphus* Linnaeus, that is common in Carpathians, mixed and deciduous forests. The species was recorded in Ternopil and Lviv Provinces, but obviously is widely distributed along with spruce in Ukraine.

Nine species are recorded for Ukrainian lowlands for the first time. *Dryocoetes alni* Georg was previously known from Carpathians and Crimea only, but it was found also in the Polesje of the left bank of Dnipro River (Chernigiv Province). *Taphrorychus villifrons* Dufour, native for Crimea, was found in steppes of Donetsk Province. *Phloeosinus aubei* Perris native for Transcarpathia and Crimea was introduced to the arboretum of the Donetsk Botanical garden where it was collected first time in 2010 and is currently breeding. Most probably the species was introduced with big saplings and it forms a stable local population. *Thamnurgus caucasicus* Reitter in Ukraine was previously known only from Crimea, but was collected repeatedly in Donetsk and Lugansk Provinces that proves it is also widespread in the steppes of Ukraine. *Pityogenes bistridentatus* Eichhoff has also been collected outside the Crimea, now it is widely distributed in the steppes being associated with artificial stands of Crimean pine (*Pinus pallasiana*) on the left bank of the Dnipro River. *Scolytus orientalis* Eggers was recorded in the artificial stands of elm in the Zaporizhzhya Province and *S. sulcifrons* was captured in the forests of Siverskyy Donets River basin, and Dnipro River (nearby Kyiv). Most probably *Pityophthorus henscheli* Seitner, which is now recorded in nine provinces, should be considered as expanding its distribution eastwards from the Carpathians. *C. subcribrosus* Eggers was found in the arboretum of the Grishko Botanical garden, Kyiv Province apart of main range.

We indicate 3 species as new to Ukrainian Carpathians. *C. subcribrosus* is known from Crimea based on ambiguous identification (Rudnev 1962). However, as this finding is not confirmed by the collection material, we consider our finding (1 female) nearby Luga village in the Zakarpatska Province as the first confirmed record of *C. subcribrosus* from Ukraine and for whole Carpathians. Invasive *Xyleborinus attenuatus* is widely distributed in Carpathian mountain forests and abundant in Petrov window traps. *Ernoporicus caucasicus* (Lindemann), previously known from Crimea, is recorded in Zakarpatska Province for the first time.

Two new species are indicated for the first time for Crimean Peninsula. *Tomicus destruens* is known from vicinity of Yalta and Phoros Cape. *Crypturgus mediterraneus* was collected only once and its current occurrence in Crimea is unknown.

Problematic records. Below we list all doubtful indications of Scolytinae for Ukraine territory that we failed to confirm by collection material studied:

Pityophthorus exsculptus (Ratzeburg), *Pityophthorus knoteki* Reitter, *Pityophthorus morosovi* Spessivtsev, *Pityophthorus pubescens* (Marsham), *Pityophthorus traegardhi* Spessivtsev, *Cryphalus intermedius* Ferrari, *Cryphalus saltuarius* Weise, *Trypophloeus alni* (Lindemann), *Trypophloeus bispinulus* Eggers, *Taphrorychus siculus* Eggers, *Thamnurgus delphinii* (Rosenhauer), *Thamnurgus euphorbiae* Küster, *Hylastes parallelus* Chapuis, *Kissophagus novaki* Reitter, *Phloeosinus thujae serrifer* Wichmann, *Liparthrum genistae georgi* Knotek, *Liparthrum mori* (Aubé), *Ips cembrae* (Heer), *Phloeophthorus rhododactylus rhododactylus* (Marsham), *Scolytus amygdali* Guérin-Méneville, *S. dahuricus* Chapuis, *S. jaroschewskii* Shevyrew. Identification of *Phloeotribus brevicollis* (Kolenati) in Ukraine is doubtful due to poor condition of specimens.

Some records of bark beetles for Ukraine are obviously erroneous. *Carphoborus teplouchovi* Spessivtsev record for Volyn (Kozak 1983) should be referred to *C. minimus* (Fabricius), a species widely distributed and common in that province. Initially, *Ips amitinus* (Eichhoff, 1872) was omitted in the keys for bark beetles of the European part of the former USSR (Krivolutskaya 1965) and then was misidentified as *Ips typographus* var. *japonicus* Niisima, 1909 from the highlands of Carpathians (Krivolutskaya 1996). Recent examination of collection material reveals that *I. amitinus* is quite common on spruce in Carpathians and is usually collected along with *I. typographus*.

Several species were originally described from the territory of Ukraine. *Xyleborus angustatus* Eichhoff is known only from the holotype (NMW). It was re-examined by Holzshuh (1994) who stated that it belongs to an unknown species. Being able recently to study the holotype, we follow Holzshuh and consider this to be a mislabeled specimen; it is apparently a South American species of the genus *Xyleborinus*. *Trypophloeus tremulae* Stark was described from Crimea from two syntypes collected by Schorokhov housed in ZIN. Additional

specimens (ZMUM) with the same label were identified by H. Eggers. Meanwhile *T. tremulae* was found in Central Europe (Pfeffer 1995), in the Caucasus (Mandelstam *et al.* 2005b), and many localities in Ukraine. Besides these two valid species, *Scolytus tauricus* (Eggers) was described from Crimea; however this name is considered as a junior synonym of *Scolytus jaroschewskii* Shevyrew (Pfeffer 1995). *Phloeosinus krimaeus* Eggers was synonymized with *Ph. henschi* Reitter and we have confirmed this species presence in south coast of Crimea where it replaces *Ph. thujae* (Perris). Examination of the syntypes of *Trypophloeus rybinskii salicis* Stark reveals it is conspecific to widely distributed *T. rybinskii rybinskii* Reitter, and despite weak differences in body shape being broader and shorter, it agrees with taxonomy given by Knížek (2011b).

Biology and ecology. Scolytinae inhabit all biogeographic zones of Ukraine and are distributed from lowland artificial stands in steppes to subalpine shrubland belt of Carpathians (ca. 0–2000 m a.s.l.). In Ukraine, we have recorded bark and ambrosia beetles on more than 90 host plants; about 1/3 of those are introduced tree species. Most of Ukrainian Scolytinae are phloeophagous, feeding in inner bark of the host plant (ca. 90% of species). Xyloterini and Xyleborini (ca. 10%) are ambrosia beetles, larvae of which consume the mycelium of symbiotic ambrosia fungi developing in beetle galleries in wood; the same type of nutrition is known for *Platypus cylindrus*. Over 60% of species can develop on several hosts from related genera and should be considered as oligophagous. Interestingly, some monophagous native species can breed on several non-native tree genera. For example, *Pityogenes bistridentatus* (Eichhoff) native for Crimean black pine (*Pinus pallasiana*), can breed successfully also on introduced American species of *Abies* and *Picea* cultivated in Crimean Nature Reserve. Only few bark beetle species breed in only one host plant. True polyphagy, i.e. breeding in hosts from different families, is typical for most of the xylomycetophagous and for a few phloeophagous species (e.g. *Polygraphus grandiclava* Thomson and *Carphoborus perrisi* (Chapuis)).

The annual activity of adults significantly varies in different natural and climatic zones of Ukraine. It may occur in May-June (in Carpathians), in August-September (in steppes) or even to be perennial (examples are species of *Pityogenes*, *Crypturgus*, etc. occurring in south Crimea).

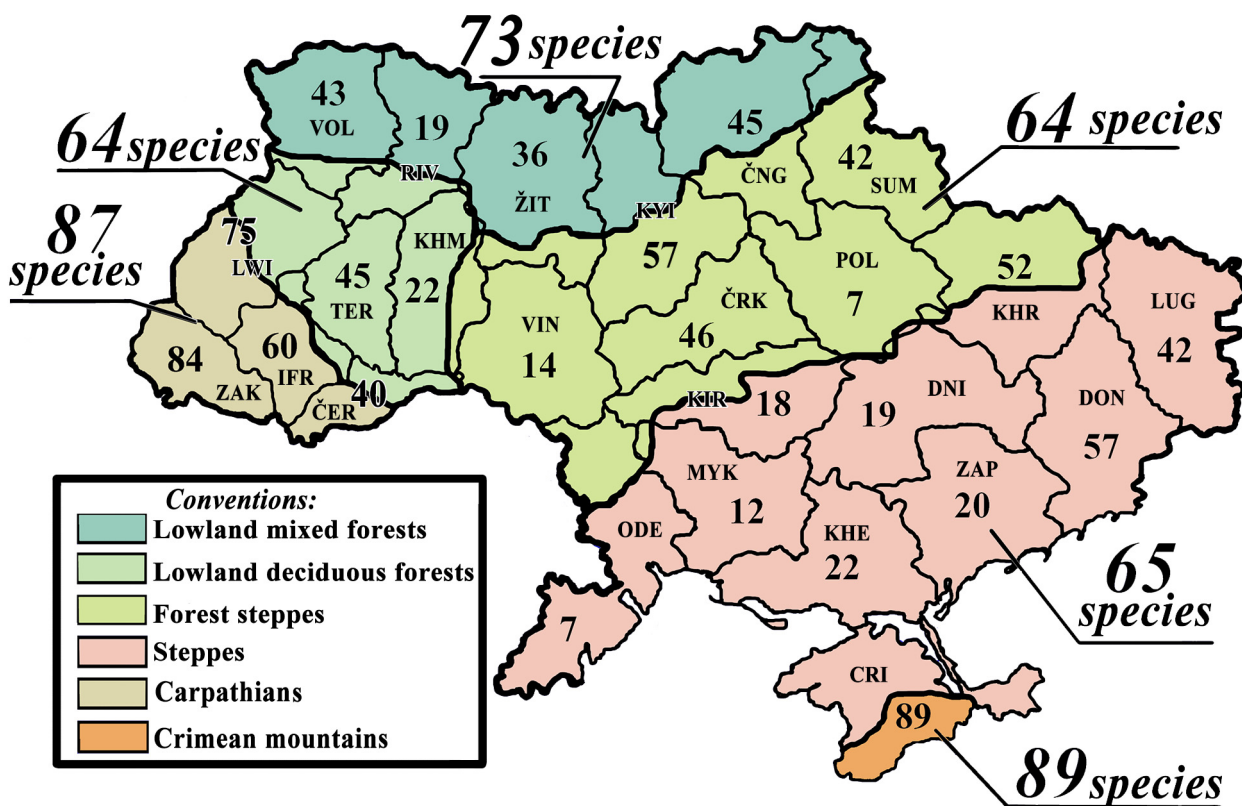


FIGURE 2. Distribution of Scolytinae species richness in different biogeographic zones and administrative regions of Ukraine.

Geographic distribution. The distribution of bark beetles corresponds to the same regularities as of other phytophagous insects. It depends on a number of environmental factors, both historical and current ranges of the host plants, and the ability to spread, either actively or passively (with timber). So far, the ecological geographic pattern of bark beetle fauna depends on diversity of native dendroflora, on the other hand, it may be affected by artificial changes in flora (deforestation and/or introduction of cultivated tree species).

Comparing species richness of Scolytinae in Ukraine (Fig.2), one can observe two hot spots of biodiversity: Crimean Mountains and Carpathians. 12 species and 3 genera in Ukraine are limited in distribution only to Crimean Mountains and 6 species and 1 genus occur in Ukraine only in Carpathians. Scolytinae fauna of the Ukrainian planes is represented generally by Central European species. Mixed coniferous and deciduous forests are most species rich with 73 species, two of them were not recorded from other nature and climatic zones (Table 1).

Deciduous forests, forest steppes and steppes possess nearly equal species number but differ in species composition. Lowland deciduous forests have visible similarity with Carpathian forests and mixed forests. Only occurrence of European *Polygraphus punctifrons* is restricted to deciduous forests (Table 1).

TABLE 1
Bark beetles specific to biogeographic zones of Ukraine

Crimean mountains	Carpathians
1. <i>Chaetoptelius vestitus</i> Mulsant & Rey	1. <i>Crypturgus subcribrosus</i> Eggers
2. <i>Crypturgus cribrellus</i> Reitter	2. <i>Pityogenes conjunctus</i> Reitter
3. <i>Crypturgus mediterraneus</i> Eichhoff	3. <i>Pityokteines vorontzowi</i> (Jacobson)
4. <i>Hypoborus ficus</i> Erichson	4. <i>Polygraphus subopacus</i> Thomson
5. <i>Hypothenemus eruditus</i> Westwood	5. <i>Thamnurgus varipes</i> Eichhoff
6. <i>Orthotomicus erosus</i> Wollaston	6. <i>Xylechinus pilosus</i> (Ratzeburg)
7. <i>Phloeosinus henschi</i> Reitter	Lowland mixed forests
8. <i>Phloeotribus brevicollis</i> (Kolenati)	1. <i>Hylastes linearis</i> Eichhoff
9. <i>P. muricatus</i> (Eggers)	2. <i>Xyleborinus angustatus</i> (Eichhoff)
10. <i>P. scarabaeoides</i> (Bernard)	Lowland deciduous forests
11. <i>Pityogenes calcaratus</i> Eichhoff	1. <i>Polygraphus punctifrons</i> Thomson
12. <i>Tomicus destruens</i> (Wollaston)	

Forest steppes and steppes are not inhabited by specific bark beetles. Forest steppes are definitely similar to mixed forests, whereas steppes are known as hot spot of biodiversity due to Mediterranean species penetrating from Crimea and Caucasus.

Review of species records

Platypodinae

Platypodini (1 genus, 1 species)

Platypus cylindrus (Fabricius)

Records. ČER CRI IFR KYI LUG LWI TER VIN VOL ZAK [Cherkunov 1889: 49; Roubal 1936: 276–277; Stark 1955b: 736; Belgovsky 1956: 358; Zagajkevich 1958: 101–102; Rudnev 1959: 198; Rudnev 1962: 85; Rudnev & Vasechko 1988a: 182; Knížek 2011a: 202.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. 6 spec. (IPP) Ivano–Frankivsk Prov., Klishkivske forestry, Zagajkevich leg., 2.vii.1951; Lviv Prov.: 2 spec. (IPP) Busk, *Quercus*; 1 spec. (IPP) Bilogirsha, 5.x., *Quercus*; 1 spec. (DONNU) environs of Bilche–Voltytsya vill., at light, Yu.M. Geryak leg., 20.vi.2003; 17 spec. (DONNU) Yavoriv Distr., environs of Ivano–Frankove vill., Roztochcha Reserve, *Quercus* sp., T.V. Nikulina leg., 14–15.v.2004 and 17.viii.2006; 1 spec.

(IPP) Vinnytsya Prov., Mogyliv Podilskyy; Zakarpatska Prov.: 5 spec. (IPP) Mukachivske forestry, 3–9.ix.1948; (UZNU) Mukacheve, in oak stumps, Giritz leg., 30.vii.1952; 2 spec. (DONNU) Tjachiv Distr., environs of Ugoljka vill., 9.vii.2001; 11 spec. (DONNU) Uzhgorod Distr., environs of Onokivtsi vill., *Quercus* sp., T.V. Nikulina leg., 1.viii.2005; 5 spec. (DONNU) Uzhgorod Distr., environs of Nevitske vill., *Fagus* sp. and *Alnus* sp., T.V. Nikulina leg., 2.viii.2005.

Biology. On *Quercus* spp., *Fagus* spp., *Fraxinus* spp., *Ulmus* spp., *Castanea sativa* (Pfeffer 1995); in Ukraine on *Quercus robur* and *Alnus* sp.

Scolytinae

Corthylini (1 genus, 5 species)

Pityophthorus glabratus Eichhoff

Records. ČRK CRI IFR KYI LWI VOL [Stark 1952: 354–355; Zagajkevich 1958: 90; Rudnev 1962: 81; Pogorilyak 1973: 44; Rudnev & Vasechko 1988b: 170; Pfeffer 1995: 178; Kravchenko 2010: 62; Knížek 2011b: 216; Nikulina 2014: 105.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. 1 male and 3 females (APP) Cherkasy, left bank of Dnipro, close of the May 1981, A. Petrov leg.; 2 spec. (APP) Kyiv Prov., Brovary, *Pinus*, A. Petrov leg., 20–25.x.1980 and 1.v.1992.

Biology. On *Pinus sylvestris*, *P. mugo*, and *P. nigra nigra* (Pfeffer 1995); in Ukraine on *P. sylvestris*. Biologically it is similar to *Pityophthorus lichtensteinii*, prefers drying twigs of standing pine trees, occasionally also found on broken twigs by wind on the ground.

Pityophthorus henscheli Seitner

Records. CRI DON IFR KHR KYI LWI SUM TER VOL ZAK ZAP [Pfeffer 1955: 222; Zagajkevich 1958: 90; Pogorilyak 1973: 44; Pfeffer 1995: 181; Nikulina & Martynov 2007: 95; Nikulina 2007: 258; Nazarenko 2009b: 47; Nikulina 2010b: 142; Nikulina & Filyk 2010: 264; Knížek 2011b: 216; Nikulina 2014: 105.]

Distribution. Europe (Alps, Carpathians) (Pfeffer 1995).

Material examined. Crimea: 6 spec. (DONNU) Lenine Distr., environs of Mar'jivka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 18.i.2007; 19 spec. (DONNU) Lenine Distr., environs of Shcholkine city, *Pinus nigra pallasiana*, T.V. Nikulina leg., 21.i.2007; 8 spec. (DONNU) Sebastopol city, Bajdarska valley, environs of Kizilove vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 18.v.2010; 42 spec. (DONNU) Donetsk Prov., Volodarsk Distr., environs of Fedorivka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 24.v.2007; 4 spec. (DONNU) Kharkiv Prov., Zmijiv Distr., environs of Zadonetske vill., *Pinus sylvestris*, T.V. Nikulina leg., 15.viii.2008, 20.viii.2009; 2 spec. (SIZK) Kyiv Prov., Kyiv city, Island Kazachiy, *Pinus*, V.Yu. Nazarenko leg., 9.ix.2009; 10 spec. (DONNU) Lviv Prov., Yavoriv Distr., environs of Ivano–Frankove vill., “Roztochcha” Reserve, window traps, T.V. Nikulina leg., 29–31.v.2008; 2 spec. (SIZK) Sumy Prov., “Mykhaylivska tsilyna” Reserve, *Pinus*, V.Yu. Nazarenko leg., 20–21.viii.2009; 5 spec. (DONNU) Ternopil Prov., Gusyatyn Distr., environs of Paivka vill., *Pinus*, T.V. Nikulina leg., 21.v.2004; 7 spec. (DONNU) Volyn Prov., Ratne Distr., environs of Zalisytysy vill., *Pinus* sp., T.V. Nikulina leg., 9.viii.2006; 1 spec. (DONNU) Zaporizhzhya Prov., Prymorsk Distr., environs of Kolarivka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 25.iv.2010.

Biology. On *Pinus mugo*, *P. cembra* and *P. leucodermis* (Pfeffer 1995). In Carpathians the species was recorded on *P. nigra nigra*, in Ukrainian plains on *P. sylvestris* and *P. nigra pallasiana*.

Notes. This species was previously considered to occur in Ukraine only in Carpathians, but we have recognized the species to inhabit a number of provinces of the Ukrainian plains for the first time. Probably this small species was previously overlooked in Ukraine rather than expanding its range from the West.

Pityophthorus lichtensteinii (Ratzeburg)

Records. ČER CRI DON IFR KHR KYI LWI SUM VOL ZAK [Bukowsky 1930: 132; Fedorov 1930: 227; Bukowsky 1940: 176; Stark 1952: 350–351; Stark 1955a: 711; Zagajkevich 1958: 90; Rudnev 1962: 81; Pogorilyak 1973: 44; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 170; Pfeffer 1995: 177; Izhevsky *et al.* 2005: 142–143; Nazarenko 2009b: 47; Knížek 2011b: 217; Nikulina 2012c: 254; Nikulina 2014: 105.]

Distribution. Palaearctic (Pfeffer 1995; Krivolutskaya 1996).

Material examined. Ca. 300 specimens (DONNU, IPP, KUMN, APP, SIZK, ZIN) from Chernivtsi, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kyiv, Sumy, Volyn, and Zakarpatska Provinces studied.

Biology. On *Pinus sylvestris*, *P. strobus*, *P. nigra nigra*, *P. nigra pallasiana*, *P. pinaster*, *P. sibirica*, *Picea obovata* (Pfeffer 1995); in Ukraine on *P. sylvestris* and *P. nigra pallasiana*, also recorded on *P. cembra*, *P. mugo*, and occasionally on *Picea abies* and *Abies alba*. Species breeds in small twigs, and two year old shoots on standing trees, rather commonly found on wind broken twigs on well aerated mountain slopes.

Notes. This species is common throughout North Palaearctics and also abundant in Crimea where it may be represented by a peculiar subspecies.

Pityophthorus micrographus (Linnaeus)

Records. IFR LWI VOL ZAK [Krol 1877: 57; Stark 1952: 342–344; Zagajkevich 1958: 90; Pogorilyak 1973: 44; Kozak 1983: 59; Rudnev & Vasechko 1988b: 169–170; Izhevsky *et al.* 2005: 143–144; Nikulina 2014: 105.]

Distribution. Palaearctic (Stark 1952).

Material examined. Ivano–Frankivsk Prov.: 5 spec. (IPP) Nadvirna forest district, *Abies*, Zagajkevich leg., 18.vi.(19)52; 4 spec. (IPP) Nadvirna forest district, Bredulets, *Pinus*, 10.ix.1959; 11 spec. (IPP) Tatarivske forestry, *Abies*, top with a lateral branch, viii.(19)61; 5 spec. (IPP) Nadvirna forest district, Rechanskoe forestry, 10.vi.(19)60, 16.vii.(19)61, *Abies*; 8 spec. (IPP) Mountain Khomyak, *Pinus mugo* and *P. cembra*, 29.vii.(19)61; 2 spec. (DONNU) Kosiv Distr., environs of Cherganivka vill., T.V. Nikulina leg., 26.v.2008; 3 spec. (IPP) Lviv Prov., Bryukhovik, *Pinus*, 9–26.vii.1951; 12 spec. (IPP) Volyn Prov., Manevichi, *Picea*, D. Rudnev leg., 16.x.(19)54; 1 spec. idem, D. Rudnev leg., 24.xi.(19)54; 2 spec. (IPP) Zakarpatska Prov., Rakhiv, *Picea*, 8.x.(19)57.

Biology. On *Picea obovata*, *P. abies*, *Abies sibirica* (Pfeffer 1995); in Ukraine on *P. abies*, also recorded on *Abies alba*, *Pinus sylvestris*, *P. mugo* and *P. cembra*.

Notes. In Carpathians *Pityophthorus pityographus* mostly substitute for this species.

Pityophthorus pityographus pityographus (Ratzeburg)

Records. ČER CRI IFR KHM LWI TER VOL ZAK [Roubal 1936: 269; Stark 1952: 343; Rudnev 1953a: 1153; Stark 1955a: 713; Zagajkevich 1958: 90–91; Rudnev 1962: 81; Pogorilyak 1968: 8; Pogorilyak 1973: 45; Rudnev & Vasechko 1988b: 170; Pfeffer 1995: 176; Izhevsky *et al.* 2005: 138; Nikulina 2005: 57; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Kravchenko 2010: 62; Knížek 2011b: 217; Nikulina 2014: 105.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 300 specimens (DONNU, IPP, UZNU, ZIN) from Chernivtsi, Ivano–Frankivsk, Khmelnytsky, Lviv, Ternopil, and Zakarpatska Provinces studied.

Biology. On *Abies alba*, *Picea abies*, *P. omorica*, *Larix decidua*, *Pinus sylvestris*, *P. strobus*, *P. rotundata*, *P. mugo*, *P. cembra*, *Pseudotsuga menziesii* (Pfeffer 1995). In Ukraine on *Picea abies*, *Pinus mugo*, *P. cembra*, *Abies alba*, *Larix* sp. and *Juniperus* sp., also on cultivated *Pinus strobus*.

Notes. *Pityophthorus pityographus cribratus* Pfeffer occurring in Caucasus, Greece, and Asia Minor does not breed in Ukraine.

Cryphalini (5 genera, 11 species)

Cryphalus asperatus (Gyllenhal)

Records. ČRK IFR LWI TER ZAK [Roubal 1936: 263; Stark 1952: 266–267; Rudnev 1953a: 1153; Zagajkevich

1958: 86; Pogorilyak 1973: 36; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 166; Pfeffer 1995: 185; Izhevsky *et al.* 2005: 80–81; Nikulina 2005: 57; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Nikulina 2014: 104.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 300 specimens (DONNU, UZNU, ZIN) from Chernigiv, Chernivtsi, Ivano–Frankivsk, Lviv, Ternopil, and Zakarpatska Provinces studied.

Biology. On *Picea* spp., *Abies* spp., *Pinus* spp., *Larix decidua* (Pfeffer 1995); in Ukraine on *Abies alba*, *Picea abies*, *Larix decidua*, *Pinus sylvestris*, *P. cembra* and cultivated *P. banksiana*.

Notes. Species breeds in stems of small undersized spruces, on cut and broken trees, especially abundant in proximal part of small branches.

Cryphalus piceae (Ratzeburg)

Records. ČER IFR LWI TER ZAK [Roubal 1936: 263; Stark 1952: 260–261; Rudnev 1953a: 1152; Stark 1955a: 690; Zagajkevich 1958: 86–87; Pogorilyak 1968: 8; Pogorilyak 1973: 37; Rudnev & Vasechko 1988b: 165–166; Pfeffer 1995: 184; Izhevsky *et al.* 2005: 82; Nikulina 2005: 57; Nikulina 2009b: 126; Knížek 2011b: 219; Nikulina 2014: 104.]

Distribution. West and Central Europe, Caucasus (Pfeffer 1995).

Material examined. Ca. 100 specimens (DONNU, KUMN, IPP) from Chernivtsi, Ivano–Frankivsk, and Lviv Provinces studied.

Biology. On *Abies* spp. (Pfeffer 1995); in Ukraine on *Abies alba* and *Picea abies*. Similar in biology to *Cryphalus asperatus*, however is restricted in distribution by its host, European fir, where both two species can be found in areas of sympatry (Carpathians).

Ernoporicus caucasicus (Lindemann)

Records. ČER CRI ZAK [Stark 1952: 276; Pfeffer 1955: 187; Stark 1955a: 692; Rudnev 1962: 79; Rudnev & Vasechko 1988b: 166–167; Pfeffer 1995: 192; Izhevsky *et al.* 2005: 94; Knížek 2011b: 220; Nikulina 2014: 104.]

Distribution. Europe, Caucasus (Pfeffer 1995).

Material examined. 4 spec. (IPP) Chernivtsi Prov., Botanical garden Chernovitskiy, vii.(19)59; Crimea: 7 spec. (DONNU) Southern Coast of Crimea, Foros cape, *Tilia dasystyla*, T.V. Nikulina leg., 26.v.2010; 5 spec. (KUMN) Bakhchysaray Distr., environs of Tankovoe vill., left bank of the river Bel'bek, *Tilia*, A. Drovalenko leg., 2.v.1999; 18 spec. (DONNU) Zakarpatska Prov., Uzhgorod city, *Tilia*, T.V. Nikulina leg., 4.viii.2005.

Biology. On *Tilia cordata*, *T. platyphyllos*, *T. rubra*, *T. tomentosa*, *Ulmus glabra* (Pfeffer 1995); in Carpathians on *Tilia* sp., in Crimea collected from *Tilia dasystyla*.

Notes. This is a first record for Carpathians.

Ernoporicus fagi (Fabricius)

Records. CRI IFR LWI ZAK [Roubal 1936: 264; Stark 1952: 276–277; Stark 1955a: 692; Rudnev 1953a: 1153; Pfeffer 1955: 182; Zagajkevich 1958: 87; Rudnev 1962: 79; Pogorilyak 1973: 38; Kuznetsov & Vasil'eva 1987: 67; Rudnev & Vasechko 1988b: 167; Pfeffer 1995: 187; Izhevsky *et al.* 2005: 94–95; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Knížek 2011b: 220; Nikulina 2014: 104.]

Distribution. Europe, Crimea, Caucasus (Stark 1952).

Material examined. 2 spec. (DONNU) Ivano–Frankivsk Prov., Kosiv Distr., environs of Sheshory vill., window traps, T.V. Nikulina leg., 24.v.2008; Zakarpatska Prov.: 16 spec. (DONNU) Tjachiv Distr., Ugoljka vill., Karpatsky Biosphere Reserve, V.A. Chumak leg., 15.v.2000; 10 spec. (DONNU) Uzhgorod Distr., environs of Onokivtsy vill., *Fagus*, d=0,7–3 cm, T.V. Nikulina leg., 1.viii.2005; 16 spec. (DONNU) environs of Mala Ugoljka vill., yellow pan traps, V.A. Chumak leg., 15.v., 25.v., 5.vi., 15.vi., 5.vii., 25.vii., 5.viii.2011.

Biology. On *Fagus sylvatica*, *F. orientalis*, *F. macrophylla*, *Carpinus betulus* (Pfeffer 1995); in Ukraine in broken twigs of *Fagus sylvatica*.

Ernoporos tiliae (Panzer)

Records. ČER ČNG CRI ČRK DNI DON IFR KHM KHR KIR LUG LWI POL SUM TER VOL ZAK [Shevyrew 1893a: 32; Kostenko 1929: 208; Bukowsky 1930: 131; Roubal 1936: 261; Pomerantsev 1949: 181; Stark 1952: 272–273; Rudnev 1953a: 1152; Zagajkevich 1958: 87; Rudnev 1962: 79; Pogorilyak 1973: 39; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 166; Pfeffer 1995: 186; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 96–97; Nikulina 2005: 57; Nikulina & Martynov 2007: 96; Nikulina 2009b: 126; Nikulina & Filyk 2010: 264; Knížek 2011b: 220; Nikulina 2011b: 59; Nikulina 2014: 104.]

Distribution. Europe, North Caucasus, West Siberia (Stark 1952).

Material examined. Ca. 400 specimens (DONNU, IPP, KES, KUMN, NSPU, UZNU, VColl) from Cherkasy, Chernigiv, Chernivtsi, Crimea, Dnipropetrovsk, Donetsk, Ivano–Frankivsk, Kharkiv, Khmelnytsky, Kirovograd, Lugansk, Lviv, Poltava, Ternopil, Volyn, and Zakarpatska Provinces studied.

Biology. Common on *Tilia* spp. (Pfeffer 1995); in Ukraine on *Tilia cordata*.

Hypothenemus eruditus (Westwood)

Records. CRI [Pfeffer 1995: 194; Izhevsky *et al.* 2005: 116–117; Knížek 2011b: 222; Nikulina 2014: 104.]

Distribution. Nearly worldwide in regions with tropical and subtropical climate (Africa, Asia, Australia, Mediterranean Europe, Indonesia, North America) (Wood & Bright 1992a).

Material examined. 5 spec. (ZIN) Crimea, Yalta, on dried twig of *Morus alba*, M.Yu. Mandelshtam et A.A. Khaustov leg., 21.vii.1997.

Biology. Polyphagous on *Ficus carica*, *Morus alba*, *Pinus eldarica*, *Viscum album*, *Humulus lupulus* (Petrov 2005); in Ukraine collected on dried twig of *Morus alba*.

Hypothenemus hampei (Ferrari)

Records. DON(i) [Nikulina & Martynov 2007: 96; Nikulina 2008b: 74; Nikulina 2013b: 113; Nikulina 2014: 104.]

Distribution. Pantropical. Invasive worldwide with coffee beans. Originally is endemic of Central Africa, but currently registered in all coffee-producing region, with the exception of Hawaii, Nepal, and Papua New Guinea (Vega *et al.* 2009).

Material examined. (DONNU) specimens registered in 2006 and 2008 in coffee beans imported from Brazil and India in Mariupol (Donetsk Prov.).

Biology. In beans of *Coffea canephora*, *C. arabica* and possibly in seeds of plants from other families (Rubiaceae, Fabaceae, Oleaceae, Mimosaceae et al.) (Vega *et al.* 2009).

Notes. Quarantine species; no collection records in Ukraine natural ecosystems.

Trypophloeus binodulus (Ratzeburg)

Records. ČRK KHR KYI ZAK [Roubal 1936: 261; Stark 1952: 285; Rudnev 1953a: 1153; Stark 1955a: 695; Pogorilyak 1973: 39; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 167; Pfeffer 1995: 190; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 185; Nazarenko 2009b: 47; Knížek 2011b: 226; Nikulina 2014: 104.]

Distribution. Transpalearctic.

Material examined. 24 spec. (DONNU) Kharkiv Prov., Barvenkove Distr., environs of Bogodarivka vill., *Salix* sp., 18.iv.2010 (larvae), imago emerged in July 2010, T.V. Nikulina leg.; 2 males, 1 female (ZIN) Kyiv Prov., Kyiv, I.I. Ivanov leg., v.1900., V.Stark det.: *Trypophloeus asperatus* Gyll.

Biology. On *Populus tremula*, *P. nigra*, *P. alba*, *P. canadensis*, *Salix fragilis* (Pfeffer 1995); in Ukraine on *Salix* sp. Species inhabits alive or standing dry aspen in contrast to *T. bispinulus* that feeds on fallen trees.

Trypophloeus granulatus (Ratzeburg)

Records. CRI ?DON KYI LWI TER ZAK [Pomerantsev 1949: 176; Stark 1952: 288–289; Stark 1955a: 694; Zagajkevich 1958: 87; Rudnev 1962: 78; Pogorilyak 1973: 39; Rudnev & Vasechko, 1988b: 167; Pfeffer 1995: 192; Izhevsky *et al.* 2005: 186; Knížek 2011b: 226; Nikulina 2014: 104.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Zakarpatska Prov.: 18 spec. (ZIN) Uzhgorod, river Uzh bank, under bark of cut *Populus nigra* branches, M.Yu. Mandelshtam leg., 22.vii.2009; 10 spec. (ZIN) Uzhgorod, Bozdosh Park, under bark of broken *Populus nigra* branches, M.Yu. Mandelshtam leg., 3.viii.2009.

Biology. On *Populus alba* and *P. nigra* (Pfeffer 1995); in Ukraine collected on *P. nigra*.

Notes. Traditionally confused with related species, particularly with *Trypophloeus tremulae*, leading to false records for Ukraine.

Trypophloeus rybinskii Reitter

Records. ČNG CRI DON IFR KHE KHR KYI LUG ODE SUM [Klimesch 1915: 11; Stark 1952: 283; Pfeffer 1955: 186; Stark 1955a: 695; Zagajkevich 1958: 88; Rudnev 1962: 79; Mikhalski 1969: 893; Pogorilyak 1973: 40; Rudnev & Vasechko 1988b: 167; Pfeffer 1995: 190; Nikulina & Martynov 2007: 95; Knížek 2011b: 226; Nikulina 2014: 104.]

Distribution. Central and East Europe, Caucasus (Freude *et al.* 1981).

Material examined. 1 spec. (DONNU) Chernigiv Prov., Borzna Distr., environs of Prokhory vill., V.V. Martynov leg., 18.viii.2007; 9 spec. (ZIN) Crimea, Demerdzhi Mt., under bark of *Salix*, M.Yu. Mandelshtam leg., 19.ix.2004 [emerged in i–iii.2005]; 2 spec. (IPP) Crimea, Bakhchysaray, *Salix* sp., 18.ix.1945; 1 spec. (IPP) Alushta, *Salix* sp., 22.vi.1955; 34 spec. (DONNU) Donetsk Prov., Yasynuvata Distr., environs of Yakovlivka vill., *Salix* sp., T.V. Nikulina leg., 10.ix.2006 [emerged 24.v.2007]; 1 spec. (IPP) Kherson Prov., Tsyurupinsk, *Salix* sp., 29.ix.1959; 1 spec. (IPP) Kyiv Prov., Starosel'e, 1959; 7 spec. (DONNU) Kharkiv Prov., Zmijiv Distr., environs of Gaidary vill., *Salix* sp., T.V. Nikulina leg., 17.viii.2009; 3 spec. (DONNU) Lugansk Prov., Stanychno-Lugansk Distr., “Prydintsivska Zaplava” Reserve, *Salix* sp., T.V. Nikulina leg., 26.vi.2004; 5 spec. (DONNU) Antratsyt Distr., environs of Krasnyy Kut, *Salix* sp., T.V. Nikulina leg., 24.x.2008; 2 spec. (DONNU) Svatove Distr., environs of Novonikanorivka vill., *Salix* sp., T.V. Nikulina leg., 19.v.2009; 1 spec. (IPP) Odesa Prov., Troitske forestry, *Salix* sp., 29.vi.1959; 1 spec. (SIZK) Sumy Prov., “Mykhajlivska Tsilyna” Reserve, V.Yu. Nazarenko leg., 18.viii.2009.

Trypophloeus rybinskii salicis Stark, 1952: 4 spec. syntypes (ZIN) “Gorodnyanskoe forestry, Kiev Gouv[ernement], 10.vi.1926, Kostenko”, “willow”, “*Trypophloeus rybinskii salicis* subsp. nov.”

Biology. On *Salix* spp., *Populus nigra*, *P. canadensis* (Pfeffer 1995); in Ukraine on *Salix* sp.

Notes. Examination of syntypes of *Trypophloeus rybinskii salicis* Stark housed in ZIN reveals that it is a form of *T. rybinskii rybinskii* that weakly differs by slightly shorter and broader body from nominate subspecies. *Trypophloeus rybinskii corsicus* Eggers is endemic to Corse (Pfeffer 1995).

Trypophloeus tremulae Stark

Records. ČNG CRI DON KHE KHR KIR LUG ZAK [Stark 1952: 287–288; Sokanovsky 1954: 17; Pfeffer 1955: 76; Stark 1955a: 695; Zagajkevich 1958: 88; Rudnev 1962: 79; Mikhalski 1969: 893; Pogorilyak 1973: 40; Pfeffer 1995: 192; Nikulina & Martynov 2007: 95; Nikulina 2010b: 142; Knížek 2011b: 226; Nikulina 2011b: 59; Nikulina 2012c: 155; Nikulina 2014: 104.]

Distribution. Bulgaria, Slovakia (Pfeffer 1995), south Ukraine (Stark 1952 and orig. data), Caucasus.

Type material. (ZIN) Lectotype (male): CRI, Yalta, 11.v.1925, aspen, [S.I.] Shorokhov; Paralectotype (female).

Other material examined. (DONNU) 14 spec. Chernigiv Prov., Shchors Distr., environs of Nyzkivka vill., *Populus tremula*, V.N. Pavlyuk leg., 17.v. and 21.v.2007; Crimea: more than 150 spec. environs of Yalta, *Populus tremula*, A.A. Khaustov leg., 31.x.2004; 2 spec. environs of Simferopol city, *Populus nigra*, V.V. Martynov leg., 15.v.2006; Donetsk Prov.: 31 spec. Donetsk city, *Populus tremula*, T.V. Nikulina leg., 5.xi.2006—larvae, imago emerged in January 2007; 47 spec. idem, *Populus trichocarpa*, T.V. Nikulina leg., 24.vii.2011, 15.ix.2011; 10 spec. idem, *Populus simonii*, M.E. Sergeev leg., ix.2010; 63 spec. Donetsk botanical garden, *Populus trichocarpa*, T.V. Nikulina leg., 2.vii.2010; 29 spec. idem, *P. balsamifera*, T.V. Nikulina leg., 14.vii.2011; 1 spec. Artemivsk Distr., environs of Dronivka vill., T.V. Nikulina leg., 2.vii.2003; 7 spec. idem, *Populus nigra*, T.V. Nikulina leg., 23.vi.2011; 2 spec. idem, window traps, T.V. Nikulina leg., 7.vii.2011; 9 spec. Slovjansk Distr., environs of

Bogorodichne vill., National Nature park “Svyati gory”, *Populus tremula*, T.V. Nikulina leg., 6.vii. and 6.x.2006; 8 spec. Yasynuvata Distr., environs of Avdijivka city, *Populus* sp., T.V. Nikulina leg. 11.ix.2004, 4.vii.2010; 1 spec. Pershotravneve Distr., environs of Bilosarajska Kosa vill., M.E. Sergeev leg., 19.ix.2004; 36 spec. Volodarsk Distr., “Kamjani Mogyly” Reserve, *Populus tremula*, T.V. Nikulina leg., 1.x.2005—larvae, imago emerged in April 2006; 24 spec. idem, *Populus tremula*, T.V. Nikulina leg., 2.vi. and 21.vii.2012; 3 spec. Starobesheve Distr., Starobesheve urban settlement, *Populus* sp., V.V. Martynov leg., 4.iv.2010; 10 spec. Kharkiv Prov., Zmijiv Distr., environs of Gaidary vill., *Populus tremula*, T.V. Nikulina leg., 16.viii.2008, 18.viii.2009; 7 spec. Kherson Prov., environs of Kahovka city, *Populus* sp., T.V. Nikulina leg., 8.viii.2008; 5 spec. Kirovograd Prov., Alexandriya Distr., environs of Alexandria city, *Populus tremula*, T.V. Nikulina leg., 23.xi.2010; 6 spec. Lugansk Prov.: Stanychno–Lugansk Distr., “Prydintsivska Zaplava” Reserve, *Populus italica*, T.V. Nikulina leg., 8.x.2004; 1 spec. environs of Antratsit city, *Populus* sp., T.V. Nikulina leg., 24.x.2008; 2 spec. environs of Orekhovo vill., *Populus tremula*, T.V. Nikulina leg., 24.x.2008; 9 spec. Krasnodon Distr., environs of Krasnodon city, *Populus* sp., T.V. Nikulina leg., 26.x.2008; 4 spec. Milove Distr., environs of Velykotsk vill., *Populus* sp., T.V. Nikulina leg., 17.v.2009.

Biology. On *Populus tremula*, *P. alba*, *P. nigra* (Pfeffer 1995); in Ukraine on *P. tremula*, *P. nigra* and cultivated *P. simonii*, *P. trichocarpa*, *P. italica*, and *P. balsamifera*.

Notes. More than 150 specimens from environs of Yalta (type locality) were elevated from larvae on *Populus tremula*. *Trypophloeus tremulae* differs from other European species not only by robust body, elongated recumbent elytral scales but also by presence of 3–4 teeth on male elytral declivity (and not one as stated in Stark’s (1952) description). This male feature is also evident in lectotype. Species seems to be related to Asian *T. klimeschi* Eggers, another species with multiple spines on male elytral declivity. *T. tremulae* is the only *Trypophloeus* species breeding in aspen in Crimea and Caucasus.

Crypturgini (1 genus, 6 species)

Crypturgus cinereus (Herbst)

Records. ČNG CRI ČRK DON IFR KHR KYI LWI RIV SUM TER VOL ZAK [Kostenko 1929: 208; Stark 1952: 247–248; Rudnev 1953a: 1152; Rudnev 1962: 78; Gurando 1973: 90; Pogorilyak 1973: 35; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 165; Pfeffer 1995: 116; Nikulina 2005: 57; Nikulina & Martynov 2007: 93; Jordal & Knížek 2007; Nazarenko 2009a: 502; Nikulina 2009b: 126; Knížek 2011b: 227; Nikulina 2011b: 59; Nikulina 2014: 101.]

Distribution. Transpalaeartic (Knížek 2011b).

Material examined. Ca. 200 specimens (DMLU, DONNU, IPP, KUMN, SIZK, UZNU, ZMUM) from Chernigiv, Ivano–Frankivsk, Kharkiv, Kyiv, Lviv, Rivne, Sumy, Ternopil, Volyn and Zakarpatska Provinces studied.

Biology. On *Picea* spp., *Pinus* spp. and *Abies* spp. (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *Picea abies*, *Abies alba* and on cultivated *Pinus strobus*. In Ukraine the species found in galleries of *Polygraphus poligraphus*, *Pityogenes chalcographus*, *Tomicus minor*, *T. piniperda*.

Notes. Since this species has been confused with *C. subcribrosus* Eggers most literature records should be re-evaluated.

Crypturgus cribrellus Reitter

Records. CRI [Stark 1955a: 684; Rudnev 1962: 78; Pfeffer 1995: 115; Knížek 2011b: 227; Nikulina 2014: 101.]

Distribution. Mediterranean countries, South Bulgaria (Pfeffer 1995).

Material examined. Crimea: 10 spec. (ZIN) Yalta Mountain Forest Nature Reserve, under bark of *Pinus pallasiana*, A.A. Khaustov leg., 10.ii.1996; 10 spec. (ZIN) Massandra, sanatorium “Sosnyak”, burned pine wood, under bark of the stem of fallen *Pinus pallasiana*, M.Yu. Mandelshtam leg., 19.vii.1997; 36 spec. (DONNU) Kerch peninsula, Lenine Distr, environs of Shcholkin city, *Pinus nigra pallasiana*, V.V. Martynov leg., 21.i.2007.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. nigra pallasiana*.

Notes. Known only from South Coast of Crimea (Massandra) and from the Kertch Peninsula (Shcholkin). Not a synonym of *C. pusillus* as treated by auct.

Crypturgus hispidulus C. G. Thomson

Records. IFR KHR(i) LWI TER ZAK [Roubal 1936: 262; Stark 1952: 253; Rudnev 1953a: 1152; Pfeffer 1955: 155; Zagajkevich 1958: 86; Pogorilyak 1973: 36; Rudnev & Vasechko 1988b: 165; Pfeffer 1995: 114; Saranča & Bilyakov 2006: 3; Knížek 2011b: 227; Nikulina 2014: 101.]

Distribution. Transpalaeartic (Wood & Bright 1992a).

Material examined. Ca. 40 specimens (DONNU, KUMN, ZIN) from Ivano–Frankivsk, Lviv, Ternopil, and Zakarpatska Provinces studied.

Biology. Most conifers within range (Pfeffer 1995); in Ukraine especially on *Picea abies*, *Pinus sylvestris*, *P. strobus* (in culture) and *Larix* sp.

Notes. Breeds in galleries of *Polygraphus polygraphus* and *Pityogenes chalcographus*. Most common on fallen spruces with black wet bark and is substituted by *Crypturgus cinereus* and *C. subcribrosus* on standing drying trees.

Crypturgus mediterraneus Eichhoff

Records. CRI [Stark 1952: 138–139; Nikulina *et al.* 2010: 69; Nikulina 2013a: 33; Nikulina 2014: 102.]

Distribution. Mediterranean (from Portugal to Caucasus) (Pfeffer 1995).

Material examined. 3 spec. (ZIN) Crimea, Massandra, sanatorium “Sosnyak”, burned pine wood, in roots of fallen *Pinus pallasiana*, M.Yu. Mandelshtam leg., 19.vii.1997.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. nigra pallasiana*, in Caucasus on *P. halepensis* var. *pithyusa*.

Notes. Species is indicated here for the territory of Ukraine for the first time.

Crypturgus pusillus (Gyllenhal)

Records. ČER CRI IFR KHR LWI RIV TER VOL ZAK ŽIT [Lomnicki 1868: 151; Miller 1868: 27; Lomnicki 1880: 11; Bukowsky 1930: 130; Stark 1952: 250–251; Rudnev 1953a: 1152; Girtz 1959: 249; Rudnev 1962: 79; Pogorilyak 1973: 36; Kozak 1983: 59; Rudnev & Vasechko 1988b: 165; Pfeffer 1995: 114; Nikulina 2005: 57; Nazarenko 2009a: 502; Nikulina 2009b: 126; Nikulina & Filyk 2010: 260; Knížek 2011b: 228; Nikulina 2014: 101.]

Distribution. Transpalaeartic (Wood & Bright 1992a).

Material examined. Ca. 100 specimens (DONNU, IPP, KUMN, SIZK, UZNU) from Chernivtsi, Crimea, Ivano–Frankivsk, Kharkiv, Lviv, Rivne, Ternopil, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On most conifers within range (Pfeffer 1995), in Ukraine on *Picea abies*, *Pinus sylvestris*, *Abies alba* and *Larix decidua*. In Carpathians indicated on cultivated *Pinus strobus*. Similar in biology to *C. hispidulus*, but equally common both in spruces and pines.

Crypturgus subcribrosus Eggers

Records. CRI KYI ZAK [Rudnev 1962: 78–79; Nikulina *et al.* 2012: 414; Nikulina 2014: 102.]

Distribution. Transpalaeartic (Jordal & Knížek 2007).

Material examined. 1 female (DONNU) Zakarpatska Prov., Rakhiv Distr., environs of Lugy vill., Karpatsky Biosphere Reserve, Chornogirske forestry, locality Tovstyy Grun, V.B. Rizun leg., 1.vii.2010; 29 spec. (DONNU, SIZK) Kyiv Prov., Vyduhichi, Botanical garden Grishko N.N., *Picea*, V. Fursov leg., 19.ix.2013.

Biology. On *Picea abies*, *Pinus sylvestris* (Stark 1952; Jordal & Knížek 2007); in Ukraine on *Picea abies*.

Notes. *C. subcribrosus* was previously mixed with *C. cinereus* widely distributed in North Palaeartic region. Characters valuable to distinguish these species were adopted in the paper of Jordal & Knížek (2007). Previously, *C. subcribrosus* was recorded for Crimea (Rudnev 1962), however, this find cannot be verified. Since reliable characters to determine the species of *C. cinereus* group were recently formulated we consider our materials as the first reliable record of *C. cinereus* in Ukraine.

Dryocoetini (5 genera, 11 species)

Dryocoetes alni (Georg)

Records. ČER ČNG CRI IFR ZAK [Roubal 1936: 268; Stark 1952: 332–333; Rudnev 1953a: 1153; Stark 1955a: 705; Zagajkevich 1958: 89; Kryshstal' 1959: 82; Rudnev 1962: 81; Pogorilyak 1973: 43; Pfeffer 1995: 137; Nikulina 2009b: 126; Knížek 2011b: 230; Nikulina 2014: 101.]

Distribution. Europe, Caucasus (Pfeffer 1995).

Material examined. Ca. 30 specimens (DONNU, IPP) from Chernigiv, Chernivtsi and Ivano–Frankivsk Provinces studied.

Biology. On *Alnus glutinosa*, *A. incana*, *Corylus avellana*, *Duschekia alnobetula*, *Fagus orientalis* (Pfeffer 1995); in Ukraine on *A. incana*, *C. avellana*, never observed by authors in *A. glutinosa*.

Notes. It is a first record from Ukrainian lowlands.

Dryocoetes autographus (Ratzeburg)

Records. ČER ČNG CRI IFR LWI SUM TER VIN ZAK [Lomnicki 1868: 151; Miller 1868: 27; Lomnicki 1880: 11; Roubal 1936: 268; Stark 1952: 336–337; Stark 1955a: 705; Zagajkevich 1958: 89; Rudnev 1962: 81; Pogorilyak 1973: 43; Rudnev & Vasechko 1988b: 169; Pfeffer 1995: 136; Izhevsky *et al.* 2005: 87–88; Nikulina 2005: 57; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Nikulina & Filyk 2010: 260; Knížek 2011b: 230; Nikulina 2014: 101.]

Distribution. Holarctic (Wood & Bright 1992a).

Material examined. Ca. 300 specimens (DONNU, IPP, KUMN, APP, RColl, UZNU, ZIN) from Chernigiv, Chernivtsi, Ivano–Frankivsk, Lviv, Sumy, Ternopil, Vinnytsa, and Zakarpatska Provinces studied.

Biology. On *Picea* spp., *Pinus* spp., *Abies* spp., *Larix* spp. (Pfeffer 1995); in Ukraine on *Picea abies*, *Abies alba*, *Pinus cembra*, *P. sylvestris*, and cultivated *P. strobus*. In contrast to *D. hectographus* it does not breed on the trunks of fallen trees, but on roots only.

Dryocoetes hectographus Reitter

Records. ČER ČRK IFR KYI LWI VOL ZAK [Roubal 1936: 268; Stark 1952: 338–339; Rudnev 1953a: 1153; Zagajkevich 1958: 89; Pogorilyak 1973: 43; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 169; Pfeffer 1995: 136; Izhevsky *et al.* 2005: 90–91; Nazarenko V. 2008: 143; Nikulina 2009b: 126; Nikulina 2014: 101.]

Distribution. North Palaearctic (Stark 1952).

Material examined. Ca. 100 specimens (DONNU, IPP, KUMN, APP, SIZK, UZNU, ZIN) from Ivano–Frankivsk, Kyiv, Lviv, and Zakarpatska Provinces studied.

Biology. On *Picea* spp., *Abies* spp. and *Larix* spp. (Pfeffer 1995); in Ukraine on *Picea abies*, *Pinus sylvestris*, *P. cembra*, *Larix* spp. and *Abies alba*. In contrast to *D. autographus* can be found in fallen conifers, even in apex of trunks.

Dryocoetes villosus villosus Fabricius

Records. ČER CRI ČRK DON KYI LWI RIV ZAK ŽIT [Bukowsky 1930: 131; Sokanovsky 1930: 804; Lebedev 1935: 51; Roubal 1936: 268; Pomerantsev 1949: 90–91; Stark 1952: 330–331; Rudnev 1953a: 1153; Stark 1955a: 709; Zagajkevich 1958: 89–90; Kryshstal' 1959: 82; Rudnev 1962: 81; Pogorilyak 1973: 43; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 169; Pfeffer 1995: 136; Izhevsky *et al.* 2005: 78; Nikulina & Martynov 2007: 93; Nazarenko 2009a: 502; Knížek 2011b: 231; Nikulina 2011b: 59; Nikulina 2014: 101.]

Distribution. North Africa, South and Central Europe, Caucasus, Asia Minor, Canary Islands, Madeira (Stark 1952; Freude *et al.* 1981).

Material examined. Ca. 50 specimens (DONNU, IPP, KUMN, APP, ZIN) from Crimea, Donetsk, Lviv, Rivne, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Quercus petraea*, *Q. robur*, *Castanea sativa* (Pfeffer 1995); in Ukraine on *Q. robur*; in Crimea also on *Q. pubescens*.

Notes. All specimens from Ukraine belong to nominative subspecies but not to *Dryocoetes villosus minor* Eggers.

Lymantor aceris Lindemann

Records. ČRI ČRK ?DON LWI TER ZAK [Pomerantsev 1949: 159; Stark 1952: 316–317; Stark 1955a: 702; Rudnev 1962: 80; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 168; Pfeffer 1995: 140; Knížek 2011b: 231; Nikulina 2014: 101.]

Distribution. Palaearctic (Pfeffer 1995).

Material examined. 1 spec. (IPP) Lviv Prov., Bilogirsha, *Frangula*, 5.viii; 1 spec. (DONNU) Ternopil Prov., Ternopil city, park, *Acer platanoides*, D.V. Vlasov leg., 28.vi.2007; 1 spec. (KUMN) Zakarpatska Prov., Mezhygirjya Distr., Synevyrskya Polyana vill., V. Gorbunkov leg., 4.vii.1996.

Biology. On *Acer platanoides*, *A. tataricum*, *A. pseudoplatanus*, *A. campestre*, *Prunus padus*, *Frangula alnus* and *Cornus mas* (Pfeffer 1995); in Ukraine on *A. platanoides* and *Frangula alnus*.

Notes. All specimens from Ukraine belong to nominative subspecies but not to *Lymantor aceris schabliovskii* Stark endemic to Far East.

Lymantor coryli (Perris)

Records. ČER CRI ČRK DON IFR KHM KHR KIR LUG LWI TER ZAK ZAP [Bukowsky 1930: 131; Roubal 1936: 266; Stark 1952: 315; Rudnev 1953a: 1153; Stark 1955a: 703; Zagajkevich 1958: 88; Kryshtal' 1959: 82; Rudnev 1962: 80; Pogorilyak 1973: 42; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 168; Pfeffer 1995: 140; Nikulina & Martynov 2007: 93; Nikulina 2009b: 126; Nikulina 2010b: 142; Knížek 2011b: 231; Nikulina 2014: 101.]

Distribution. Europe, Caucasus (Pfeffer 1995).

Material examined. Ca. 40 specimens (DONNU, IPP, KUMN, SIZK, VColl) from Chernivtsi, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Khmelnytsky, Kirovograd, Lugansk, Lviv, Ternopil and Zaporizhzhya Provinces studied.

Biology. On *Corylus avellana*, *Carpinus betulus*, *Frangula alnus*, infected with fungi *Diaporthe nigricolor* and *D. conjuncta* (Pfeffer 1995); in Ukraine on *Acer platanoides*, *A. campestre*, *C. avellana*, *F. alnus* and also found on *Tilia cordata*.

Taphrorychus bicolor (Herbst)

Records. ČER CRI DON IFR LUG LWI TER ZAK [Lomnicki 1880: 11; Roubal 1936: 267; Stark 1952: 320; Rudnev 1953a: 1153; Pfeffer 1955: 206; Stark 1955a: 703; Zagajkevich 1958: 88; Rudnev 1962: 80; Pogorilyak 1973: 42; Rudnev & Vasechko 1988b: 168; Pfeffer 1995: 146; Izhevsky *et al.* 2005: 172; Nikulina 2005: 57; Nikulina & Martynov 2007: 93; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Nikulina & Filyk 2010: 260; Knížek 2011b: 232; Nikulina 2014: 101.]

Distribution. Central Europe, Balkans (Pfeffer 1995).

Material examined. Ca. 250 specimens (DONNU, IPP, KUMN, APP, UZNU, ZIN) from Chernivtsi, Ivano–Frankivsk, Kharkiv, Lugansk, Lviv, Ternopil and Zakarpatska Provinces studied. One of the most common bark beetle species in window traps.

Biology. On *Fagus sylvatica*, *F. orientalis*, *Carpinus betulus*, *C. orientalis*, *Quercus petraea*, *Q. robur* (Pfeffer 1995); in Ukraine on *F. sylvatica* and *Q. robur*.

Notes. The species is indicated here for the Ukrainian lowlands and plains for the first time. However, we believe that all records of the species for Crimea refer to *T. villifrons*.

Taphrorychus villifrons (Dufour)

Records. CRI DON LUG ZAK [Bukowsky 1930: 131; Bukowsky 1940: 172; Stark 1952: 321–322; Stark 1955a: 704; Rudnev 1962: 81; Pogorilyak 1968: 7; Pogorilyak 1973: 42; Rudnev & Vasechko 1988b: 168–169; Pfeffer 1995: 147; Khaustov 2001: 10; Izhevsky *et al.* 2005: 172–173; Nikulina & Martynov 2007: 93; Knížek 2011b: 232; Nikulina 2014: 101.]

Distribution. South Europe, Crimea, Caucasus, North Africa, Turkey (Pfeffer 1995).

Material examined. Ca. 300 specimens (DONNU, IPP, KUMN, MColl, ZIN) from Crimea, Lugansk and Zakarpatska Provinces studied.

Biology. On *Quercus* spp., *Fagus orientalis*, *Carpinus betulus*, *C. orientalis*, *Castanea sativa* (Pfeffer 1995); in Ukraine on *F. orientalis*, *Quercus robur* and *C. betulus*.

Notes. It is a first record from Ukrainian lowlands. In Zakarpattia most probably absent; specimens in fact were misidentified *T. bicolor* which is common in Central Europe.

Thamnurgus caucasicus Reitter

Records. CRI DON LUG [Stark 1952: 310–311; Rudnev 1962: 80; Pfeffer 1995: 126; Nikulina & Martynov 2007: 92–93; Nikulina 2010b: 141; Knížek 2011b: 232; Mandelshtam *et al.* 2011: 611; Nikulina 2012b: 252; Nikulina 2014: 100.]

Distribution. South East Europe (Ukraine, Southern Bulgaria), Crimea, Caucasus, Transcaucasia, Asia Minor, South Russia, occasionally Volga River Bassin (Mandelshtam *et al.* 2011).

Material examined. 1 female (DONNU) Crimea: environs of Eupatoria city, Pribrezhne vill., V.V. Martynov leg., 2.v.2000; 1 female (KUMN) Eupatoria city, *Carduus* sp., A.F. Bartenev leg., 25.iv.1979; 1 male (KUMN) Opuk, I. Maltsev leg., 27.v.1950; 1 female, idem, *Jurinea arachnoidea*, I. Maltsev leg.; 1 spec. (MColl) Ukraine, Crimea, Eupatoria, Suvorowo, S. Mosyakin leg., 9.v.1999; Donetsk Prov.: 1 male (DONNU) Donetsk city, M.E. Sergeev leg., 18.v.2000; 3 females (DONNU) Volodarsk Distr., “Kamjani Mogyly” Reserve (by sweeping of steppe herbaceous plants), M.E. Sergeev leg., 19.vi., 16.viii.2004; Lugansk Prov.: 1 female (DONNU) Stanychno–Lugansk Distr., “Prydintsivska Zaplava” Reserve, T.A. Pisarenko leg., 6.x.2001; 1 spec. (KUMN) environs of D’yakovo vill., S. Konovalov leg., 29.iv.2000.

Biology. In stems of herbaceous plants, mostly Asteraceae, accidentally on *Euphorbia* spp. (Mandelshtam *et al.* 2011); in Ukraine on *Carduus* sp. and *Jurinea arachnoidea*.

Notes. Previously the species in Ukraine was considered to occur only in Crimea, but now we recorded from steppes of East Ukraine.

Thamnurgus varipes Eichhoff

Records. ZAK [Roubal 1936: 266; Pogorilyak 1968: 7; Pogorilyak 1973: 42; Mandelshtam *et al.* 2011: 603; Nikulina 2014: 100.]

Distribution. South and Central Europe (Pfeffer 1995).

Material examined. 2 spec. (APP) Zakarpatska Prov., Beregove Distr., Velyka Balka vill., 19.viii.1972.

Biology. On *Euphorbia amygdaloides* and *E. characiae* (Pfeffer 1995); in Ukraine the host plants are unknown.

Notes. This species does not breed in Crimea, and most probably is absent also in Caucasus.

Xylocleptes bispinus (Duftschmid)

Records. CRI KHM ZAK [Bukowsky 1930: 131; Roubal 1936: 267; Stark 1952: 318–320; Rudnev 1953a: 1153; Stark 1955a: 703; Zagajkevich 1958: 89; Rudnev 1962: 80; Pogorilyak 1968: 7; Pogorilyak 1973: 42; Pfeffer 1995: 141; Knížek 2011b: 233; Nikulina 2014: 100.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 150 specimens (DONNU, IPP, KUMN, MColl) from Crimea, Khmelnytsky and Zakarpatska Provinces studied.

Biology. On *Clematis vitalba* and *C. orientalis* (Stark 1952); in Ukraine on *Clematis vitalba*.

Notes. Imago overwinter in dry *Clematis* vines. This species can be potentially invasive with cultivated *Clematis*.

Hylastini (2 genera, 9 species)

Hylastes angustatus (Herbst)

Records. ČNG CRI DON KHM KHR KYI LUG LWI SUM ?VOL ŽIT [Lomnicki 1866: 8; Krol 1877: 57; Cherkunov 1889: 49; Bukowsky 1930: 129; Sokanovsky 1930: 804; Stark 1952: 216; Stark 1955a: 674; Zagajkevich 1958: 84; Pogorilyak 1973: 33; Rudnev & Vasechko 1988b: 163; Pfeffer 1995: 76; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 97–98; Nikulina & Martynov 2007: 83; Sokolova 2008: 169; Davidenko 2010b: 76; Kravchenko 2010: 61; Nikulina & Filyk 2010: 252; Davidenko 2011: 42; Knížek 2011b: 205; Nikulina 2011b: 58; Skrylnyk *et al.* 2011: 32; Nikulina 2014: 91.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 100 specimens (DONNU, IPP, KUMN, NSPU) from Chernigiv, Crimea, Donetsk, Kharkiv, Khmelnytsky, Lugansk, Lviv and Sumy Provinces studied.

Biology. On *Pinus* spp., *Picea orientalis* (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *P. nigra pallasiana*, occasionally on *Picea abies*.

Notes. It is closely related to and hardly differs from *Hylastes opacus* Erichson, 1836 by more elongated pronotum and also by more evident vestiture on elytra. Perhaps some literature records refer to *H. angustatus* but not *H. opacus*.

Hylastes ater (Paykull)

Records. ČER ČNG CRI DON IFR KHR KYI LUG LWI RIV SUM VOL ZAK ŽIT [Krol 1877: 57; Cherkunov 1889: 49; Shyshkin 1913: 49; Kostenko 1929: 207; Bukowsky 1930: 129; Lebedev 1935: 51; Stark 1952: 213; Stark 1955a: 675; Rudnev 1962: 78; Pogorilyak 1973: 31; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 162–163; Pfeffer 1995: 72; Tregub *et al.* 2000: 51; Khaustov 2001: 10; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 98–99; Meshkova *et al.* 2006: 284; Nikulina & Martynov 2007: 84; Nazarenko S. 2008: 270; Sokolova 2008: 169; Mateleshko *et al.* 2009: 490; Kravchenko 2010: 61; Nikulina & Filyk 2010: 252–253; Davidenko 2011: 42; Knížek 2011b: 205; Nikulina 2011b: 58; Skrylnyk *et al.* 2011: 32; Nikulina 2014: 91.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 150 specimens (DONNU, IPP, KUMN, NSPU, RColl, ZMUM) from Chernigiv, Chernivtsi, Donetsk, Ivano–Frankivsk, Kharkiv, Kyiv, Lugansk, Lviv, Rivne, Sumy, Volyn, Zhytomyr, and Zakarpatska Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *P. nigra pallasiana*, rarely on *Picea abies*.

Notes. The species was mixed for a long time with more recently described *H. brunneus*, however, most Ukrainian records referring to *H. ater* are correct.

Hylastes attenuatus Erichson

Records. CRI DON KYI LWI VOL ZAK ZAP ŽIT [Lomnicki 1866: 8; Krol 1877: 57; Sokanovsky 1930: 804; Stark 1952: 216; Stark 1955a: 675; Zagajkevich 1958: 84; Rudnev 1962: 78; Pogorilyak 1973: 32; Kozak 1983: 59; Rudnev & Vasechko, 1988b: 163; Pfeffer 1995: 76; Izhevsky *et al.* 2005: 99; Nikulina & Martynov 2007: 84; Nikulina 2010b: 141; Knížek 2011b: 205; Nikulina 2012b: 254; Nikulina 2014: 91.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 20 specimens (DMLU, DONNU, SIZK) from Crimea, Donetsk, Kyiv, Lviv, and Volyn Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. sylvestris* and *P. nigra pallasiana*.

Notes. This species is very common in Crimea.

Hylastes brunneus Erichson

Records. IFR LWI ZAK [Roubal 1936: 260–261; Zagajkevich 1958: 84; Pogorilyak 1968: 7; Pogorilyak 1973: 32; Pfeffer 1995: 73; Izhevsky *et al.* 2005: 99–100; Nikulina 2014: 91.]

Distribution. Palaearctic (Stark 1952).

Material examined. Ca. 10 specimens (DONNU, RColl) from Lviv Province studied.

Biology. On *Pinus* spp. and *Picea* spp. (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, occasionally on *Picea abies*.

Notes. Rare in Ukraine.

Hylastes cunicularius Erichson

Records. ČER IFR LWI TER VIN VOL ZAK ŽIT [Lomnicki 1868: 151; Miller 1868: 27; Lomnicki 1870; Roubal 1936: 261; Stark 1952: 215; Rudnev 1953a: 1152; Zagajkevich 1958: 84; Pogorilyak 1973: 32; Kozak 1983: 59; Rudnev & Vasechko 1988b: 163; Pfeffer 1995: 71; Kubisz *et al.* 1998: 263; Izhevsky *et al.* 2005: 100–101; Nikulina 2009: 126; Nikulina & Filyk 2010: 253; Knížek 2011b: 205; Nikulina 2014: 91.]

Distribution. North Palaearctic (Pfeffer 1995).

Material examined. Ca. 150 specimens (DONNU, IPP, KUMN, RColl, SIZK, ZIN, ZMUM) from Chernivtsi, Ivano–Frankivsk, Lviv, Vinnytsya, Volyn, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Picea* spp. (Pfeffer 1995); in Ukraine on *P. abies*.

Notes. Most common in Carpathians.

Hylastes linearis Erichson

Records. IFR ZAK ŽIT [Sokanovsky 1930: 804; Roubal 1936: 261; Stark 1952: 211; Stark 1955a: 676; Zagajkevich 1958: 85; Pogorilyak 1973: 33; Rudnev & Vasechko 1988b: 162; Pfeffer 1995: 71; Knížek 2011b: 205; Nikulina 2014: 91.]

Distribution. Mediterranean region, Canary Islands, Madeira, introduced to South Africa (Wood & Bright 1992a).

Material examined. 1 spec. (ZMUM) Zhytomyr Prov., Schitomir, B.Sokanovský, without date of collection; 1 spec. (collection of V. Grachev in ZMUM) Zakarpatska Prov., Tur'yi Remety, NE of Uzhgorod, A. Rasnitsyn leg., 16.v.1965.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine host plants unknown.

Notes. The species common in Mediterranean region, sporadically occurs in Ukraine.

Hylastes opacus Erichson

Records. ČNG CRI ČRK DON IFR KHM KHR KYI LUG LWI RIV SUM VOL ZAK ŽIT [Shyshkin 1913: 49; Kostenko 1929: 207; Roubal 1936: 261; Stark 1952: 217; Zagajkevich 1958: 85; Pogorilyak 1973: 33; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 163; Pfeffer 1995: 75; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 101; Meshkova *et al.* 2006: 284; Nikulina & Martynov 2007: 84; Nazarenko S. 2008: 270; Sokolova 2008: 169; Davidenko 2010b: 76; Kravchenko 2010: 61; Nikulina & Filyk 2010: 253; Davidenko 2011: 42; Skrylnyk *et al.* 2011: 32; Nikulina 2014: 91.]

Distribution. Palaearctic (Pfeffer 1995).

Material examined. Ca. 250 specimens (DONNU, IPP, KUMN, SIZK, ZMUM) from Chernigiv, Crimea, Donetsk, Kharkiv, Khmelnytsky, Kyiv, Lugansk, Lviv, Rivne, Sumy, Volyn, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. sylvestris*, in Carpathians also on *Picea abies*. Recorded on *Pinus nigra pallasiana* in coastal zone of Azov sea.

Hylurgops glabratus (Zetterstedt)

Records. ČER ČRK IFR ZAK [Lomnicki 1868: 151; Miller 1868: 27; Roubal 1936: 260; Stark 1952: 198; Rudnev 1953a: 1152; Zagajkevich 1958: 83; Pogorilyak 1973: 30; Rudnev & Vasechko 1988b: 161–162; Pfeffer 1995: 69; Izhevsky *et al.* 2005: 110–111; Mateleshko *et al.* 2009: 490; Nikulina 2014: 91.]

Distribution. North Palaearctic, mountains of Central Europe (Pfeffer 1995).

Material examined. Ca. 40 specimens (DONNU, APP, UZNU) from Cherkasy, Ivano–Frankivsk, and Zakarpatska Provinces studied.

Biology. On *Picea* spp. and *Pinus* spp. (Pfeffer 1995); in Ukraine on *Picea abies*, *Pinus cembra*, *P. sylvestris*, *P. mugo*. In Carpathians also on *Abies alba*.

Notes. Most common in Carpathians.

Hylurgops palliatus (Gyllenhal)

Records. ČER ČNG CRI ČRK IFR KHR LUG LWI RIV SUM VIN VOL ZAK ŽIT [Lomnicki 1880: 11; Stark 1952: 203; Rudnev 1953a: 1152; Stark 1955a: 673; Zagajkevich 1958: 83–84; Rudnev 1962: 78; Rudnev *et al.* 1962: 53; Pogorilyak 1973: 31; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 162; Pfeffer 1995: 69; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 113–114; Sarancha & Bilyakov 2006: 3; Nikulina 2009b: 126; Kravchenko 2010: 61; Nikulina & Filyk 2010: 252; Knížek 2011b: 206; Nikulina 2014: 91.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 300 specimens (DONNU, KColl, KUMN, NSPU, APP, SIZK, ZIN, UZNU, ZMUM) from Cherkasy, Chernigiv, Chernivtsi, Crimea, Ivano–Frankivsk, Kharkiv, Khmelnytsky, Lugansk, Lviv, Rivne, Sumy, Vinnytsya, Volyn, and Zhytomyr Provinces studied.

Biology. On *Picea* spp., *Pinus* spp. and *Larix* spp. (Pfeffer 1995); in Ukraine on *Picea abies*, *Pinus sylvestris*, *P. cembra*, *Larix* sp., rarely on *Abies alba*.

Notes. Species, despite widely distributed and common, has no economic importance.

Hylesinini (4 genera, 8 species)

Hylastinus obscurus (Marsham)

Records. CRI KYI [Cherkunov 1889: 49; Stark 1952: 182–183; Kryshtal' 1959: 82; Rudnev 1962: 77; Pfeffer 1995: 46; Nazarenko V. 2008: 143; Nikulina *et al.* 2010: 69; Knížek 2011b: 206; Nikulina 2014: 92.]

Distribution. Madeira, Canary Islands, North Africa, Southern, Central and Eastern Europe, Caucasus, introduced in North America (Freude *et al.* 1981).

Material examined. Crimea: 2 spec. (KUMN) Crimean Nature Reserve, Mt. Chuchel', NN of glade in the Fagus forest, G. Levchinskaya leg., 5.vi.1954; 1 spec. (KUMN) environs of Rezervnoye vill., Mountain Ridge NNW of Mt. Kalafatlar and Kil'se-Burun, oak forest, sweeping, K. Nadein leg., 29.iv.2002; 1 spec. (SIZK) Kyiv Prov., Kyiv, m. Lysaja Gora, in clivis occident-meridionalibus pracosia sectum est, V.Yu. Nazarenko leg., 6.v.2000.

Biology. On *Trifolium pratense*, *Sarothamnus scoparius*, *Ononis natrix*, *Ulex europaeus*, *Medicago sativa*, *Laburnum anagyroides* (Pfeffer 1995). Host plants in Ukraine were never reported and therefore remain unknown.

Hylesinus crenatus (Fabricius)

Records. CRI ČRK DON IFR KHM KHR KIR KYI LUG LWI RIV TER VOL ZAK [Shevyrew 1892a: 19–21, 26; Korotnev 1926: 72; Bukowsky 1930: 129; Roubal 1936: 257; Lazorko 1938: 43; Bukowsky 1940: 176; Pomerantsev 1949: 121; Stark 1952: 161; Rudnev 1953a: 1152; Stark 1955a: 662; Belgovsky 1956: 362; Zagajkevich 1958: 79–80; Rudnev 1962: 74; Pogorilyak 1968: 7; Pogorilyak 1973: 26; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 155; Pfeffer 1995: 41; Petrov 2002: 125; Izhevsky *et al.* 2005: 103–105; Nikulina & Martynov 2007: 85; Terekhova 2007: 94; Broun 2009: 741; Knížek 2011b: 207; Nikulina 2012b: 252; Nikulina 2014: 92.]

Distribution. Europe, introduced to Middle Asia (Pfeffer 1995; Petrov 2011).

Material examined. Ca. 200 specimens (DONNU, IPP, KUMN, APP, UZNU, VColl, ZIN) from Cherkasy, Crimea, Donetsk, Kharkiv, Khmelnytsky, Lugansk, Ternopil, and Zakarpatska Provinces studied.

Biology. On *Fraxinus* spp., occasionally on *Acer* spp., *Quercus* spp., *Tilia* spp. (Izhevsky *et al.* 2005); in Ukraine on *Fraxinus excelsior*, occasionally on *Acer campestre*.

Notes. Important pest of ash trees in steppe zone of Ukraine.

Hylesinus toranio (D'Anthoine)

Records. ČNG CRI ČRK DNI DON IFR KHM KHR KIR KYI LUG LWI MYK TER ZAP ZAK [Shevyrew 1892a: 27–31; Shevyrew 1893b: 95; Bukowsky 1930: 129; Roubal 1936: 257; Lazorko 1938: 43; Bukowsky 1940: 176; Pomerantsev 1949: 125; Stark 1952: 164; Stark 1955a: 663; Belgovsky 1956: 362; Zagajkevich 1958: 80; Rudnev 1962: 76; Pogorilyak 1973: 27; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 155–156; Pfeffer 1995: 42; Kubisz *et al.* 1998: 263; Izhevsky *et al.* 2005: 108–109; Nikulina 2005: 57; Nikulina & Martynov 2007: 87; Nikulina 2009b: 126; Sumarokov, 2009: 182; Knížek 2011b: 207; Nikulina 2011b: 58; Nikulina 2012b: 155; Nikulina 2014: 92.]

Distribution. West Palaearctic (Petrov 2011; Knížek 2011b).

Material examined. Ca. 400 specimens (DONNU, IPP, KUMN, ZIN) from Chernigiv, Crimea, Ivano–Frankivsk, Kharkiv, Khmelnytsky, Kirovograd, Lugansk, Mykolajiv and Ternopil Provinces studied.

Biology. On *Fraxinus* spp., *Olea europaea*, *Syringa* spp. (Pfeffer 1995); in Ukraine on *Fraxinus excelsior* and cultivated *F. pennsylvanica* and *F. lanceolata*.

Notes. Secondary pest of olive trees in Crimea.

Hylesinus varius (Fabricius)

Records. ČER ČNG ČRK CRI DNI DON IFR KHE KHM KHR KIR KYI LUG LWI MYK POL RIV SUM TER VIN VOL ZAK ZAP [Lomnicki 1866: 8; Krol 1877: 57; Cherkunov 1889: 49; Shevyrew 1892a: 31,35; Shevyrew 1893b: 97; Greze 1928: 137; Kostenko 1929: 208; Bukowsky 1930: 129; Lebedev 1935: 51; Roubal 1936: 257; Bukowsky 1940: 175; Pomerantsev 1949: 124; Medvedev 1950: 78; Stark 1952: 172; Rudnev 1953a: 1152; Belgovsky 1956: 362; Zagajkevich 1958: 80; Kryshthal' 1959: 82; Rudnev 1962: 74–75; Khvatova 1964: 52; Pogorilyak 1968: 7; Pogorilyak 1973: 27; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 156; Pfeffer 1995: 43; Kubisz *et al.* 1998: 263; Khaustov 2001: 12; Izhevsky *et al.* 2005: 109–110; Nikulina 2005: 57; Nikulina & Martynov 2007: 86; Terekhova 2007: 94; Novak *et al.* 2008: 255; Nikulina 2009b: 126; Sumarokov 2009: 182; Kravchenko 2010: 61; Nikulina 2010b: 141; Knížek 2011b: 207; Nikulina 2014: 92.]

Distribution. West Palaearctic (Petrov 2011).

Material examined. Ca. 400 specimens (DONNU, IPP, KColl, KES, KUMN, APP, VColl, ZIN) from Cherkasy, Chernigiv, Chernivtsi, Crimea, Dnipropetrovsk, Donetsk, Ivano–Frankivsk, Kharkiv, Khmelnytsky, Kirovograd, Kyiv, Lugansk, Lviv, Mykolajiv, Rivne, Sumy, Ternopil, Vinnytsya, Zaporizhzhya, and Zakarpatska Provinces studied.

Biology. On *Fraxinus* spp., *Olea europaea*, *Syringa* spp. (Pfeffer 1995); in Ukraine on *Fraxinus excelsior*, *Syringa vulgaris* and cultivated *F. pennsylvanica*.

Notes. For a long time mixed with the species *Hylesinus wachtli*, that follows.

Hylesinus wachtli Reitter

Records. CRI LWI [Stark 1952: 173; Stark 1955a: 664; Zagajkevich 1958: 80; Rudnev 1962: 75; Lazorko 1963: 85; Pogorilyak 1973: 28; Rudnev & Vasechko 1988b: 156; Pfeffer 1995: 43; Knížek 2011b: 207; Nikulina 2014: 92.]

Distribution. Europe (Wood & Bright 1992a; Knížek 2011b).

Material examined. 1 spec. (ZMUM) Lviv Prov., Zubrza Lwow, Frax.ex., Nunberg leg., 20.vii.(19)25.

Biology. On *Fraxinus excelsior* and *F. ornus* (Pfeffer 1995); in Ukraine on *F. excelsior*.

Notes. Among two subspecies, *H. wachtli wachtli* Reitter and *H. wachtli orni* Fuchs presence of only the

second subspecies is validated on Ukraine territory and therefore is cited here. According to A.V. Petrov (Petrov 2011) opinion *H. wachtli* is only a junior synonym of *H. varius* (Fabricius), however in North Palaearctic Catalogue (Knížek 2011b) these two species are listed separately and both are recorded for Ukraine.

***Kissophagus vicinus* (Comolli)**

Records. CRI ZAK [Stark 1952: 181; Stark 1955a: 666; Zagajkevich 1958: 81; Rudnev 1962: 76–77; Pogorilyak 1968: 7; Pogorilyak 1973: 29; Rudnev & Vasechko 1988b: 157; Pfeffer 1995: 48; Kravchenko 2010: 61; Knížek 2011b: 208; Nikulina 2014: 92.]

Distribution. Central Europe, Mediterranean countries (incl. Algeria and Asia Minor) (Knížek 2011b).

Material examined. Ca. 60 specimens (DONNU, IPP, KUMN) from Crimea studied.

Biology. On *Hedera helix* and *H. colchica* (Pfeffer 1995); in Ukraine on *H. helix*.

Notes. All records of the species outside Crimea in Ukraine are based only on published records, but not validated by collection material.

***Pteleobius kraatzii* (Eichhoff)**

Records. ČNG CRI ČRK DNI DON KHE KHR LUG MYK ZAK ZAP [Shevyrew 1892b: 87–88; Greze 1928: 139; Roubal 1936: 257–258; Stark 1952: 174; Stark 1955a: 665; Zagajkevich 1958: 80; Rudnev 1962: 76; Pogorilyak 1973: 29; Kuznetsov & Vasil'eva 1987: 67; Rudnev & Vasechko 1988b: 156; Pfeffer 1995: 45; Izhevsky *et al.* 2005: 150–121; Nikulina & Martynov 2007: 83; Sumarokov 2009: 182; Knížek 2011b: 208; Nikulina 2011a: 268; Nikulina 2012b: 253; Nikulina 2014: 92.]

Distribution. Southern and Central Europe, Caucasus, Asia Minor (Pfeffer 1995).

Material examined. Ca. 150 specimens (DONNU, IPP, KES, KUMN, APP, MColl, ZIN, ZMUM) from Cherkasy, Chernigiv, Crimea, Donetsk, Kherson, Lugansk, Mykolajiv, and Zakarpatska Provinces studied.

Biology. On *Ulmus laevis* and *U. minor* (Pfeffer 1995), in Ukraine on *U. laevis*, *U. minor*, also on cultivated *U. pumila*.

***Pteleobius vittatus* (Fabricius)**

Records. ČER ČNG CRI ČRK DNI DON KHR KIR LUG LWI POL TER ZAK ZAP ŽIT [Krol 1877: 57; Shevyrew 1887: 39; Shevyrew 1892b: 85; Korotnev 1926: 81; Greze 1928: 139; Kostenko 1929: 208; Bukowsky 1930: 130; Roubal 1936: 258; Bukowsky 1940: 179; Stark 1952: 175; Rudnev 1953a: 1152; Stark 1955a: 665; Belgovsky 1956: 359; Zagajkevich 1958: 81; Rudnev 1962: 76; Pogorilyak 1973: 29; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 156–157; Pfeffer 1995: 44; Khaustov 2001: 12; Izhevsky *et al.* 2005: 151; Terekhova 2006: 81; Nikulina & Martynov 2007: 83; Novak & Gamayunova. 2008: 188; Terekhova 2009a: 46; Nikulina 2010b: 141; Knížek 2011b: 208; Nikulina 2011a: 268; Nikulina 2011b: 58; Nikulina 2012b: 253; Nikulina 2014: 92.]

Distribution. South and Central Europe, Caucasus, Asia Minor (Pfeffer 1995).

Material examined. Ca. 450 specimens (DONNU, IPP, KUMN, APP, NSPU, UZNU, ZIN, ZMUM) from Cherkasy, Chernigiv, Chernivtsi, Crimea, Donetsk, Kharkiv, Kirovograd, Lugansk, Poltava, Vinnytsya, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Ulmus laevis* and *U. minor* (Pfeffer 1995), in Ukraine on *U. laevis*, *U. minor*, also on cultivated *U. pumila*.

Notes. This species is much common than *P. kraatzi*.

Hylurgini (5 genera, 7 species)

***Chaetoptelius vestitus* (Mulsant et Rey)**

Records. CRI [Korotnev 1926: 84; Stark 1952: 176–177; Stark 1955a: 665; Rudnev 1962: 76; Rudnev & Vasechko 1988b: 157; Pfeffer 1995: 45; Knížek 2011b: 208; Nikulina 2014: 93.]

Distribution. South Europe, Crimea, Caucasus, Middle Asia (Wood & Bright 1992a).

Material examined. Crimea: 9 spec. (KUMN) Karadag Nature Reserve, *Pistacia* branch, imago emerged in laboratory conditions 24–25.v.1982, A.F. Bartenev leg.; 7 spec. (MColl) Yalta, S.A. Mosyakin leg., 27.viii.1983; 1 spec. (KUMN) west part of Karadag Nature Reserve, A. Drovalenko leg., 14.iv.1993; 8 spec. (DONNU) Alushta, imago emerged in laboratory conditions, *Pistacia*, A.A. Khaustov leg., 16.ii.1996.

Biology. Predominantly on *Pistacia* spp., rarely *Pinus halepensis* var. *eldarica*, *Cotinus coggyria*, *Juniperus* spp., *Olea europaea* (Stark 1952); in Ukraine on *Pistacia* sp. Usually collected along with *Carphoborus perrisi*.

Dendroctonus micans (Kugelann)

Records. IFR KYI LWI ZAK ŽIT [Roubal 1936: 258–259; Stark 1952: 185–187; Rudnev 1953a: 1152; Stark 1955a: 668; Zagajkevich 1958: 81; Lazorko 1963: 85; Melnikova 1965: 1866; Pogorilyak 1973: 29; Rudnev & Vasechko 1988b: 157–158; Pfeffer 1995: 65; Izhevsky *et al.* 2005: 84–86; Knížek 2011b: 208; Nikulina 2014: 93–94.]

Distribution. Palaearctic (Pfeffer 1995).

Material examined. Ivano–Frankivsk Prov.: 4 spec. (IPP) W Ukraine, Dolinsky forested area, locality “Lipovitsa”; 3 spec. (IPP) W Ukraine, Yasynskiy forested area, Melnikova leg., 15.viii.(19)61; 3 spec. (UZNU) Zakarpatska Prov, Rakhiv Distr., Apshinets, Giritz leg., 29.viii.1961, 25.iv.1962; 1 spec. (ZMUM) Zhytomyr.

Biology. On *Picea abies*, *P. obovata*, *P. jezoensis*, *P. sitchensis* (cultivated), *Pinus sylvestris* (Pfeffer 1995). Despite this species is common on pines, in north Ukraine it occurs only on spruce.

Hylurgus ligniperda (Fabricius)

Records. ČER CRI ČRK DNI DON KHE KHR KYI LUG LWI RIV SUM TER VOL ŽIT [Krol 1877: 57; Cherkunov 1889: 49; Shyshkin 1913: 49; Kostenko 1929: 207; Sokanovsky 1930: 804; Stark 1952: 195; Stark 1955a: 670; Zagajkevich 1958: 82–83; Rudnev 1962: 77–78; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 161; Pfeffer 1995: 65; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 115–116; Meshkova *et al.* 2006: 284; Nikulina & Martynov 2007: 86; Nazarenko S. 2008: 270; Sokolova 2008: 169; Sumarokov 2009: 182; Davidenko 2010b: 76; Kravchenko 2010: 62; Nikulina 2010b: 141; Nikulina & Filyk 2010: 253; Knížek 2011b: 208; Nikulina 2011b: 58; Skrylnyk *et al.* 2011: 32; Nikulina 2014: 93.]

Distribution. Central Europe, Mediterranean region, Caucasus, Japan, introduced in South Africa, East Australia, and South America (Uruguay) (Freude *et al.* 1981).

Material examined. Ca. 300 specimens (DONNU, KES, KUMN, RColl, NSPU, ZMUM) from Chernigiv, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Lugansk, Lviv, Sumy, Volyn, and Zhytomyr Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. sylvestris* and *P. nigra pallasiana*.

Notes. Despite a number of beetles studied, no specimens of related *Hylurgus micklitzi* Wachtl, 1881 were found. The latter is present in Caucasian Black Sea coastal region, but is not found in Crimea so far.

Tomicus destruens (Wollaston)

Records. CRI [Khaustov & Nikulina 2008: 84; Nikulina 2008a: 151; Nikulina 2009a: 53; Nikulina *et al.* 2010: 69; Knížek 2011b: 209; Nikulina 2013a: 33; Nikulina 2014: 93.]

Distribution. Madeira Island, Mediterranean region (Pfeffer 1995), Caucasian Black Sea Coastal Region (Mandelstam *et al.* 2005a,b).

Material examined. Crimea: 1 spec. (ZIN) Yalta, Nikitsky Botanical garden, on Crimean pine, Vasilyeva leg., 25.viii.1981; 2 spec. (ZIN) Yalta, Darsan Hill, *Pinus pithyusa*, A.A. Khaustov leg., 14.iv.2007; 47 spec. (DONNU) Sebastopol, environs of Phoros, *Pinus nigra pallasiana*, T.V. Nikulina leg., 26.v.2010.

Biology. In Mediterranean Region on *Pinus canariensis*, *P. halepensis*, *Pinus brutia*, and *P. pinaster* (Pfeffer 1995). In West Caucasus and Crimea collected on *P. halepensis* var. *pithyusa* (Mandelstam *et al.* 2005a,b; Khaustov & Nikulina 2008).

Notes. Invasive species. Firstly found in Ukraine in 1981. However, most probably the species appeared in Crimea much earlier and was confused with *Tomicus piniperda*. It breeds on cultivated pines but not on native *Pinus nigra pallasiana*. For identification of species see Kirkendall *et al.* (2008).

Tomicus minor (Hartig)

Records. ČNG CRI ČRK DON KHE KHR KYI KIR LUG LWI RIV SUM VOL ZAK ŽIT [Golovjanko 1926: 4; Greze 1928: 138; Illinskij 1928: 3; Parkhomenko 1928: 123; Kostenko 1929: 208; Bukowsky 1930: 130; Fedorov 1930: 226; Bukowsky 1940: 173; Stark 1952: 189; Rudnev 1953a: 1152; Stark 1955a: 669; Zagajkevich 1958: 81; Rudnev 1962: 77; Gurando 1973: 89–91; Pogorilyak 1973: 30; Sklyarova & Tarasenko 1973: 70; Blinova & Gurando 1974: 50; Gurando 1979: 28; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 158–160; Tupik & Bartenev 1993: 131; Pfeffer 1995: 67; Tregub *et al.* 2000: 51; Khaustov 2001: 9; Kucheryavenko 2003: 178; Izhevsky *et al.* 2005: 174–175; Nikulina & Martynov 2007: 86–87; Nazarenko V. 2008: 143; Nazarenko S. 2008: 270; Khaustov & Nikulina 2008: 84; Nazarenko 2009a: 502; Kravchenko 2010: 62; Nikulina & Filyk 2010: 253–254; Knížek 2011b: 209; Nikulina 2011b: 58; Nikulina 2014: 93.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 350 specimens (DONNU, KUMN, APP, RColl, SIZK, NSPU, UZNU, ZMUM) from Chernigiv, Crimea, Donetsk, Kharkiv, Kirovograd, Kyiv, Lugansk, Lviv, Rivne, Sumy, and Zytomyr Provinces studied.

Biology. On *Pinus* spp., rarely on *Picea* spp. and *Larix* spp. (Stark 1952); in Ukraine on *Pinus sylvestris* and *P. nigra pallasiana*.

Notes. In contrast to other *Tomicus* species, *T. minor* is equally common in Crimea on both *Pinus sylvestris* and *P. nigra pallasiana*; the latter is avoided by both *T. destruens* and *T. piniperda*.

Tomicus piniperda (Linnaeus)

Records. ČNG CRI ČRK DON IFR KHE KHM KHR KIR KYI LUG LWI MYK RIV SUM TER VIN VOL ZAK ŽIT [Lomnicki 1866: 8; Krol 1877: 57; Cherkunov 1889: 49; Golovjanko 1926: 4; Greze 1928: 138; Parkhomenko 1928: 123; Kostenko 1929: 208; Bukowsky 1930: 130; Fedorov 1930: 226; Lebedev 1935: 51; Roubal 1936: 259; Bukowsky 1940: 173; Medvedev *et al.* 1951: 313; Medvedev *et al.* 1952: 42; Stark 1952: 191; Rudnev 1953a: 1152; Sokanovsky 1954: 15; Stark 1955a: 670; Zagajkevich 1958: 82; Dmitriev 1959: 852; Rudnev 1962: 77; Pogorilyak 1968: 7; Tarasenko 1969: 127; Gurando 1973: 90; Pogorilyak 1973: 30; Sklyarova & Tarasenko 1973: 70; Sklyarova & Tarasenko 1975: 75; Kozak 1980: 161–162; Gurando *et al.* 1982: 63; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 160–161; Pfeffer 1995: 67; Tregub *et al.* 2000: 51; Khaustov 2001: 10; Popov & Kovalenko 2004a: 133; Popov & Kovalenko 2004b: 191; Izhevsky *et al.* 2005: 176–177; Nikulina 2005: 57; Nikulina & Martynov 2007: 86–87; Sarancha & Bilyakov 2006: 3; Nazarenko S. 2008: 270; Khaustov & Nikulina 2008: 84; Andreeva 2009: 268; Nazarenko 2009a: 502; Popov 2009a: 213; Popov 2009b: 195; Kravchenko 2010: 62; Nikulina 2010b: 141; Nikulina & Filyk 2010: 254; Knížek 2011b: 209; Nikulina 2011b: 58; Nikulina 2012c: 154; Nikulina 2014: 93.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 450 specimens (DONNU, KUMN, APP, SIZK, NSPU, ZMUM) from Chernigiv, Crimea, Donetsk, Ivano–Frankivsk, Kherson, Kirovograd, Kyiv, Lugansk, Lviv, Rivne, Sumy, Ternopil, Volyn, Zakarpatska, and Zhytomyr Provinces studied. Here we give only collection labels from *Pinus nigra pallasiana* where the species is very rare. 9 spec. (DONNU) Crimea, Chatyr–Dag, Southern slope, *Pinus nigra pallasiana*, T.V. Nikulina leg., 14.v.2006; 7 spec. (DONNU) Donetsk Prov., Volodarsk Distr., environs of Fedorivka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 16.ix.2006; 16 spec. (DONNU) Kherson Prov., Kahovka Distr., environs of Malokahovka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 1.v.2005.

Biology. On *Pinus* spp., rarely on *Picea* spp. and *Larix* spp. (Stark 1952); in Ukraine on *Pinus sylvestris*, in Crimea and steppe zone it also found on *P. nigra pallasiana*.

Notes. In contrast to *T. minor*, this species was found in Crimea only on cultivated pines of forested tops of highest mountain ranges and on north slopes of Crimean mountains and extremely rare on *Pinus nigra pallasiana* in south slopes of Crimean mountains.

Xylechinus pilosus (Ratzeburg)

Records. IFR LWI ?VOL ZAK [Roubal 1936: 258; Rudnev 1953a: 1152; Zagajkevich 1958: 81; Lazorko 1963:

85; Pogorilyak 1973: 29; Pfeffer 1995: 64; Izhevsky *et al.* 2005: 196; Kravchenko 2010: 61; Knížek 2011b: 210; Nikulina 2014: 93.]

Distribution. North Palaearctic (Pfeffer 1995).

Material examined. 3 spec. (IPP) Ivano–Frankivsk Prov., Nadvirna forest district, Osmolodivske forestry, *Picea*, Zagajkevich leg., 29.vi., 20.viii.; 5 spec. (IPP) Lviv Prov., Bryukhovychi, 16.v.; 2 spec. (DONNU) Skole Distr., environs of Skole, National Nature park “Skolevski Beskydy”, *Picea*, T.V. Nikulina leg., 21.viii.2005; Zakarpatska Prov.: 6 spec. (UZNU) Rakhiv Distr., Apshinets, *Picea*, Giritz leg., 23.vii.1960, 29.vii.1960; 2 spec. (KUMN) Kvasniy Verkh range, 3 km NNW from mountain Topeshch, 700–1000 m., beech forest, N. Yunakov leg., 14.vii.2001.

Biology. On *Picea* spp., rarely on *Pinus* spp., *Abies* spp. and *Larix* spp. (Stark 1952); in Ukraine on *Picea* sp.

Hypoborini (1 genus, 1 species)

Hypoborus ficus Erichson

Records. CRI [Shevyrew 1887: 46; Korotnev 1926: 107; Stark 1952: 244; Stark 1955a: 683; Rudnev 1962: 78; Rudnev & Vasechko 1988b: 165; Pfeffer 1995: 85; Khaustov 1998: 1419; Khaustov 2001: 10; Knížek 2011b: 210; Nikulina 2014: 95.]

Distribution. Mediterranean region (Pfeffer 1995).

Material examined. Ca. 250 specimens (DONNU, IPP) from Crimea studied, most raised from larvae boring in fig tree twigs. Crimea: 13 spec. (IPP) Simeiz, *Ficus carica*, vi.1948; 3 spec. (IPP) Crimea, vi.1952; 9 spec. (IPP) Alupka, *Ficus carica* vi.(19)52; 27 spec. (IPP) Crimea, *Ficus carica*, 1957; 32 spec. (IPP) Gurzuf, *Ficus carica*, Zagajkevich leg., 31.v.(19)58; 164 spec. (DONNU) Alushta Distr., environs of Alushta city, V.V. Martynov leg., 15.x.2002, 10.iv.2003; 6 spec. (DONNU) Alushta Distr., environs of Verkhnya Kutuzivka vill., *Ficus carica*, T.V. Nikulina leg., 27.vi.2004.

Biology. On *Ficus carica* (Pfeffer 1995); in Ukraine collected on *F. carica*.

Ipini (4 genera, 22 species)

Ips acuminatus (Gyllenhal)

Records. ČNG CRI ČRK DNI DON IFR KHE KHR KYI LUG LWI RIV SUM VIN VOL ZAK [Cherkunov 1889: 49; Golovjanko 1926: 4; Korotnev 1926: 58; Greze 1928: 138; Parkhomenko 1928: 123; Kostenko 1929: 208; Bukowsky 1930: 133; Fedorov 1930: 227; Lebedev 1935: 51; Roubal 1936: 272; Bukowsky 1940: 173; Pomerantsev 1949: 50; Stark 1952: 394–396; Stark 1955a: 720; Zagajkevich 1958: 93; Dmitriev 1959: 853; Rudnev 1962: 82; Rudnev *et al.* 1962: 53; Pogorilyak 1968: 7; Vasechko 1971: 750; Pogorilyak 1973: 52; Sklyarova & Tarasenko 1973: 70; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 173–174; Pfeffer 1995: 161; Izhevsky *et al.* 2005: 117–119; Nikulina & Martynov 2007: 92; Nazarenko S. 2008: 270; Davidenko 2010a: 119; Nikulina & Filyk 2010: 258; Knížek 2011b: 233; Nikulina 2011b: 59; Nikulina 2014: 99.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 300 specimens (DONNU, IPP, KUMN, NSPU, UZNU, ZIN) from Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kyiv, Lugansk, Lviv, Rivne and Sumy Provinces studied.

Biology. On *Pinus* spp., rarely on *Picea* spp. (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, in Carpathians and mixed forests also on *Picea abies*.

Notes. In Crimea found only in the highlands (Gurzufskoye Sedlo Pass).

Ips amitinus (Eichhoff)

Records. ČER IFR LWI ZAK [Roubal 1936: 272; Rudnev 1953a: 1153; Stark 1955a: 720; Pfeffer 1955: 251; Zagajkevich 1958: 93–94; Rudnev *et al.* 1962: 53; Pogorilyak 1968: 8; Vasechko 1971: 750; Pogorilyak 1973: 53;

Rudnev & Vasechko 1988b: 177; Pfeffer 1995: 165; Izhevsky *et al.* 2005: 119–120; Nikulina 2009b: 126; Nikulina & Filyk 2010: 258; Nikulina 2014: 100.]

Distribution. Europe (Mandelshtam 1999).

Material examined. Ca. 200 specimens (DONNU, IPP, RColl, UZNU, ZIN) from Chernivtsi, Ivano–Frankivsk, Lviv, and Zakarpatska Provinces studied.

Biology. On *Picea* spp. and *Pinus* spp. (Pfeffer 1995); in Ukraine on *Picea abies*, rarely on *Pinus sylvestris*, *P. mugo*, *P. cembra*, in Carpathians on *Abies alba* and cultivated *Pinus strobus*.

Notes. Despite in Germany the species is common on pines, in Ukraine it occurs along with spruce. Apparently Krivolutska (1996) could not recognise *Ips amitinus* that resulted in misrecord of *Ips typographus japonicus* for highlands of Carpathians, but refers to *I. amitinus* (Mandelshtam & Petrov 2009).

Ips duplicatus (C. R. Sahlberg)

Records. ČER ČNG CRI(i) IFR LUG LWI SUM VIN ZAK [Lomnicki 1904: 370; Stark 1952: 398–400; Rudnev 1953a: 1153; Zagajkevich 1958: 94; Rudnev 1962: 83; Lazorko 1963: 85; Pogorilyak 1973: 55; Rudnev & Vasechko 1988b: 174–175; Pfeffer 1995: 163; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 121–122; Kostyba *et al.* 2008: 155; Nikulina 2009: 126; Nikulina & Filyk 2010: 258; Nikulina 2013b: 113; Nikulina 2014: 100.]

Distribution. North Palaearctic (Stark 1952).

Material examined. 2 spec. (NSPU) Chernigiv Prov., Nizhyn city, P.N. Sheshurak leg., 1997; 1 spec. (KUMN) Crimea, Agarmysh, *Pinus*, A.F. Bartenev leg., 25.vi.1980; Ivano–Frankivsk Prov.: 6 spec. (IPP) Nadvirna forest district, Rechanske forestry, 6.ix.1959; 6 spec. (DONNU) environs of Yaremche city, *Picea*, 1–2.v.2004 (pheromone traps) T.V. Nikulina leg.; 17 spec. same locality, T.V. Nikulina leg., 2–3.viii.2004; 10 spec. (DONNU) Kosiv Distr., environs of Sheshory vill., *Abies alba*, T.V. Nikulina leg., 20.v.2008; 4 spec. same locality, *Picea abies*, T.V. Nikulina leg., 21.v.2008; Lviv Prov.: 2 spec. (IPP), Bryuhovik, *Picea*, 10.v. and 15.v.1952; 1 spec. (IPP) Morshin, *Picea*, 26.viii.1952; 5 spec. (IPP) Drogobych forest district, Lisovetske forestry, *Picea*, 26.vii.1952; 11 spec. (DONNU) environs of Ivano–Frankove vill., “Roztochcha” Reserve, T.V. Nikulina leg., 16.v.2004; 24 spec. (DONNU) environs of Skole city, National Nature park “Skolevski Beskydy”, *Picea abies*, T.V. Nikulina leg., 20.viii.2005; 1 spec. (IPP) Sumy Prov., Shostka Distr., Yampil forest district, *Picea*, 12.ix.1948; 7 spec. (IPP) Vinnytsya Prov., Kryzhopil forest district, Zhabokrichske forestry, *Picea*, 2.ix.1955; 2 spec. (IPP) Zakarpatska Prov., Mezhygirya forest district, h~300–600 m, *Picea*; 1 spec. (KColl) Lugansk Prov., Lugansk city, *Pinus*, A.Kravchenko leg., 12.ix.1971.

Biology. On *Picea* spp. and *Pinus* spp. (Pfeffer 1995); in Ukraine mainly on *Picea abies*, also recorded on *Abies alba*, *Pinus sylvestris*, and *P. cembra*.

Notes. It was multiply introduced with spruce wood to steppe zone and Crimea outside the native spruce range, nevertheless occurrence in Crimea should be confirmed by fresh samples.

Ips sexdentatus (Boerner)

Records. ČNG CRI ČRK DNI DON KHE KHM KHR KYI LUG LWI MYK RIV SUM TER VIN VOL ZAK ŽIT [Krol 1877: 57; Cherkunov 1889: 49; Golovjanko 1926: 14; Korotnev 1926: 142; Greze 1928: 137; Parkhomenko 1928: 123; Kostenko 1929: 208; Bukowsky 1930: 133; Fedorov 1930: 227; Lebedev 1935: 51; Bukowsky 1940: 173; Stark 1952: 396–398; Arnoldi 1953: 190; Stark 1955a: 721; Zagajkevich 1958: 94–95; Dmitriev 1959: 853; Rudnev 1962: 82; Maksimova 1967: 804; Sklyarova & Tarasenko 1973: 70; Gurando *et al.* 1982: 63; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 174; Tupik & Bartenev 1993: 131; Pfeffer 1995: 161; Tregub *et al.* 2000: 51; Khaustov 2001: 9; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 122–124; Nikulina & Martynov 2007: 92; Nazarenko S. 2008: 270; Kravchenko 2010: 62; Nikulina 2010b: 141; Nikulina & Filyk 2010: 259; Knížek 2011b: 234; Nikulina 2011b: 59; Skrylnyk *et al.* 2011: 32; Nikulina 2014: 100.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 300 specimens (DONNU, IPP, KColl, KES, KUMN, MColl, RColl, SIZK, NSPU, UZNU) from Chernigiv, Crimea, Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Khmelnytsky, Kyiv, Lugansk, Lviv, Mykolajiv, Rivne, Sumy, Vinnytsya, Volyn, Zakarpatska and Zhytomyr Provinces studied.

Biology. On *Pinus* spp. and *Picea orientalis* (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *P. nigra pallasiana* and *Picea pungens* (in culture), sometimes on *Picea abies*.

Ips subelongatus (Motschulsky)

Records. KHR(i) [Sarancha & Bilyakov 2006: 4.]

Distribution. Russia, China, Japan (Wood & Bright 1992a).

Material examined. We have not seen the specimens ourselves and thus rely on literature data.

Biology. On *Larix* spp., rarely on *Picea* spp. and *Pinus* spp. (Stark 1952).

Notes. It does not breed in Ukraine, but regularly introduced to Kharkiv Province with timber wood from Russia (Sarancha & Bilyakov 2006).

Ips typographus (Linnaeus)

Records. ČER ČNG CRI(transported from ZAK) IFR KHM KYI LWI MYK(transported from ZAK with wood) SUM TER VIN VOL ZAK [Lomnicki 1868: 151; Miller 1868: 27; Lomnicki 1880: 11; Cherkunov 1889: 49; Roubal 1936: 273; Stark 1952: 402; Rudnev 1953a: 1153; Rudnev 1953b: 11; Zagajkevich 1958: 95–96; Giritz 1959: 249; Zagajkevich 1959: 11; Rudnev 1962: 83; Pogorilyak 1968: 8; Pogorilyak 1973: 56; Giritz 1975: 3–153; Kozak 1983: 59; Rudnev & Vasechko 1988b: 175–177; Pfeffer 1995: 164; Tregub *et al.* 2000: 51; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 124–125; Nikulina 2005: 57; Kostyryba *et al.* 2008: 155; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Kravchenko 2010: 62; Nikulina & Filyk 2010: 259; Knížek 2011b: 234; Nikulina 2013b: 113; Nikulina 2014: 100.]

Distribution. North Palaearctic (Pfeffer 1995).

Material examined. More than 500 specimens (DONNU, IPP, KColl, KUMN, RColl, NSPU, UZNU, ZIN) from Chernigiv, Chernivtsi, Ivano–Frankivsk, Khmelnytsky, Kyiv, Lviv, Ternopil, Vinnytsya, Volyn, and Zakarpatska Provinces studied.

Biology. On *Picea* spp., *Pinus* spp. and *Abies sibirica* (Pfeffer 1995); in Ukraine on *Picea abies*, rarely on *Abies alba* and *Pinus sylvestris*.

Orthotomicus erosus (Wollaston)

Records. CRI [Stark 1952: 414; Stark 1955a: 723; Rudnev 1962: 83; Rudnev & Vasechko 1988b: 178; Pfeffer 1995: 167; Khaustov 2001: 8; Izhevsky *et al.* 2005: 126; Knížek 2011b: 234; Nikulina 2014: 99.]

Distribution. Mediterranean, occasionally in Central Europe (Pfeffer 1995).

Material examined. Ca. 100 specimens (DONNU, IPP, KUMN, UZNU, ZIN) from Crimea studied.

Biology. On *Pinus* spp. and *Cedrus atlantica* (Pfeffer 1995); in Crimea on *Pinus nigra pallasiana*, *P. sosnowskyi*, *P. sylvestris*, and *P. stankewiczii*.

Notes. Very common on fallen pines on southern and northern slopes of Crimean mountains including cultivated pine trees on mountain forested plateau (Yaltynska Yaila Mt. Range).

Orthotomicus laricis (Fabricius)

Records. ČER ČNG CRI DNI DON IFR KHR KYI LUG LWI SUM TER VOL ZAK ŽIT [Cherkunov 1889: 49; Korotnev 1926: 168; Kostenko 1929: 209; Bukowsky 1930: 133; Roubal 1936: 273; Bukowsky 1940: 173; Stark 1952: 417–418; Lebedev 1935: 51; Zagajkevich 1958: 97; Rudnev 1953a: 1153; Rudnev 1962: 83–84; Pogorilyak 1973: 60; Kozak 1983: 59; Rudnev & Vasechko 1988b: 179; Pfeffer 1995: 171; Tregub *et al.* 2000: 51; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 127; Nikulina 2005: 57; Nikulina & Martynov 2007: 91; Nazarenko S. 2008: 143; Nikulina 2009b: 126; Kravchenko 2010: 62; Nikulina & Filyk 2010: 257; Knížek 2011b: 234; Skrylnyk *et al.* 2011: 32; Nikulina 2014: 99.]

Distribution. Transpalaearctic (Wood & Bright 1992a).

Material examined. Ca. 250 specimens (DONNU, IPP, KColl, KUMN, RColl, SIZK, NSPU, ZIN) from Chernigiv, Chernivtsi, Crimea, Dnipropetrovsk, Donetsk, Ivano–Frankivsk, Kharkiv, Kyiv, Lugansk, Lviv, Sumy, Ternopil, Volyn, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Pinus* spp., *Picea* spp. and *Larix* spp. (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *P. cembra*, *Picea abies* and *Abies alba*.

Notes. Species avoids insolated and dry habitats, what is especially evident in South Crimea, where species does occur only in deep and humid ravines (Uch–Kosh gorge).

Orthotomicus longicollis (Gyllenhal)

Records. CRI KYI [Shevyrew 1887: 59; Golovjanko 1926: 14; Parkhomenko 1928: 123; Bukowsky 1930: 133; Fedorov 1930: 227; Bukowsky 1940: 173; Stark 1952: 408–409; Stark 1955a: 724; Rudnev 1962: 83; Rudnev & Vasechko 1988b: 178; Pfeffer 1995: 167; Khaustov 2001: 9; Izhevsky *et al.* 2005: 128–129; Kravchenko 2010: 62; Knížek 2011b: 235; Nikulina 2014: 99.]

Distribution. Europe, Crimea, Caucasus (Stark 1952).

Material examined. Ca. 80 specimens (DONNU, IPP, KUMN, SIZK, ZIN) from Crimea and Kyiv Province studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. sylvestris* and *P. nigra pallasiana*.

Notes. Quite common in Crimea under thick bark at basis of standing drying pines.

Orthotomicus proximus (Eichhoff)

Records. ČNG CRI ČRK DON KHM KHR KYI LUG LWI RIV SUM VOL ZAK ŽIT [Golovjanko 1926: 6; Greze 1928: 137; Kostenko 1929: 208; Roubal 1936: 273; Stark 1952: 411–414; Rudnev 1953a: 1153; Stark 1955a: 724; Zagajkevich 1958: 97–98; Rudnev 1962: 83; Pogorilyak 1973: 60; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 178; Pfeffer 1995: 170; Tregub *et al.* 2000: 51; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 129–130; Nikulina & Martynov 2007: 91–92; Nazarenko S. 2008: 270; Nazarenko 2009a: 502; Kravchenko 2010: 62; Nikulina 2010b: 141; Nikulina & Filyk 2010: 257–258; Knížek 2011b: 235; Nikulina 2011b: 59; Nikulina 2014: 99.]

Distribution. Palaearctic (Pfeffer 1995).

Material examined. Ca. 300 specimens (DONNU, IPP, KColl, KUMN, RColl, SIZK, NSPU, UZNU) from Chernigiv, Crimea, Donetsk, Kharkiv, Khmelnytsky, Kyiv, Lugansk, Lviv, Rivne, Sumy, Volyn, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine most common on *P. sylvestris*, rarely on *Picea abies*; in Crimea on *Pinus nigra pallasiana* (but here may be confused with *O. erosus*). In other locations the species prefers pine logs on insolated places.

Orthotomicus suturalis (Gyllenhal)

Records. ČNG ČER ?CRI DNI DON IFR KHE KHR KYI LUG LWI RIV SUM TER VOL ZAK ZAP ŽIT [Lomnicki 1868: 151; Miller 1868: 27; Cherkunov 1889: 49; Golovjanko 1926: 4; Greze 1928: 138; Kostenko 1929: 208; Bukowsky 1930: 133; Lebedev 1935: 51; Roubal 1936: 273; Stark 1952: 414–416; Zagajkevich 1958: 98; Rudnev 1962: 84; Pogorilyak 1973: 60; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 179; Pfeffer 1995: 169; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 131–132; Nikulina 2005: 57; Nikulina & Martynov 2007: 92; Nazarenko S. 2008: 270; Mateleshko *et al.* 2009: 490; Kravchenko 2010: 62; Nikulina 2010b: 141; Nikulina & Filyk 2010: 258; Knížek 2011b: 235; Nikulina 2011b: 59; Skrylnyk *et al.* 2011: 32; Nikulina 2012b: 254; Nikulina 2014: 99.]

Distribution. Transpalaearctic, North America (Wood & Bright 1992a).

Material examined. Ca. 300 specimens (DONNU, IPP, KColl, KUMN, RColl, NSPU, UZNU, ZIN) from Chernigiv, Chernivtsi, Dnipropetrovsk, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Kyiv, Lugansk, Lviv, Rivne, Sumy, Ternopil, Volyn, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Picea* spp., *Pinus* spp. and *Larix decidua* (Pfeffer 1995); in Ukraine most common on *Pinus sylvestris* and cultivated in steppe zone *P. nigra pallasiana*, rarely on *Picea abies*; in Carpathians also on *Pinus cembra*, *P. mugo*, and *Abies alba*. The species breeds mostly in pine logs with thin moist bark.

Pityogenes bidentatus (Herbst)

Records. ČNG ?CRI ČRK DON IFR KHR KYI LUG LWI RIV SUM TER VOL ZAK ZAP [Lomnicki 1891: 23;

Golovjanko 1926: 24; Greze 1928: 138; Roubal 1936: 271; Stark 1952: 391–393; Stark 1955a: 716; Zagajkevich 1958: 92; Pogorilyak 1973: 51; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 173; Pfeffer 1995: 157; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 133–134; Nikulina 2005: 57; Nikulina & Martynov 2007: 91; Nazarenko S. 2008: 270; Nikulina 2010b: 141; Nikulina & Filyk 2010: 256; Knížek 2011b: 235; Nikulina 2012b: 254; Nikulina 2014: 98.]

Distribution. Palaearctic (Pfeffer 1995).

Material examined. Ca. 200 specimens (DONNU, IPP, KUMN, NSPU, UZNU, VColl, ZIN) from Chernigiv, Ivano–Frankivsk, Kharkiv, Kyiv, Lviv, Rivne, Sumy, Ternopil, Volyn, Zaporizhzhya, and Zakarpatska Provinces studied.

Biology. On *Pinus* spp. and *Picea* spp. (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, also from cultivated *P. nigra pallasiana* and *P. strobus*. Despite larger size, the species usually find on thinner twigs compared to smaller *P. quadridens*.

***Pityogenes bistridentatus* (Eichhoff)**

Records. ?ČNG CRI DON KHE ?KYI ZAP [Korotnev 1926: 137; Greze 1928: 139; Bukowsky 1930: 133; Fedorov 1930: 227; Bukowsky 1940: 170; Stark 1952: 389; Stark 1955a: 717; Rudnev 1962: 82; Rudnev & Vasechko 1988b: 173; Pfeffer 1995: 156; Khaustov 2001: 9; Izhevsky *et al.* 2005: 134–135; Nikulina 2007: 258; Nikulina 2008a: 150; Nikulina 2009a: 54; Nikulina 2010a: 175; Nikulina 2010b: 141; Knížek 2011b: 235; Nikulina 2012b: 254; Nikulina 2013b: 113; Nikulina 2014: 98.]

Distribution. Europe, Asia Minor (Pfeffer 1995).

Material examined. Ca. 200 specimens (DONNU, IPP, KUMN, MColl, ZIN) studied. Here we give only collection labels outside of Crimea, (DONNU) 2 spec. Donetsk Prov., Volodarsk Distr., “Kamjani Mogyly” Reserve, at light, T.V. Nikulina leg., 17.vii.2009; 36 spec. idem, *Pinus nigra pallasiana*, T.V. Nikulina leg., 2.vi.2012; Kherson Prov.: 44 spec. Kahovka Distr., Malokahovka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 1.v.2005; 9 spec. Kozachi Lageri vill., *Pinus nigra pallasiana*, V.V. Martynov leg., 16.iv.2007; 17 spec. environs of Gola Prystan vill., *Pinus nigra pallasiana*, V.V. Martynov leg., 18.iv.2007; 8 spec. Beryslav Distr., environs of Mylove vill., *Pinus nigra pallasiana*, emerged in laboratory conditions 23.vi–15.vii.2007, V.V. Martynov leg.; 1 spec. Zaporizhzhya Prov., Prymorsk Distr., environs of Kolarovka vill., *Pinus nigra pallasiana*, T.V. Nikulina leg., 25.iv.2010.

Biology. On *Pinus nigra* in Central and South Europe and primarily *Pinus nigra pallasiana* in Ukraine; in Crimea on *Pinus sylvestris* on plateau like mountain ranges (Yaltynska Yaila, Babugan–Yaila, Demerdzhi–Yaila) and on cultivated American *Picea* spp. and *Abies* spp. nearby Krasnyi Kamen’.

Notes. The species range expanded along with introduction of *Pinus nigra pallasiana* into steppe zone of Ukraine. It is very common in Crimean mountains, in contrast to other provinces.

***Pityogenes calcaratus* (Eichhoff)**

Records. CRI [Stark 1952: 389–390, Stark 1955a: 718; Rudnev 1962: 82; Rudnev & Vasechko 1988b: 173; Pfeffer 1995: 156; Knížek 2011b: 235; Nikulina 2014: 99.]

Distribution. Mediterranean countries (Pfeffer 1995).

Material examined. Crimea: 5 spec. (DONNU) Yalta, *Pinus* sp. 25.iv.1996; 4 spec. (ZIN) Massandra, under bark of cultivated pine, M.Yu. Mandelshtam leg., 19.vii.1997; 7 spec. (ZIN) Yalta, Prymorsky Park, on the branch (diameter ca. 2.5 cm) of cultivated *Pinus halepensis* var. *pithyusa*, M.Yu. Mandelshtam leg., 29.vii.1997.

Biology. On *Pinus halepensis*, *P. halepensis* var. *brutia*, *P. pinaster*, *P. sylvestris* (Pfeffer 1995); in Ukraine on *P. halepensis* var. *pithyusa*.

***Pityogenes chalcographus* (Linnaeus)**

Records. ČER ČNG CRI (transported with wood) ČRK DON (transported with wood) IFR KHM KHR (transported with wood) KYI LWI SUM TER VIN VOL ZAK [Lomnicki 1868: 151; Miller 1868: 27; Lomnicki 1880: 11; Cherkunov 1889: 49; Roubal 1936: 271; Stark 1952: 377–379; Rudnev 1953a: 1153; Zagajkevich 1958:

92; Giritz 1959: 249; Rudnev 1962: 81; Rudnev *et al.* 1962: 53; Pogorilyak 1968: 8; Vasechko 1971: 750; Pogorilyak 1973: 49; Kozak 1983: 59; Rudnev & Vasechko 1988b: 171–172; Pfeffer 1995: 152–153; Tregub *et al.* 2000: 51; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 135–136; Nikulina 2005: 57; Sarancha & Bilyakov 2006: 3; Nikulina & Martynov 2007: 91; Nikulina 2008b: 73; Kostyba *et al.* 2008: 155; Nazarenko V. 2008: 143; Nikulina 2009b: 126; Mateleshko *et al.* 2009: 490; Nikulina & Filyk 2010: 256–257; Nikulina 2013b: 113; Nikulina 2014: 98.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 500 specimens (DONNU, IPP, KES, KUMN, APP, RColl, SIZK, UZNU, ZIN) from Cherkasy, Chernigiv, Ivano–Frankivsk, Khmelnytsky, Kyiv, Lviv, Sumy, Ternopil, Vinnytsya, Volyn, and Zakarpatska Provinces studied.

Biology. On *Picea* spp., *Pinus* spp., *Larix* spp. and *Pseudotsuga menziesii* (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *P. mugo*, *P. cembra*, *Picea abies*, *Larix decidua*, *Abies alba*, and cultivated *Pinus strobus* and *P. banksiana*.

Pityogenes conjunctus Reitter

Records. IFR ZAK [Roubal 1936: 271; Rudnev 1953a: 1153; Zagajkevich 1958: 93; Pogorilyak 1973: 51; Pfeffer 1995: 156; Izhevsky *et al.* 2005: 137; Nikulina 2009b: 126; Mateleshko *et al.* 2009: 490; Knížek 2011b: 235; Nikulina 2014: 98.]

Distribution. Central Europe, South Siberia, Far East of Russia (Knížek 2011b; Mandelshtam & Petrov 2009).

Material examined. Ivano–Frankivsk Prov.: 13 spec. (IPP) Nadvirnyansky forest district, Zelenske forestry, *Pinus cembra*, viii.(19)47, 11.ix.(19)59; 4 spec. idem, *Pinus mugo*, ix.(19)59; 10 spec. (IPP) Nadvirna forest district, Rechanske forestry, *Abies*, 16.vii.(19)61; 4 spec. (DONNU) Nadvirna Distr., environs of Bystrytsya vill., “Gorgany” Reserve, h=1350, *Pinus cembra*, V.V. Martynov leg., 5.viii.2009; 1 spec. (IPP) Mountain Goverla, G. Vasechko leg., 3.viii.1972; 6 spec. (IPP) Mountain Khomyak, *Pinus cembra*, 29.vii.(19)61; 21 spec. (UZNU) Zelena–Sitnik, locality M. Medvezhki, thin branches of *Pinus cembra*, emerged in laboratory conditions Giritz leg., 15.x.1961; 9 spec. idem, *Pinus cembra*, 16.iii.1961; 3 spec. idem, Giritz leg., 2.viii.1961; 1 spec. (UZNU) Zheryp, Giritz leg., 3.xi.1961; 20 spec. (DONNU) polonine Tsybulnyk, *Pinus mugo*, T.V. Nikulina leg., 5–6.viii.2004; 17 spec. (DONNU) Verkhovyna Distr., environs of Volova vill., mountain Rotylo, h=1483 m., *Pinus cembra*, T.V. Nikulina leg., 23.v.2008; 15 spec. (DONNU) Zakarpatska Prov., South slope Mountain Breskul, *Pinus mugo*, T.V. Nikulina leg., 8.viii.2004.

Biology. On *Pinus* spp. (Pfeffer 1995); in subalpine belt of Carpathians on *Pinus mugo* and *Pinus cembra*.

Pityogenes irkutensis Eggers

Records. ČNG DON KHR KYI LWI SUM ŽIT [Kostenko 1929: 208; Stark 1952: 381–383; Stark 1955a: 718; Zagajkevich 1958: 93; Rudnev & Vasechko 1988b: 172–173; Pfeffer 1995: 154; Nikulina & Martynov 2007: 91; Izhevsky *et al.* 2005: 138–138; Nikulina & Filyk 2010: 257; Knížek 2011b: 235; Nikulina 2014: 98.]

Distribution. Europe, Siberia, Caucasus (Stark 1952).

Material examined. 2 spec. (NSPU) Chernigiv Prov., Borzna Distr., near Yaduty vill., P.N. Sheshurak leg., 1.vi.1994; Kharkiv Prov.: 2 spec. (ZIN) Balaklejske forestry, Izyum Distr., *Pinus*, N. Kostenko det., 9.xii.26; 2 spec. (ZIN) Izyum, Ye. Shubkin leg., 1926; 3 spec. (KUMN) Sumy Prov., Konotop Distr., Kuzjky vill., *Pinus*, Tupik leg., 29.vi.1999.

Biology. On *Pinus sylvestris* (Stark 1952); in Ukraine on *Pinus* sp.

Notes. We failed distinguishing *P. irkutensis monacensis* and *P. irkutensis irkutensis*. Taxonomic status of the subspecies *Pityogenes irkutensis moncensis* remains doubtful, most probably it should be considered as conspecific to nominative subspecies.

Pityogenes quadridens (Hartig)

Records. ČNG ČRK IFR KYI RIV SUM VOL ZAK ŽIT [Golovjanko 1926: 26; Greze 1928: 139; Roubal 1936: 271–272; Stark 1952: 390–391; Zagajkevich 1958: 93; Pogorilyak 1973: 51; Pavlenko *et al.* 1982: 189; Kozak

1983: 59; Rudnev & Vasechko 1988b: 173; Pfeffer 1995: 155; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 138; Nazarenko 2009a: 502; Kravchenko 2010: 62; Knížek 2011b: 236; Nikulina 2014: 98.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 150 specimens (DONNU, IPP, KES, KUMN, APP, SIZK, NSPU, UZNU) from Cherkasy, Chernigiv, Ivano–Frankivsk, Rivne, Sumy, and Volyn Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. sylvestris*, *P. mugo* and cultivated *P. banksiana*.

Notes. *P. bistridentatus* completely substitute for this species in Crimea.

Pityogenes trepanatus (Nördlinger)

Records. DON KHR KYI LWI SUM TER VOL ŽIT [Greze 1928: 138; Kostenko 1929: 208; Sokanovsky 1930: 804; Stark 1952: 384–385; Stark 1955a: 719; Pfeffer 1955: 229; Zagajkevich, 1958: 93; Rudnev & Vasechko 1988b: 173; Pfeffer 1995: 153; Nikulina & Martynov 2007: 91; Nazarenko S., 2008: 270; Kravchenko 2010: 62; Nikulina & Filyk 2010: 257; Knížek 2011b: 236; Nikulina 2014: 98.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. 3 spec. (ZIN) DON–KHR: Krasno–Oskol’ska dacha, N. Kostenko leg., 25.iv.1926; 1 spec. (ZIN) Kyiv Prov., Darnytska forestry experimental station, *Pinus*, D. Rudnev leg., 17.ix.(19)26; (IPP) Lviv Prov., Bryukhovychi, 29.ix.(19)51; 2 spec. (RColl) “Roztochcha” Reserve, *Pinus*, R.A. Filyk leg., 9.v.2003; 1 spec. (ZIN) Sumy Prov., Yampol’ske forestry, Chernigiv Gouvernement (District), *Pinus*, D.F. Rudnev leg., 23.viii.(19)26; 1 spec. (IPP) Ternopil Prov., Bilokrynytsya 11.xi.(19)57; 18 spec. (DONNU) Ternopil Prov., environs of Lychkivtsi vill., “Medobory” Reserve, *Pinus*, T.V. Nikulina leg., 26.viii.2004.

Biology. On *Pinus nigra laricio*, *P. nigra cevennensis*, *P. nigra nigra*, *P. sylvestris* (Pfeffer 1995); in Ukraine on *Pinus* sp.

Pityokteines curvidens (Germar)

Records. ČER CRI IFR LWI MYK(transported from ZAK) ZAK ŽIT [Krol 1877: 57; Lomnicki 1880: 11; Roubal 1936: 274; Stark 1952: 421–422; Rudnev 1953a: 1153; Rudnev 1953b: 11; Stark 1955a: 725; Zagajkevich 1958: 98–99; Rudnev 1962: 84; Pogorilyak 1969: 8; Vasechko 1971: 750; Pogorilyak 1973: 60; Rudnev & Vasechko 1988b: 179; Pfeffer 1995: 159; Izhevsky *et al.* 2005: 139–140; Knížek 2011b: 236; Nikulina 2014: 99.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. 1 spec. (IPP) Chernivtsi Prov., Chudeyske forestry, *Abies*, 15.x.(19)57; Ivano–Frankivsk Prov.: 1 spec. (IPP) Dolina Kalush, W Ukraine; 3 spec. (IPP) Dolyna forest district, Rudnev leg., 1951; 6 spec. (IPP) Nadvirnyansky forestry, Sytnyanske locality, *Abies*, 30.vi.(19)52; 4 spec. (UZNU) Yasynskyy timber combinate, Apshynets, *Abies*, Giritz leg., 16.vii.1962; 12 spec. (UZNU) Vorokhta settlement, 25.vii.1963, 9.xi.1963, 6.xii.1963; *Abies*, Giritz leg., 15.v.1965; 5 spec. idem, Vasechko leg., 6.xii.1963, 15.v.1964; 2 spec. (DONNU) environs of Mykulychyn vill., *Picea abies*, T.V. Nikulina leg., 6.v.2004; 4 spec. (IPP) Lviv Prov., Drogobych forest district, Kropyvnytske forestry, *Abies*, Zagajkevich leg., 9.vi., 10.vi.(19)52; Zakarpatska Prov.: 2 spec. (IPP) Stavne forest district, Tarapukha leg., 14.ix.(19)48; 7 spec. (UZNU) Rakhiv Distr., Lazeshchyna, *Abies*, 20.vi.1964; 5 spec. (UZNU) Tjachiv Distr., Chorna Tysa, Markovets, *Abies alba*, Giritz leg., 19.v.1963, 9.vii.1963, 29.v.1963.

Biology. On *Abies* spp. (Pfeffer 1995); in Ukraine on *Abies alba* and *Picea abies*.

Pityokteines spinidens (Reitter)

Records. ČER CRI IFR ZAK [Roubal 1936: 274; Stark 1952: 422–423; Rudnev 1953a: 1153; Stark 1955a: 725; Zagajkevich 1958: 99; Pogorilyak 1973: 61; Rudnev & Vasechko 1988b: 179–180; Pfeffer 1995: 159; Izhevsky *et al.* 2005: 141; Nikulina 2009b: 126; Nikulina 2014: 99.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Chernivtsi Prov.: 1 spec. (IPP) Chudeyske forestry, *Abies*; 1 spec. (DONNU) Vyzhnytsya Distr., environs of Beregomet urban settlement, National Nature park “Vyzhnytskyy”, *Abies*, T.V. Nikulina leg.,

14.v.2008; 1 spec. (ZIN) Crimea, Babugan Yaila, environs of Gurzufske sedlo pass, under thin bark of *Pinus sylvestris*, M.Yu. Mandelsham leg., 28.vii.1997; Ivano–Frankivsk Prov.: 2 spec. (IPP) Dolyna Kalush, Zagajkevich leg.; 5 spec. (IPP) Nadvirnyanske forestry, Sitnyanske locality, *Abies*, 30.vi.(19)52; 2 spec. (IPP) Dolyna forest district, Rudnev leg., (19)51; 6 spec. (DONNU) Kosiv Distr., environs of Sheshory vill., *Abies*, T.V. Nikulina leg., 20.v.2008.

Biology. On *Abies alba* and *A. nordmanniana* (Pfeffer 1995); in Ukraine on *Abies alba*, rarely on *Pinus sylvestris*.

Pityokteines vorontzowi (Jacobson)

Records. ČER IFR LWI MYK (transported from ZAK) ZAK [Stark 1952: 423–424; Rudnev 1953a: 1153; Rudnev 1953b: 11; Stark 1955a: 725; Zagajkevich 1958: 99; Pogorilyak 1973: 61; Rudnev & Vasechko 1988b: 180; Pfeffer 1995: 159; Izhevsky *et al.* 2005: 141–142; Knížek 2011b: 236; Nikulina 2014: 99.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Chernivtsi Prov.: 1 spec. (DONNU) Vyzhnytsya Distr., Beregomet urban settlement, National Nature park “Vyzhnytskyi” h ~ 600 m, *Abies alba*, T.V. Nikulina leg., 15.v.2008; Ivano–Frankivsk Prov.: 2 spec. (IPP), Kropyvnyk, 10.vi.(19)52; 3 spec. (IPP) Nadvirnyanske forestry, *Abies*, Zagajkevich leg., 18.vi.(19)52; 8 spec. (IPP) Lviv Prov., Drogobych forest district, Kropyvnytske forestry, *Abies*, Zagajkevich leg., 9.vi.(19)52; Zakarpatska Prov.: 7 spec. (UZNU) Tjachiv Distr., Tysa vill., Markovets locality, *Abies*, Giritz leg., 8.vii.1962; 1 spec. (UZNU) Zhdenievo, Sufelyak leg., 19.v.1964.

Biology. On *Abies* spp. (Pfeffer 1995); in Ukraine on *Abies alba*.

Phloeosinini (1 genus, 3 species)

Phloeosinus aubei (Perris)

Records. ČER CRI DON IFR LWI ZAK [Korotnev 1926: 71; Stark 1952: 306–307; Stark 1955a: 700; Rudnev 1962: 80; Pogorilyak 1968: 7; Pogorilyak 1973: 41; Rudnev & Vasechko 1988b: 168; Pfeffer 1995: 61; Nikulina 2010a: 175; Knížek 2011b: 211; Nikulina 2012a: 104; Nikulina 2012c: 154; Nikulina 2013b: 113; Nikulina 2014: 94.]

Distribution. Mediterranean region, south part of Central Europe, Crimea, Caucasus, Turkmenistan (Pfeffer 1995).

Material examined. Crimea: 34 spec. (DONNU) Alushta Distr., environs of Izobiljne vill., *Thuja occidentalis*, T.V. Nikulina leg., 25.vii.2004; 23 spec. idem, *Cupressus* sp., T.V. Nikulina leg., 28.vii.2004, 25.v.2006; 6 spec. (DONNU) Lenine Distr., environs of Bagerovo urban settlement, *Thuja*, T.V. Nikulina leg., 10.v.2010; 1 female (KUMN) environs of Alushta, viii.1905; 5 spec. (IPP) Alushta forest district, *Juniperus*, 14.vii.(19)55; 10 spec. (IPP) Zoloty plyazh, *Cupressus*, beetles and larvae in the course beginning of the gallery construction, 10.ix.(19)56; 6 spec. (IPP) Miskhor, *Juniperus oxycedrus*, 22.vi.(19)52; idem, D. Rudnev leg., 2.viii.1955; idem, 14.vii.(19)59; 2 spec. (IPP) Simejiz, *Cupressus*, 2.vi.(19)48; Donetsk Prov.: 18 spec. (DONNU) Donetsk city, Donetsk Botanical garden, *Juniperus virginiana*, imago emerged in laboratory conditions in January 2010, M.E. Sergeev leg.; 112 spec. (DONNU) idem, *Juniperus virginiana*, T.V. Nikulina leg., 19.iv.2010; 394 spec. (DONNU) idem, *Thuja occidentalis*, T.V. Nikulina leg., 14.ix.2010, 4.vii.2011, 6.v.2012; 22 spec. (DONNU) Zakarpatska Prov., Uzhgorod Distr., Uzhgorod city, Botanical garden, *Thuja occidentalis*, T.V. Nikulina leg., 12.viii.2005.

Biology. On *Juniperus* spp., *Thuja* spp., *Cupressus* spp., *Platycladus orientalis*, *Tetraclinis articulata*, *Sequoiadendron giganteum* (Pfeffer 1995); in Ukraine on *Thuja occidentalis*, *Juniperus oxycedrus*, *J. virginiana* *Cupressus* sp., also indicated for cultivated *Cryptomeria japonica*.

Notes. In the last years an invasive population of *Ph. aubei* was found in Donetsk Prov. where it breeds on *Thuja occidentalis*, *Juniperus virginiana*, and *J. sabina*.

Phloeosinus henschi Reitter

Records. CRI [Stark 1952: 303–304; Sokanovsky 1954: 18; Stark 1955a: 700; Rudnev 1962: 80; Rudnev & Vasechko 1988b: 168; Pfeffer 1995: 62; Knížek 2011b: 212; Nikulina 2014: 94.]

Distribution. Balkans, Crimea (Pfeffer 1995).

Material examined. Crimea: 1 spec. (DONNU) Alushta, *Cupressus* sp., T.V. Nikulina leg., 23.ix.2005; 8 spec. (DONNU) Sebastopol, environs of Chornorichcha settlement, *Juniperus oxycedrus*, T.V. Nikulina leg., 14.v.2010; 1 spec. (IPP) Crimea, 7.vi.(19)47; 4 spec. (IPP) Sudak, D. Rudnev leg., 26.viii.(19)47, 26.vii.(19)48; 5 spec. (IPP) Alupka, vii.1955, 24.vii.1955, on *Thuja* branches.

Biology. On *Cupressus sempervirens pyramidalis*, *Juniperus oxycedrus*, *J. phoenicea* (Pfeffer 1995); in Ukraine on *Cupressus* sp., *Thuja* sp. and *Juniperus oxycedrus*.

Notes. This species completely substitutes for *Ph. thujae* in south coast of Crimea. It was repeatedly described from Crimea as *Ph. krimaeus* Eggers.

Phloeosinus thujae thujae (Perris)

Records. CRI IFR LWI TER ZAK [Stark 1952: 304–305; Rudnev 1953a: 1152; Stark 1955a: 701; Zagajkevich 1958: 88; Rudnev 1962: 80; Pogorilyak 1968: 7; Pogorilyak 1973: 40; Rudnev & Vasechko 1988b: 168; Pfeffer 1995: 60; Nikulina 2009b: 126; Knížek 2011b: 212; Nikulina 2014: 94.]

Distribution. Europe, Caucasus (Pfeffer 1995).

Material examined. 10 spec. (DONNU) Chernivtsi Prov., Vyzhnytsya Distr., environs of Beregomet settlement, National Nature park “Vyzhnytskyy”, V.V. Martynov leg., 11.viii.2008; 4 spec. (DONNU) Ivano–Frankivsk Prov., environs of Yaremche, slope of mountain Kovpaka, *Juniperus*, T.V. Nikulina leg., 3.viii.2004; 2 spec. (DONNU) Kosiv Distr., environs of Sheshory vill., *Juniperus*, V.V. Martynov leg., 20.viii.2008; 1 spec. (IPP) Lviv Prov., Dobrogostiv, D. Rudnev leg., 27.i.1952; Zakarpatska Prov.: 12 spec. (DONNU) Uzhgorod city, *Thuja occidentalis*, T.V. Nikulina leg., 2.viii.2005; 3 spec. (DONNU) idem, *Chamaecyparis*, T.V. Nikulina leg., 12.viii.2005; 1 spec. (ZIN) Uzhgorod city, M.Yu. Mandelshtam leg., vii–viii.2009; 5 spec. (UZNU) Uzhgorod city, Giritz leg., 29.v.1962; 1 spec. (UZNU) idem, *Thuja*, Giritz leg., 25.v.1963; 1 spec. (UZNU) Perechyn Distr., Uzhgorod city, Botanical garden, *Thuja*, Giritz leg., 13.vii.1963.

Biology. On *Juniperus communis*, *J. sabina*, *Thuja occidentalis*, *T. orientalis* (Pfeffer 1995); in Ukraine on *Juniperus* sp., *Thuja occidentalis* and also on cultivated *Chamaecyparis* sp.

Notes. *Ph. thujae serrifer* was not found in the collections from Ukraine. All specimens recorded from Crimea as *Ph. thujae* belong to *Ph. henschi*.

Phloeotribini (1 genus, 5 species)

Phloeotribus brevicollis (Kolenati)

Records. CRI [Korotnev 1926: 71; Stark 1952: 299–300; Stark 1955a: 697; Rudnev 1962: 79; Rudnev & Vasechko 1988b: 167–168; Pfeffer 1995: 55; Knížek 2011b: 212; Nikulina 2014: 94.]

Distribution. Crimea, Caucasus (Pfeffer 1995).

Material examined. Few damaged specimens (ZIN, NMW) with label “Tauria”.

Biology. On *Fagus orientalis* (Stark 1952).

Notes. The status of this name is doubtful as the type is not preserved as far as we know. All available specimens are in poor condition.

Phloeotribus caucasicus Reitter

Records. CRI DON LUG ZAK ZAP [Shevyrew 1892b: 90–92; Shevyrew 1893b: 105; Korotnev 1926: 66; Greze 1928: 139; Pomerantsev 1949: 127; Stark 1952: 294–295; Rudnev 1953a: 1152; Stark 1955a: 697; Belgovsky 1956: 362; Zagajkevich 1958: 88; Rudnev 1962: 79; Pogorilyak 1973: 40; Rudnev & Vasechko 1988b: 167; Pfeffer

1995: 50; Izhevsky *et al.* 2005: 132–133; Nikulina & Martynov 2007: 87; Knížek 2011b: 212; Nikulina 2011b: 58; Nikulina 2014: 94.]

Distribution. South East Europe, Crimea, Caucasus, South Kyrgyzstan, Turkmenia (Stark, 1952).

Material examined. As it is very common in Crimea, we give here only findings outside of Crimea. Donetsk Prov.: 2 spec. (DONNU) Shakhtarsk Distr., environs of Grabove vill., *Fraxinus excelsior*, T.V. Nikulina leg., 5.xi.2007; 2 spec. (DONNU) Slovjansk Distr., environs of Svyatogirsk city, *Fraxinus*, T.V. Nikulina leg., 3.x.2009; 7 spec. (DONNU) Yasynuvata Distr., environs of Mineralne vill., *Fraxinus excelsior*, T.V. Nikulina leg., 22.viii.2010; 2 spec. (KUMN) Velyko–Anadol, *Fraxinus*, N. Kostenko leg., 4.viii.1926; 1 spec. (IPP) Velyko–Anadol, *Fraxinus*, thin branch, d=1 cm; Kharkiv Prov.: 19 spec. (DONNU) environs of Kupyansk city, *Fraxinus*, d ~ 1–2 cm, T.V. Nikulina leg., 20–21.v.2009; 1 spec. (DONNU) Zmijiv Distr., environs of Gajdary vill., *Fraxinus*, d ~ 0,5–1 cm, T.V. Nikulina leg., 18.viii.2009; Lugansk Prov.: 3 spec. (DONNU) environs of Krasnyy Luch city, *Fraxinus excelsior*, T.V. Nikulina leg., 24.x.2008; 1 spec. (DONNU) Belovodsk Distr., environs of Gorodyshche vill., *Fraxinus*, T.V. Nikulina leg., 14.v.2009.

Biology. On *Fraxinus* spp. (Pfeffer 1995); in Ukraine on *Fraxinus excelsior*.

Phloeotribus muricatus (Eggers)

Records. CRI [Stark 1952: 297–298; Stark 1955a: 698; Rudnev 1962: 79; Rudnev & Vasechko 1988b: 167; Pfeffer 1995: 55; Knížek 2011b: 213; Nikulina 2014: 94.]

Distribution. East Mediterranean countries (Bulgaria, Romania, Hungary), Crimea, Caucasus (Pfeffer 1995).

Material examined. 1 spec. (ZIN) Crimea, Yalta, Nikita Botanical garden, from *Olea europaea*, A.A.Khaustov leg., 13.iv.1998.

Biology. On *Fraxinus ornus* (Pfeffer 1995); in Ukraine collected on cultivated *Olea europaea*.

Notes. The specimen mentioned above from the south Crimea is unique finding from Ukraine.

Phloeotribus scarabaeoides (Bernard)

Records. CRI [Kuznetsov & Vasil'eva 1987: 67; Pfeffer 1995: 50; Knížek 2011b: 213; Nikulina 2014: 94.]

Distribution. Mediterranean region along with *Olea* range (Pfeffer 1995).

Material examined. Crimea: 15 spec. (DONNU) Yalta, environs of Nikita, *Olea* plantation, A.A. Khaustov leg., 13.iv.1998; 3 spec. (DONNU) idem, dead beetles in *Olea*, T.V. Nikulina leg., 21.ix.2005; 2 spec. (ZIN) Yalta, Prymorsky Park, on the stem of dying *Olea* tree, M.Yu. Mandelshtam leg., 29.vii.1997.

Biology. On *Olea europaea*, *Fraxinus angustifolia*, *Syringa* spp., *Phillyrea* spp. (Pfeffer 1995).

Notes. Unique population is known in Crimea breeding on *Olea europaea* nearby Nikitsky Botanical garden.

Phloeotribus spinulosus (Rey)

Records. ČER ČNG KYI LWI ZAK [Roubal 1936: 266; Stark 1952: 300–301; Rudnev 1953a: 1152; Zagajkevich 1958: 88; Lazorko 1963: 85; Pogorilyak 1973: 40; Pfeffer 1995: 51; Knížek 2011b: 213; Nikulina 2014: 94.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. 1 spec. (ZIN) Chernigiv, Ya. Ivashkin leg., 7.vii.1925; 1 spec. (DONNU) Chernivtsi Prov., Vyzhnytsya Distr., environs of Beregomet urban settlement, National Nature park “Vyzhnytskyy”, *Picea abies*, T.V. Nikulina leg., 11.v.2008; 1 spec. (DONNU) Zakarpatska Prov., Rakhiv Distr., environs of Ludy vill., Karpatsky biosphere reserve, Chornogirsk forestry, Tovstyy Grun locality, V.B. Rizun leg., 16.vii.2010.

Biology. On *Picea abies*, *P. obovata* and *P. jezoensis* (Pfeffer 1995); in Ukraine on *P. abies*.

Polygraphini (2 genera, 6 species)

Carphoborus minimus (Fabricius)

Records. CRI ČRK DON KHE KHR KIR KYI LUG LWI VOL ŽIT [Golovjanko 1926: 14; Kostenko 1929: 208;

Stark 1952: 235–236; Stark 1955a: 681; Zagajkevich 1958: 86; Rudnev 1962: 78; Pavlenko *et al.* 1982: 189; Kuznetsov & Vasil'eva 1987: 67; Rudnev & Vasechko 1988b: 164–165; Izhevsky *et al.* 2005: 78; Nikulina & Martynov 2007: 87; Nazarenko S. 2008: 270; Nikulina 2009a: 55; Nikulina 2010a: 175; Nikulina 2010b: 141; Nikulina 2011b: 59; Skrylnyk *et al.* 2011: 32; Nikulina 2012c: 154; Nikulina 2014: 95.]

Distribution. Central Europe, Asia Minor, Israel, Caucasus (Freude *et al.* 1981).

Material examined. Ca. 400 specimens (DONNU, IPP, KES, KUMN, APP) from Cherkasy, Crimea, Donetsk, Kharkiv, Kherson, Kirovograd, Kyiv, Lugansk, Lviv, and Volyn Provinces studied.

Biology. On *Pinus sylvestris*, *P. nigra laricio*, *P. nigra nigra*, *P. nigra pallasiana*, *P. pinaster* (Pfeffer 1995); in Ukraine common on *Pinus sylvestris*, rarely in cultivated *P. mugo*, *P. nigra pallasiana*, *P. banksiana* and *Larix decidua*.

Notes. This species is considered as a pest of pine plantations along Azov Sea coast.

Carphoborus perrisi (Chapuis)

Records. CRI DON [Korotnev 1926: 77; Stark 1952: 231; Stark 1955a: 681; Rudnev 1962: 78; Rudnev & Vasechko 1988b: 164; Pfeffer 1995: 84; Khaustov 2001: 10; Nikulina 2010b: 141; Knížek 2011b: 213; Nikulina 2012b: 254; Nikulina 2014: 95.]

Distribution. South Europe, Mediterranean countries, Middle Asia (Pfeffer 1995).

Material examined. Ca. 70 specimens (DONNU, KUMN, ZMUM) from Crimea and Donetsk Province studied.

Biology. Common on *Pistacia mutica*, *P. terebinthus*, *P. vera*, rarely in *Olea europaea*, *Cotinus coggyria*, *Acer* spp., *Rhus cotinus*, and *Pinus* sp. (Stark 1952); in Crimea collected on *Pistacia* sp., in Donetsk Province the host plants are unknown. It occurs along with *Chaetoptelius vestitus*.

Polygraphus grandiclava C. G. Thomson

Records. IFR LWI TER ZAK [Roubal 1936: 261; Stark 1952: 221; Rudnev 1953a: 1152; Stark 1955a: 677; Zagajkevich 1958: 85; Pogorilyak 1973: 33; Rudnev & Vasechko 1988b: 163–164; Pfeffer 1995: 78; Nikulina 2009b: 126; Knížek 2011b: 214; Nikulina 2014: 95.]

Distribution. Central Europe (Freude *et al.* 1981).

Material examined. 3 spec. (IPP) Ivano–Frankivsk Prov., Nadvirna, *Pinus mugo*, ix.(19)59; 2 spec. (IPP) Zelenske forestry, Nadvirna forest district, Bredulets locality, *Pinus cembra*, 10.ix.1959; 2 spec. (IPP) locality Rafajliv, *Pinus cembra*, 8.ix.(19)59; 5 spec. (IPP) Nadvirna forest district, *Pinus cembra*, viii.1947; 7 spec. (DONNU) Nadvirna Distr., environs of Bystrytsya vill., “Gorgany” Reserve, h ~ 1350, *Pinus cembra*, V.V. Martynov leg., 5.viii.2009; 1 spec. (DONNU) Kosiv Distr., environs of Sheshory vill., window traps, T.V. Nikulina leg., 21–25.v.2008; 18 spec. (DONNU) Verkhovyna Distr., environs of Volova vill., Mountain Rotylo, h=1483 m, *Pinus cembra*, T.V. Nikulina leg., 23.v.2008; 1 spec. (IPP) Ternopil Prov., Skala Podilska, *Pinus cembra*, 17.vii.

Biology. On *Cerasus avium*, *C. vulgaris*, *Picea abies*, *Pinus cembra*, *P. mugo*, *P. leucodermis* (Pfeffer 1995). In Carpathians on *Pinus cembra* and *P. mugo*, in planes most probably on Rosaceae (*Cerasus avium*).

Polygraphus poligraphus (Linnaeus)

Records. CRI ČRK IFR KHM KYI LWI TER VOL ZAK [Cherkunov 1889: 49; Roubal 1936: 261–262; Stark 1952: 225; Rudnev 1953a: 1152; Zagajkevich 1958: 85–86; Pogorilyak 1968: 8; Pogorilyak 1973: 33; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 164; Pfeffer 1995: 79; Izhevsky *et al.* 2005: 145–147; Nikulina 2005: 57; Nikulina 2009b: 126; Nikulina & Filyk 2010: 254; Knížek 2011b: 214; Nikulina 2014: 95.]

Distribution. Palaearctic (Wood & Bright 1992a).

Material examined. Ca. 50–60 specimens (DONNU, IPP, VColl, ZMUM) from Ivano–Frankivsk, Khmelnytsky, Lviv, Ternopil, and Zakarpatska Provinces studied.

Biology. On *Picea* spp. and *Pinus* spp. (Pfeffer 1995); in Ukraine common on *Picea abies*, rarely on *Pinus sylvestris*, in Carpathians very rarely also on *Abies alba*.

Polygraphus punctifrons C. G. Thomson

Records. LWI TER [Izhevsky *et al.*, 2005: 147; Nikulina & Filyk, 2010: 254; Nikulina *et al.* 2010: 69; Nikulina 2014: 95.]

Distribution. North Palaearctic (Stark 1952).

Material examined. 1 spec. (DONNU) Lviv Prov., Yavoriv Distr., environs of Ivano–Frankove vill., “Roztochcha” Reserve, *Picea abies*, T.V. Nikulina leg., 20.viii.2006; 7 spec. (DONNU) Ternopil Prov., Gusyatyn Distr, environs of Pajivka vill., “Medobory” Reserve, T.V. Nikulina leg., 21.v., 26.v.2004.

Biology. On *Picea abies*, *P. obovata*, *Pinus sylvestris* (Pfeffer 1995); in Ukraine on *Picea abies*.

Notes. The species is recorded here for the territory of Ukraine for the first time. In literature it is commonly mixed with *P. poligraphus* and thus only recently indicated for Ukraine fauna.

Polygraphus subopacus C. G. Thomson

Records. IFR LWI ZAK [Roubal 1936: 262; Stark 1952: 223; Rudnev 1953a: 1152; Zagajkevich 1958: 86; Pogorilyak 1973: 35; Rudnev & Vasechko 1988b: 164; Pfeffer 1995: 80; Izhevsky *et al.* 2005: 149–150; Nikulina 2014: 95.]

Distribution. North Palaearctic (Pfeffer 1995).

Material examined. 1 spec. (UZNU) Ivano–Frankivsk Prov., Nadvirna Distr., environs of Sitnyy sett., locality M. Medvezhky, 31.x.1961; 6 spec. (UZNU) Zakarpatska Prov., Irshava Distr., Dovzhanske forestry, M. Palychak locality, 15.ii.1961.

Biology. On *Picea* spp. and *Pinus* spp. (Pfeffer 1995); in Ukraine the host plants are unknown.

Scolytini (1 genus, 15 species)

Scolytus carpini (Ratzeburg)

Records. ČNG CRI ČRK DON KHR KIR KYI LWI TER ZAK ŽIT [Lomnicki 1866: 8; Cherkunov 1889: 49; Pomerantsev 1902: 449–450; Korotnev 1926: 77; Greze 1928: 138; Bukowsky 1930: 129; Sokanovsky 1930: 803; Lebedev 1935: 51; Roubal 1936: 255–256; Stark 1952: 134; Rudnev 1953a: 1152; Sokanovsky 1954: 15; Stark 1955a: 650; Zagajkevich 1958: 77; Kryshtal' 1959: 82; Rudnev 1962: 71; Pogorilyak 1968: 7; Pogorilyak 1973: 25; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 154; Pfeffer 1995: 107–108; Izhevsky *et al.* 2005: 155; Nikulina 2005: 57; Sarancha & Bilyakov 2006: 2; Terekhova 2009: 47; Nikulina & Filyk 2010: 255; Knížek 2011b: 237; Nikulina 2012b: 254; Nikulina 2014: 97.]

Distribution. Central, South and South East Europe, Crimea, Caucasus (Freude *et al.* 1981).

Material examined. Ca. 150 specimens (DMLU, DONNU, KUMN, APP, UZNU, VColl, ZIN, ZMUM) from Cherkasy, Chernivtsi, Crimea, Kharkiv, Kirovograd, Lviv, Ternopil, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Carpinus* spp., *Fagus* spp., *Quercus* spp., *Corylus avellana*, *Ostrya carpinifolia* (Pfeffer 1995); in Ukraine common on *Carpinus betulus*, rarely on *Corylus avellana* and *Fagus* sp.

Scolytus ensifer Eichhoff

Records. CRI ČRK DON KHR KIR LUG SUM ZAP [Shevyrew 1893a: 15; Korotnev 1926: 62; Kostenko 1929: 207; Stark 1952: 108; Stark 1955a: 652; Pfeffer 1955: 76; Rudnev 1962: 72; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 151; Pfeffer 1995: 94; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 156–157; Terekhova 2006: 81; Nikulina & Martynov 2007: 87; Terekhova 2009a: 46; Terekhova 2009b:47; Nikulina 2010b: 141; Knížek 2011b: 238; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 253; Nikulina 2014: 96.]

Distribution. South, Central, South Eastern Europe, Crimea, Caucasus (Freude *et al.* 1981).

Material examined. Ca. 150–180 specimens (DONNU, KUMN, ZIN, ZMUM) from Donetsk, Kharkiv, Kirovograd, Lugansk and Sumy Provinces studied.

Biology. On *Ulmus minor*, *U. laevis*, *U. glabra*, and *Zelkova carpinifolia* (Pfeffer 1995); in Ukraine on *Ulmus minor* and *U. laevis*, also indicated for cultivated *U. pumila*.

Notes. Rather commonly occur in grooves or individual trees in steppe regions of Ukraine.

Scolytus intricatus (Ratzeburg)

Records. ČNG CRI ČRK DNI DON KHR KYI LUG LWI SUM TER VIN ZAK ZAP ŽIT [Lomnicki 1866: 8; Lindeman 1875: 62; Cherkunov 1889: 49; Shevyrew 1889b: 54–55; Shevyrew 1893a: 18; Shevyrew 1893b: 95; Kostenko 1929: 207; Bukowsky 1930: 129; Lebedev 1935: 51; Roubal 1936: 255; Bukowsky 1940: 173; Stark 1952: 132; Rudnev 1953a: 1152; Belgovsky 1956: 358; Zagajkevich 1958: 77; Rudnev 1962: 71; Pogorilyak 1973: 24; Mezintsev 1980: 165–166; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 154; Pfeffer 1995: 103; Tregub *et al.* 2000: 51; Khaustov 2001: 10; Gamayunova *et al.* 2005: 265; Izhevsky *et al.* 2005: 158–159; Nikulina 2005: 57; Chernyavska 2006: 250; Gamayunova *et al.* 2006: 43–44; Nikulina & Martynov 2007: 88; Meshkova & Kukina 2007: 273; Broun 2009: 741; Kukina 2009: 242; Meshkova & Kukina 2009: 99; Sumarokov 2009: 182; Terekhova 2009: 47; Meshkova & Kukina 2010: 167; Nikulina & Filyk 2010: 255; Meshkova & Kukina 2011: 240; Nikulina 2011b: 59; Nikulina 2012b: 253; Nikulina 2014: 97.]

Distribution. West Palaearctic (Pfeffer 1995).

Material examined. Ca. 250–300 specimens (DMLU, DONNU, IPP, KES, KUMN, APP, NSPU, UZNU, ZIN, ZMUM) from Cherkasy, Chernigiv, Crimea, Dnipropetrovsk, Donetsk, Kharkiv, Kyiv, Lugansk, Lviv, Sumy, Ternopil, Vinnytsya, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Quercus* spp., *Fagus* spp., *Ostrya carpinifolia*, *Castanea sativa* (Pfeffer 1995); in Ukraine common on *Quercus robur*, rarely on *Carpinus betulus*.

Notes. Breeds in branches of old oaks, but during maturation beetles feeding may cause damage to oak saplings.

Scolytus kirschii Skalitzky

Records. ČNG CRI ČRK DNI DON KHE KHR KYI LUG MYK ODE VOL ZAP [Shevyrew 1889b: 48; Shevyrew 1892c: 189–194; Pliginsky 1916: 351; Kostenko 1929: 207; Stark 1952: 100; Pfeffer 1955: 77; Stark 1955a: 654; Belgovsky 1956: 359; Zagajkevich 1958: 78; Rudnev 1962: 69; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 149–150; Pfeffer 1995: 96; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 160–161; Terekhova 2006: 81; Nikulina & Martynov 2007: 88; Terekhova 2009a: 46; Sumarokov 2009: 182; Terekhova 2009b: 47; Nikulina 2010b: 141; Knížek 2011b: 238; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 253; Nikulina 2014: 96.]

Distribution. Mediterranean Region, South Europe, Crimea, Caucasus, Central Asia (Pfeffer 1995).

Material examined. Ca. 250–300 specimens (DONNU, IPP, APP, ZIN, ZMUM) from Cherkasy, Chernigiv, Crimea, Donetsk, Kharkiv, Kherson, Kyiv, Lugansk, Mykolajiv, Odesa, and Zaporizhzhya Provinces studied.

Biology. On *Ulmus minor*, *U. laevis* and *U. glabra* (Pfeffer 1995); in Ukraine common on *U. minor* and cultivated *U. pumila*, rarely on *U. laevis*.

Notes. It comprises two subspecies: *S. kirschii kirschii* Skalitzky, 1876 and *S. kirschii fasciatus* Reitter, 1890, the latter is unknown in Ukraine.

Scolytus koenigi Shevyrew

Records. CRI ČRK KHR KIR KYI ŽIT [Eggers 1914b: 298; Greze 1928: 138; Sokanovsky 1930: 803; Stark 1952: 129; Stark 1955a: 654; Zagajkevich 1958: 78; Rudnev 1962: 74; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 153–154; Pfeffer 1995: 105; Broun 2009: 741; Terekhova 2009: 47; Knížek 2011b: 238; Nikulina 2014: 97.]

Distribution. Southern Europe, Mediterranean countries, Caucasus, Turkmenistan (Pfeffer 1995).

Material examined. 6 spec. (DONNU) Kharkiv Prov., Zmijiv Distr., environs Gajdary vill., *Acer tataricum*, T.V. Nikulina leg., 16.viii.2008; 11 spec. (ZIN) Kherson Prov., Chornoliske forestry, formerly Kherson Gouvernement, on *Acer platanoides*, D. Rudnev leg., vi.1927 and vi.1928; 4 spec., idem, on *Acer campestre*, D.

Rudnev leg., 5.viii.1927; typical damage to *Acer platanoides* was registered in Kyiv, Naddneprivsky Park, M.Yu. Mandelshtam, 23.v.1989.

Biology. On *Acer* spp. (Pfeffer 1995); in Ukraine on *A. campestre*, *A. platanoides* and *A. tataricum*.

Notes. Rare species throughout its range. Old galleries are more common than alive beetles.

Scolytus laevis Chapuis

Records. ČNG CRI ČRK DNI ?DON KHE KHR LWI SUM ZAK [Bukowsky 1930: 128; Roubal 1936: 256; Pomerantsev 1949: 148; Stark 1952: 121; Zagajkevich 1958: 78; Rudnev 1962: 70–71; Pogorilyak 1973: 22; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 152–153; Pfeffer 1995: 98; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 162–163; Sumarokov 2009: 182; Terekhova 2009: 47; Knížek 2011b: 238; Nikulina 2011a: 268; Nikulina 2014: 97.]

Distribution. Europe, Caucasus (Pfeffer 1995).

Material examined. Ca. 20 specimens (DONNU, KUMN, ZIN) from Chernigiv, Crimea, Kharkiv, Kherson, and Zakarpatska Provinces studied.

Biology. On *Ulmus* spp., rarely on *Alnus glutinosa*, *Pyrus* sp., *Malus* sp. (Pfeffer 1995); in Ukraine the host plants are unknown.

Notes. This species is distributed far to the north up to southern shore of Ladoga Lake in Russia and also in highlands of Caucasus.

Scolytus mali (Bechstein)

Records. ČNG CRI ČRK DNI DON IFR KHE KHM KHR KYI LUG LWI SUM TER ZAK ŽIT [Lomnicki 1870: 82; Cherkunov 1889: 49; Shevyrew 1889b: 48; Shevyrew 1893a: 26; Kostenko 1929: 207; Roubal 1936: 257; Stark 1952: 125; Rudnev 1953a: 1152; Stark 1955a: 655; Giritz 1959: 211; Kryshtal' 1959: 82; Rudnev 1962: 73–74; Pogorilyak 1968: 7; Pogorilyak 1973: 24; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 153; Tupik & Bartenev 1993: 131; Pfeffer 1995: 106; Khaustov 1998: 1420; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 163; Nikulina 2005: 57; Nikulina & Martynov 2007: 88; Terekhova 2007: 94; Nikulina 2009b: 126; Terekhova 2009b: 47; Nikulina 2010b: 141; Nikulina & Filyk 2010: 255–256; Knížek 2011b: 238; Nikulina 2012c: 155; Nikulina 2014: 97.]

Distribution. Europe, Caucasus, Asia Minor, Central Asia (Pfeffer 1995), introduced to Canada and Eastern States of USA (Geiser 2001).

Material examined. Ca. 350 specimens (DONNU, IPP, KES, KUMN, APP, RColl, NSPU, UZNU, VColl, ZIN, ZMUM) from Cherkasy, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Khmelnytsky, Lugansk, Lviv, Sumy, Ternopil, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Armeniaca vulgaris*, *Pyrus communis*, *Persica vulgaris*, *Padus avium*, *Cerasus* spp., *Malus* spp., *Prunus* spp., *Sorbus* spp. and other Rosaceae trees (Pfeffer 1995); in Ukraine on *Cerasus avium*, *C. vulgaris*, *Pyrus communis*, *P. avium*, *M. domestica*, *A. vulgaris*, *Prunus domestica*, *Sorbus aucuparia* and cultivated *S. intermedia*.

Notes. The species significantly varies in elytral puncturation that caused description of multiple forms.

Scolytus multistriatus (Marsham)

Records. ČNG CRI ČRK DNI DON KHE KHR KYI LUG LWI MYK POL SUM TER VIN VOL ZAK ZAP ŽIT [Lomnicki 1870: 82; Shevyrew 1889a: 434, 443; Shevyrew 1889b: 45; Shevyrew 1892c: 171–177; Greze 1928: 138; Kostenko 1929: 207; Lebedev 1935: 51; Roubal 1936: 254; Stark 1952: 97–98; Rudnev 1953a: 1152; Belgovsky 1956: 359; Zagajkevich 1958: 78; Dmitriev 1959: 852; Kryshtal' 1959: 82; Rudnev 1962: 71; Maksimova 1967: 804; Pogorilyak 1968: 7; Pogorilyak 1973: 19; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 149; Bartenev & Tupik 1990: 15; Pfeffer 1995: 93; Kolomoets 1995: 18; Tregub *et al.* 2000: 51; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 164–165; Terekhova 2006: 81; Nikulina & Martynov 2007: 88–89; Novak & Gamayunova 2008: 188; Nikulina 2009a: 55; Terekhova 2009a: 46; Terekhova 2009b: 47; Nikulina 2010a: 175; Nikulina 2010b: 141; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 253; Petrov 2013: 39–47; Nikulina 2014: 96.]

Distribution. Central and South East Europe, Caucasus, introduced to USA (Freude *et al.* 1981; Wood & Bright 1992a).

Material examined. Ca. 450 specimens (DONNU, IPP, KColl, KES, KUMN, APP, NSPU, UZNU) from Cherkasy, Chernigiv, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Kyiv, Lugansk, Mykolajiv, Poltava, Sumy, Vinnytsya, Volyn, Zaporizhzhya, and Zakarpatska Provinces studied.

Biology. On *Ulmus minor*, *U. laevis*, *U. glabra* (Pfeffer 1995); in Ukraine recorded from *U. laevis*, *U. glabra*, *U. minor*, and also from cultivated *U. pumila* and *Corylus colurna*.

Notes. One of the most common species feeding on broad leaved trees in Ukraine. It can be collected along with *S. orientalis* in Crimea.

Vector for Dutch elm disease.

Scolytus kozikowskii Michalski was proved to be only a monstrosity of *S. multistriatus* and not the separate species (Petrov 2013).

Scolytus orientalis (Eggers)

Records. CRI ZAP [Korotnev 1926: 64; Stark 1952: 99; Sokanovsky 1954: 13; Stark 1955a: 657; Rudnev 1962: 73; Rudnev & Vasechko 1988b: 149; Pfeffer 1995: 94; Khaustov 2001: 8; Knížek 2011b: 239; Nikulina 2010b: 141; Nikulina 2014: 96.]

Distribution. West Palaearctic (South East Europe, Crimea, Caucasus, Asia Minor, Turkmenistan) (Stark 1952).

Material examined. Crimea: 4 spec. (DONNU) Yalta, raised from larvae in laboratory conditions, *Ulmus* sp., A.A. Khaustov leg., May 1997; 12 spec. (DONNU) Lenine Distr., environs of Bagerovo urban settlement, Regional Landscape park “Karalarsky step”, *Ulmus minor*, emerged in laboratory from 20.v.2010, T.V. Nikulina leg.; 2 spec. (KUMN) Perevalne vill., on *Ulmus*, A.F. Bartenev leg., 15.ii.1980; 1 spec. (KUMN) Chatyr–Dag Yaila, G. Levchinskaya leg., 2.vi.1994; 4 spec. (IPP) Krasnogvardijsk Distr., 26.vii.(19)56; 3 spec. (IPP) Alushta, 24.vii.(19)55; 1 spec. (IPP) Simferopol, *Ulmus minor*, 29.vii.1956; 2 spec. (IPP) idem, *Ulmus minor*, Vladishevsky leg., 27–28.ix.(19)56; 6 spec. (SIZK) Nyzhnya Kutuzivka, garden, entomological sweeping, S. Sviridov leg., 19.vi.1990; 1 spec. (ZIN) Sebastopol, Krim, W.Pligginski leg.; 3 spec. (IPP) Zaporizhzhya Prov., Melitopol forest district, *Ulmus minor*, 4.x.(19)58.

Biology. On *Ulmus minor*, *U. laevis*, *Zelkova carpinifolia* (Pfeffer 1995); in Ukraine collected on *U. minor*.

Notes. In contrast to Pfeffer (1995) and following Stark (1952) and Knížek (2011b) we consider this species distinct from *S. multistriatus* differing in vestiture of elytral apex.

Scolytus pygmaeus (Fabricius)

Records. ČNG CRI ČRK DNI DON KHE KHR KIR KYI LUG MYK POL SUM TER ZAK ZAP ŽIT [Shevyrew 1887: 42–43; Cherkunov 1889: 49; Shevyrew 1889a: 443; Shevyrew 1889b: 47; Shevyrew 1892c: 185–189; Greze 1928: 138; Kostenko 1929: 207; Roubal 1936: 255; Stark 1952: 105; Stark 1955a: 657; Belgovsky 1956: 350, 359; Rudnev 1962: 72; Pogorilyak 1968: 7; Pogorilyak 1973: 21; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 150–151; Pfeffer 1995: 98; Tregub *et al.* 2000: 51; Khaustov 2001: 12; Sheshurak & Nazarenko 2002: 123; Izhevsky *et al.* 2005: 166; Terekhova 2006: 81; Nikulina & Martynov 2007: 89; Novak & Gamayunova 2008: 188; Nikulina 2009a: 55; Terekhova 2009a: 46; Sumarokov 2009: 182; Terekhova 2009b: 47; Nikulina 2010a: 175; Nikulina 2010b: 141; Knížek 2011b: 239; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 253; Nikulina 2014: 97.]

Distribution. Central and South East Europe, Caucasus (Freude *et al.* 1981), Middle Asia.

Material examined. Ca. 400 specimens (DMLU, DONNU, IPP, KUMN, APP, SIZK, UZNU, ZIN, ZMUM) from Cherkasy, Chernigiv, Crimea, Dnipropetrovsk, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Kyiv, Lugansk, Lviv, Mykolajiv, Poltava, Sumy, Ternopil, Zaporizhzhya, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Ulmus minor*, *U. laevis*, *U. glabra* (Pfeffer 1995); in Ukraine recorded on *U. laevis*, *U. glabra*, *U. minor*, and cultivated species *U. pumila* and *Corylus colurna*.

Notes. Invasive in Kazakhstan and Russia (St.Petersburg city). Vector for Dutch elm disease.

Scolytus ratzeburgi E. W. Janson

Records. ČER ČNG ČRK DNI DON IFR KHR KYI LUG LWI SUM TER ZAK ŽIT [Lindeman 1875: 79; Cherkunov 1889: 49; Shevyrew 1889b: 56; Shevyrew 1893a: 21; Greze 1928: 137; Kostenko 1929: 207; Roubal 1936: 256; Pomerantsev 1949: 124; Stark 1952: 118; Rudnev 1953a: 1151; Sokanovsky 1954: 14; Zagajkevich 1958: 78–79; Maksimova 1967: 799; Pogorilyak 1973: 22; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 152; Pfeffer 1995: 98; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 167–168; Nikulina & Martynov 2007: 89; Terekhova 2009: 47; Nikulina & Filyk 2010: 256; Nikulina 2011b: 59; Nikulina 2014: 97.]

Distribution. Transpalearctic (Knížek 2011b).

Material examined. Ca. 70 specimens (DONNU, IPP, KUMN, NSPU, UZNU, ZMUM) from Cherkasy, Chernigiv, Donetsk, Ivano–Frankivsk, Kharkiv, Lugansk, Sumy, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Betula* spp. (Pfeffer 1995); in Ukraine on *Betula pendula*.

Notes. Species is very variable in male morphology. Button like spine on third ventrite may be very small or absent (commonly in specimens from Far East of Russia), the posterior margin of the 4th ventrite may also not be thickened so that abdomen appears unarmed. Deep round depression on the female vertex seems to be more constant character allowing to distinguish this species.

Scolytus rugulosus (P. W. J. Mueller)

Records. ČER ČNG CRI ČRK DNI DON IFR KHE KHR KIR KYI LUG LWI MYK ODE POL RIV SUM TER VIN VOL ZAK [Lindeman 1875: 74; Cherkunov 1889: 49; Shevyrew 1889a: 450; Shevyrew 1889b: 50; Shevyrew 1893a: 30–31; Korotnev 1926: 58; Kostenko 1929: 207; Stark 1952: 138, 140; Rudnev 1953a: 1152; Stark 1955a: 656, 658; Belgovsky 1956: 361; Zagajkevich 1958: 79; Giritz 1959: 211; Kryshstal' 1959: 82; Rudnev 1962: 71, 74; Pogorilyak 1968: 7; Pogorilyak 1973: 25; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 154–155; Tupik & Bartenev 1993: 131; Pfeffer 1995: 104; Tregub *et al.* 2000: 51; Khaustov 2001: 12; Sheshurak & Nazarenko 2002: 123; Nikulina 2005: 57; Nikulina & Martynov 2007: 89–90; Nikulina 2009b: 126; Sumarokov 2009: 182; Terekhova 2009: 47; Nikulina 2010b: 141; Knížek 2011b: 239; Nikulina 2011b: 59; Nikulina 2012c: 154–155; Nikulina 2014: 97.]

Distribution. Palaearctic, introduced in North America (Wood & Bright 1992a) and South America.

Material examined. Ca. 350–400 specimens (DONNU, IPP, KUMN, APP, MColl, SIZK, NSPU, UZNU, ZIN, ZMUM) from Cherkasy, Chernivtsi, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Khmelnytsky, Kirovograd, Kyiv, Lugansk, Lviv, Mykolajiv, Odesa, Poltava, Sumy, Ternopil, Volyn, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Pyrus communis*, *Persica vulgaris*, *Armeniaca vulgaris*, *Padus avium*, *Amygdalus communis*, *Prunus* spp., *Malus* spp., *Rosa* spp., *Crataegus* spp., *Cerasus* spp., other *Rosaceae* trees, etc. (Pfeffer 1995); in Ukraine on *Cerasus avium*, *C. vulgaris*, *Armeniaca vulgaris*, *Pyrus communis* and cultivated *P. elaeagnifolia*, *M. domestica*, *M. sylvestris*, *Padus avium*, *Prunus stepposa*, *P. spinosa*, *Persica vulgaris*, *Sorbus aucuparia*, *Amygdalus communis*, and also on *Amygdalus nana*.

Notes. One of the principal pests in orchards of Ukraine.

Scolytus scolytus (Fabricius)

Records. ČNG CRI ČRK DNI DON IFR KHE KHR KIR KYI LUG LWI MYK POL SUM TER VIN VOL ZAK ZAP ŽIT [Shevyrew 1887: 42; Shevyrew 1889a: 434–443; Shevyrew 1889b: 36–42; Shevyrew 1892c: 166–170; Greze 1928: 137; Kostenko 1929: 207; Bukowsky 1930: 128; Roubal 1936: 256; Stark 1952: 110; Rudnev 1953a: 1151; Stark 1955a: 659; Belgovsky 1956: 350, 359; Zagajkevich 1958: 79; Dmitriev 1959: 852; Kryshstal' 1959: 82; Rudnev 1962: 69; Maksimova 1967: 804; Pogorilyak 1973: 20; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 151–152; Pfeffer 1995: 99; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 169; Terekhova 2006: 81; Nikulina & Martynov 2007: 89; Novak & Gamayunova 2008: 188; Terekhova 2009a: 46; Sumarokov 2009: 183; Terekhova 2009b: 47; Nikulina 2010b: 141; Knížek 2011b: 240; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 253; Nikulina 2014: 96–97.]

Distribution. South, Central and East Europe (Freude *et al.* 1981).

Material examined. Ca. 300 specimens (DONNU, IPP, KColl, KUMN, APP, MColl, NSPU, UZNU, ZIN, ZMUM) from Chernigiv, Crimea, Dnipropetrovsk, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Kyiv, Lugansk, Mykolajiv, Poltava, Sumy, Vinnytsya, Volyn, Zaporizhzhya, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Ulmus minor*, *U. laevis*, *U. glabra*, *Zelkova carpinifolia* (Pfeffer 1995); in Ukraine recorded from *U. laevis*, *U. minor*, and also from cultivated *Ulmus pumila*. Exceptionally rare on *Acer platanoides*.

Notes. Vector for Dutch elm disease.

Scolytus sulcifrons Rey

Records. CRI DON KYI LUG [Stark 1952: 112; Stark 1955a: 660; Rudnev 1962: 70; Rudnev & Vasechko 1988b: 152; Pfeffer 1995: 100; Izhevsky *et al.* 2005: 170–171; Nikulina & Martynov 2007: 90; Knížek 2011b: 240; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2014: 97.]

Distribution. South Europe, European part of Russia (Nikitsky *et al.* 1998), Caucasus, Kazakhstan, lower flow of Volga and Ural Rivers (Pfeffer 1995).

Material examined. Donetsk Prov.: 29 spec. (DONNU) Slovjansk Distr., environs Bogorodychne vill., *Ulmus laevis*, T.V. Nikulina leg., 29.vi.2007; 2 spec. (DONNU) idem, T.V. Nikulina leg., 1.viii.2011; 7 spec. (DONNU) idem, window traps, T.V. Nikulina leg., 6.vii.2008, 7.vii.2008, 7.vii.2009; 12 spec. (DONNU) idem, *Ulmus* sp., T.V. Nikulina leg., 4.vii.2009; 4 spec. (DONNU) idem, V.V. Martynov leg., 2.vii.2009; 1 male (ZIN) Kyiv, Naddniprovs'kyi Park, under bark of *Ulmus*, M.Yu. Mandelshtam leg., 23.v.1989; Lugansk Prov.: 1 spec. (DONNU) Sverdlovsk Distr., environs Provallya vill., *Ulmus* sp., T.V. Nikulina leg., 25.x.2008; 2 spec. (DONNU) Kreminna Distr., environs of Severodonetsk city, *Ulmus*, T.V. Nikulina leg., 18.iv.2009; 4 spec. (DONNU) Stanychno–Lugansk Distr., environs of Kondrashevska–Nova station, “Prydintsivska Zaplava” Reserve, *Ulmus*, T.V. Nikulina leg., 29.iv.2010.

Biology. On *Ulmus minor*, *U. laevis* (Pfeffer 1995); in Ukraine recorded on *U. laevis*.

Notes. The occurrence of species is not clear yet because of doubtful difference from *S. scolytus*, since the males are predominantly missing in samples from old galleries.

Scolytus zaitzevi Butovitsch

Records. CRI KHE [Rudnev & Stepanova 1960: 774; Rudnev 1962: 72–73; Rudnev & Vasechko 1988b: 150; Pfeffer 1995: 95; Knížek 2011b: 240; Nikulina 2014: 96.]

Distribution. Crimea, Caucasus (Pfeffer 1995), South Russia (Rostov Prov.).

Material examined. Crimea: 2 spec. (IPP) Bakhchysaray Distr., Pryvilne forestry, 19.vii.1955; 1 spec. (IPP) Bakhchysaray, 20.ii.(19)57; 3 spec. (IPP) Bakhchysaray forest district, 15.vii.1956; 1 spec. (IPP) idem, *Ulmus minor*, 15.iii.1957; 5 spec. (KUMN) environs of Perevalne vill., *Ulmus* sp., emerged in laboratory 5–10.iii.1984; 2 spec. (IPP) Miskhor, *Ulmus minor*, 14.vii.(19)55; (ZMUM) Zolotoy plyazh, plenty of specimens, 8.ix.1956.

Biology. On *Ulmus minor* (Pfeffer 1995); in Ukraine recorded on *U. minor*.

Xyleborini (3 genera, 10 species)

Anisandrus dispar (Fabricius)

Records. ČER ČNG CRI ČRK DON IFR KHE KHM KHR KIR KYI LUG LWI MYK ODE SUM TER VOL ZAK ZAP [Krol 1877: 57; Cherkunov 1889: 49; Shevyrew 1893a: 34; Korotnev 1926: 124; Kostenko 1929: 208; Bukowsky 1930: 131; Roubal 1936: 275; Medvedev 1950: 75; Stark 1952: 426–429; Rudnev 1953a: 1153; Stark 1955a: 728; Zagajkevich 1958: 100; Dmitriev 1959: 853; Kryshthal' 1959: 82; Rudnev 1959: 198; Rudnev 1962: 84; Maksimova 1967: 804; Pogorilyak 1968: 7; Pogorilyak 1973: 62; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 180; Pfeffer 1995: 201; Kubisz *et al.* 1998: 263; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 190–192; Nikulina 2005: 57; Nikulina & Martynov 2007: 94; Terekhova 2007: 93; Nikulina 2009b: 126; Mateleshko *et al.* 2009: 490; Kravchenko 2010: 62; Nikulina 2010a: 175; Nikulina 2010b: 142; Nikulina & Filyk 2010: 262; Knížek 2011b: 242; Meshkova & Kukina 2011: 240; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 252; Nikulina 2014: 102.]

Distribution. Holarctic (Wood & Bright 1992a).

Material examined. Ca. 1000 specimens (DONNU, IPP, KUMN, APP, MColl, RColl, NSPU, UZNU, ZIN) from Cherkasy, Chernigiv, Chernivtsi, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kirovograd, Kyiv, Lugansk, Lviv, Mykolajiv, Odesa, Ternopil, Volyn, and Zakarpatska Provinces examined.

Biology. Polyphagous on various leaf bearing trees (Pfeffer 1995), occasionally on coniferous trees: *Pinus* spp., *Picea* spp., *Abies* spp., *Larix* spp. (Izhevsky *et al.* 2005); in Ukraine on *Ulmus* spp., *Acer* spp., *Salix* sp., *Alnus* sp., *Juglans* sp., *Quercus robur*, *Betula pendula*, *Fraxinus excelsior*, *Fagus sylvatica*, *Carpinus betulus*, *Tilia cordata*, *Populus tremula*, *Malus domestica* and cultivated *Robinia pseudoacacia* and *Acer negundo*.

Notes. Attracted to ethanol baited traps and collected in abundance in Petrov window flight traps. It is also attracted to fresh brown bread during the sunset. This is the only species of scolytines breeding on North American *Acer negundo*.

Anisandrus maiche (Kurentsov, 1941)

Records. DON(i) KHR(i) SUM(i) [Nikulina *et al.* 2007b: 542; Nikulina 2008a: 151; Nikulina 2009a: 53; Nikulina *et al.*, 2010: 69; Terekhova & Skrylnik 2010: 129; Nikulina 2011a: 268; Nikulina 2011b: 59; Terekhova & Skrylnik 2012: 88; Nikulina 2013b: 113; Nikulina 2014: 102.]

Distribution. Endemic to Far East, recently introduced to Ukraine (Nikulina *et al.* 2007b), European Russia (Nikitsky 2009; Terekhova & Skrylnik 2012), and USA.

Material examined. Donetsk Prov.: 6 females (DONNU) Slovjansk Distr., environs of Bogorodychne vill., window traps, V.V. Martynov leg., 2–5.vii.2007; 11 females (DONNU) idem, window traps, T.V. Nikulina leg., 26–29.vi.2008, 5–10.vii.2008, 7–9.vii.2009; 1 female (DONNU) idem, *Betula pendula*, T.V. Nikulina leg., 5.vii.2008; 8 females (DONNU) Slovjansk Distr., environs of Svyatogirsk city, *Ulmus minor*, T.V. Nikulina leg., 6.vi.2010; 16 females (DONNU) Artemivsk Distr., environs of Dronivka vill., window traps, T.V. Nikulina leg., 7.vii.2011, 10–15.v.2012.

Biology. In contrast to Knížek (2011a) we consider this species to be first described by Kurentsov (1941) but not by Eggers (1942). On various leaf bearing trees in the original Far Eastern range (Krivolutskaya 1996), *Populus tremula* in European Russia (Nikitsky 2009). In Ukraine: *Betula pendula*, *Ulmus minor*, *Quercus borealis*, *P. tremula*. The species is attracted to window traps filled with ethanol.

Xyleborinus angustatus (Eichhoff)

Records. VOL (locus typicus) [Shevyrew 1887: 64; Stark 1952: 438; Stark 1955a: 727; Zagajkevich 1958: 101; Rudnev & Vasechko 1988b: 181; Pfeffer 1995: 206; Knížek 2011b: 245; Nikulina 2014: 103.]

Distribution. Ukraine (Volyn') (Holzschuh 1994).

Material examined. Holotype (female) (NMW): *Xyleborus angustatus* Eichh. Eggers det. 1935// Sicher Type! Coll. Pfeil ging du Letzner Eggers// HOLOTYPUS *Xyleborus angustatus* Eichh. Det. K.E. Schedl.

Biology. Unknown.

Notes. The holotype is probably mislabeled and belongs to an unidentified South American *Xyleborinus* species. It differs from *Xyleborinus saxesenii* (Ratzeburg) by following characters: declivity shining (in *X. saxesenii* it is dull), without tubercles on 1st and 2nd interstriae, lateral sides of the declivity with strongly developed curved teeth.

Xyleborinus attenuatus (Blandford)

Records. ČER(i) ČNG(i) DON(i) KYI(i) LUG(i) LWI(i) SUM(i) TER(i) KHR(i) KHM(i) VOL(i) [Nikulina *et al.* 2007a: 542; Nikulina 2007: 258; Nikulina 2008a: 151; Nikulina 2009a: 53; Nikulina *et al.* 2010: 69; Nikulina & Filyk 2010: 263; Meshkova & Kukina 2011: 240; Knížek 2011b: 246; Nikulina 2013b: 113; Nikulina 2014: 102–103.]

Distribution. East Asia, introduced to Europe and North America (Knížek 2011b).

Material examined. Chernigiv Prov.: 11 females (NSPU) Shchors Distr., environs of Nyzkivka vill., forest formed by deciduous trees, *Fraxinus* sp., V.N. Pavlyuk leg., 16.iv.1999; 6 females (NSPU) Shchorsk Distr.,

environs of Naumivka vill., mixed forest, V.N. Pavlyuk leg., 4.v.2006; Chernivtsi Prov.: 1 females (DONNU) Kelmenetsi Distr., environs of Grushivtsi vill., *Corylus avellana*, T.V. Nikulina leg., 7.v.2008; 10 females (DONNU) Vyzhnytsya Distr., environs of Beregomet urban settlement, National Nature park “Vyzhnytskyi”, window traps, T.V. Nikulina leg., 14–18.v.2008; Donetsk Prov.: 2 females (DONNU) Artemivsk Distr., environs of Debaltsevo city, window traps, V.V. Martynov leg., 22.viii.2011; 1 female (DONNU) Slovjansk Distr., environs of Bogorodychne vill., *Acer campestre*, T.V. Nikulina leg., 1.viii.2011; 1 female (DONNU) Kharkiv Prov.: Krasnokutsk urban settlement, *Quercus robur*, Yu. Skrylnyk leg., 30.vi.2007; 1 female (KUMN) environs of Kharkiv city, forest formed by deciduous trees, in bark of drying *Sorbus*, A. Droghvalenko leg., 14.iv.2005; 3 females (DONNU) Khmelnytskyi Prov., Kamenets–Podilskyi Distr., environs of Surzhyntsi vill., *Populus tremula*, T.V. Nikulina leg., 29.v.2009; 9 females (DONNU) Kyiv, *Alnus glutinosa*, V.V. Martynov leg., 12.viii.2007; Lviv Prov.: 15 females (DONNU) Yavoriv Distr., environs of Ivano–Frankove vill., “Roztochcha” Reserve, *Quercus*, *Fagus*, T.V. Nikulina leg., 17–18.viii.2006; 2 females (DONNU) idem, T.V. Nikulina leg., 29.v.2008; 10 females (RColl) idem, *Alnus glutinosa*, R.A. Filyk leg., 22.iv.2002, 23.ix.2002; 1 female (RColl) idem, attracted at light, R.A. Filyk leg.; 1 female (RColl) idem, *Quercus*, R.A. Filyk leg., 24.ix.2002; 2 females (RColl) idem, *Cerasus avium*, R.A. Filyk leg., 28.viii.2002; 5 females (VColl) Ternopil Prov., Ternopil city, *Carpinus betulus*, D.V. Vlasov leg., 14.ix.2005; 2 females (KColl) Volyn Prov., Shatsk Distr., environs of Pishcha vill., in flight, A. Kravchenko leg., 23.iv.2004.

Biology. On *Salix* spp., *Alnus glutinosa*, *A. hirsuta*, *Quercus robur*, *Corylus avellana*, *Betula platyphylla* var *japonica*, *Tilia amurensis* (Pfeffer 1995). In Ukraine on *Quercus robur*, *Fagus sylvatica*, *Carpinus betulus*, *Alnus glutinosa*, *Corylus avellana*, *Populus tremula*, *Fraxinus* sp., *Sorbus* sp., *Cerasus avium*, in Russia from *Fagus sylvatica*, *Populus tremula*, and *Fraxinus excelsior*.

Notes. East Asian species recently introduced to Europe: Austria, Czech Republic, Germany, Netherlands, Poland, Slovakia, Spain, Switzerland, Sweden (Kirkendall & Facolli 2010; Knížek 2011b), and European Russia (Mandelstam 2008; Nikitsky 2009).

Xyleborinus saxesenii (Ratzeburg)

Records. ČER ČNG CRI ČRK DON IFR KHE KHM KHR KIR KYI LUG LWI MYK ODE SUM TER VOL ZAK [Shevyrew 1893a: 32; Kostenko 1929: 208; Bukowsky 1930: 131; Lebedev 1935: 51; Roubal 1936: 276; Pomerantsev 1949: 179; Stark 1952: 436–438; Rudnev 1953a: 1153; Stark 1955a: 733; Zagajkevich 1958: 101; Kryshchal' 1959: 82; Rudnev 1959: 198; Rudnev 1962: 84; Pogorilyak 1973: 64; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 181; Pfeffer 1995: 203; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 187–190; Nikulina 2005: 57; Nikulina & Martynov 2007: 95; Terekhova 2007: 93; Nazarenko V. 2008: 143; Terekhova 2009a: 46; Nikulina 2009b: 126; Kravchenko 2010: 62; Nikulina 2010b: 141; Nikulina & Filyk 2010: 263; Knížek 2011b: 246; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2014: 103.]

Distribution. Cosmopolitan (Knížek 2011b).

Material examined. Ca. 1000 specimens (DONNU, IPP, KES, KUMN, APP, MColl, SIZK, NSPU, UZNU, ZIN) from Cherkasy, Chernigiv, Chernivtsi, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Kherson, Khmelnytskyi, Kirovograd, Kyiv, Lugansk, Lviv, Mykolajiv, Odesa, Ternopil, and Zakarpatska Provinces studied.

Biology. Polyphagous on various broad-leaved and coniferous trees (Pfeffer 1995); in Ukraine on *Populus* spp., *Acer* spp., *Ulmus* spp., *Alnus* sp., *Salix* sp., *Quercus robur*, *Fraxinus excelsior*, *Betula pendula*, *Carpinus betulus*, *Ficus carica*, *Cerasus avium*, *C. vulgaris*, *Malus domestica*, *Tilia cordata*, *Pinus sylvestris*, *P. nigra pallasiana* and cultivated *Castanea sativa* and *Robinia pseudoacacia*. The species is attracted to window traps filled with ethanol.

Notes. The species is active at sunset.

Xyleborus cryptographus (Ratzeburg)

Records. ČER ČNG CRI ČRK KHM KHR KYI LWI SUM VOL ZAK ŽIT [Sokanovsky 1930: 804; Roubal 1936: 274; Stark 1952: 431–433; Rudnev 1953a: 1153; Stark 1955a: 728; Zagajkevich 1958: 99–100; Rudnev 1962: 84; Pogorilyak 1973: 62; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 180; Pfeffer 1995: 202; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 189–190; Terekhova 2007: 93; Nikulina & Filyk 2010: 262; Knížek 2011b: 247; Nikulina 2014: 103.]

Distribution. Europe, Caucasus, Kazakhstan, Siberia, Far East (Knížek 2011b).

Material examined. Ca. 50 specimens (DONNU, IPP, KColl, KES, KUMN, NSPU) from Chernigiv, Crimea, Kharkiv, Khmelnytsky, Kyiv, Lviv, and Volyn Provinces studied.

Biology. On *Populus tremula*, *P. alba*, *P. nigra* (Pfeffer 1995); in Ukraine on *P. tremula*. Beetles occur under soaked rotten bark of fallen aspens (*P. tremula*, *Populus* spp.). Males are very rare.

Notes. Common throughout the range of aspen.

Xyleborus dryographus (Ratzeburg)

Records. ČER CRI DON KHR KYI LWI ODE RIV ZAK ŽIT [Cherkunov 1889: 49; Lomnicki 1891: 23; Kostenko 1929: 208–209; Bukowsky 1930: 131; Sokanovsky 1930: 804; Roubal 1936: 275; Stark 1952: 435–436; Stark 1955a: 729; Zagajkevich 1958: 100; Rudnev 1959: 198; Rudnev 1962: 84–85; Pogorilyak 1973: 64; Rudnev & Vasechko 1988b: 181; Pfeffer 1995: 204; Izhevsky *et al.* 2005: 192; Nikulina & Martynov 2007: 94; Nazarenko 2009a: 502; Knížek 2011b: 247; Nikulina 2011b: 59; Nikulina 2014: 103.]

Distribution. Europe, Caucasus (Stark 1952).

Material examined. 1 female (DONNU) Chernivtsi Prov, Khotyn Distr., environs of Ataki vill., window traps, V.V. Martynov leg., 21.viii.2010; 1 female (KUMN) Crimea, Krymskiy Reserve, “Tsentralna Kotlovyna” locality, D.S. Shapiro leg., 21.vi.1954; Donetsk Prov.: 3 females (DONNU) Slovjansk Distr., environs of Svyatogirsk city, at light, T.V. Nikulina leg., 12.vi.2010; 2 females (KES) Svyatogirske forestry, Krasno–Oskolska dacha, *Quercus robur*, N. Kostenko leg., 9.v.(19)26; 5 females (DONNU) Artemivsk Distr., environs of Dronivka vill., window traps, T.V. Nikulina leg., 10–12., 21–23.v.2012; 2 females (KUMN) Kharkiv Prov., Zmijiv Distr., environs of Gajdary vill., at light, V.V. Terekhova leg., 12.viii.2008; 1 female (KUMN) Odesa Prov., Savran, Polyanetskoe, in flight, Maltsev leg., 10.vii.1970; 11 females (DONNU) Zakarpatska Prov., Tjachiv Distr., environs of Mala Ugoljka vill., yellow pan trap, V.A. Chumak leg., 5.vi, 15.vi.2011; 1 female (APP) Uzhgorod Distr., environs of Kalynytsya settlement, left bank of Uzh river, I. Melnik leg., 23–30.v.2007.

Biology. On hard wood broad leaved trees: *Quercus* spp., *Fagus* spp., *Acer* spp., *Ulmus* spp. (Izhevsky *et al.* 2005); in Ukraine on *Quercus robur*.

Xyleborus eurygraphus (Ratzeburg)

Records. CRI DON KHR KYI [Kostenko 1929: 208; Bukowsky 1930: 131; Stark 1952: 433–434; Stark 1955a: 729; Rudnev 1962: 84; Rudnev & Vasechko 1988b: 180–181; Pfeffer 1995: 203; Izhevsky *et al.* 2005: 192–193; Nikulina & Martynov 2007: 94; Knížek 2011b: 247; Nikulina 2014: 103.]

Distribution. Europe, Caucasus (Pfeffer 1995).

Material examined. Ca. 50 specimens (DONNU, KES, KUMN, ZIN) Crimea, Donetsk, Kharkiv, and Kyiv Provinces studied.

Biology. On *Pinus* spp. (Pfeffer 1995); in Ukraine on *P. sylvestris*, in Crimea frequently on *P. nigra pallasiana*.

Xyleborus monographus (Fabricius)

Records. ČER ČNG CRI ČRK DON IFR KHM KHR KYI LUG LWI ODE SUM TER ZAK ZAP ŽIT [Shevyrew 1887: 65; Cherkunov 1889: 49; Shevyrew 1893a: 33; Kostenko 1929: 208–209; Sokanovsky 1930: 804; Lebedev 1935: 51; Roubal 1936: 275–276; Pomerantsev 1949: 92; Stark 1952: 434–435; Rudnev 1953a: 1153; Stark 1955a: 731; Zagajkevich 1958: 100–101; Rudnev 1959: 198; Rudnev 1962: 84; Pogorilyak 1968: 7; Pogorilyak 1973: 63; Rudnev & Vasechko 1988b: 181; Pfeffer 1995: 204; Gamayunova *et al.* 2005: 265; Izhevsky *et al.* 2005: 193–194; Nikulina & Martynov 2007: 95; Terekhova 2007: 94; Nazarenko V. 2008: 143; Nikulina 2009b: 126; Nikulina & Filyk 2010: 262; Knížek 2011b: 248; Meshkova & Kukina 2011: 240; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2012b: 254; Nikulina 2014: 103.]

Distribution. West Palaearctics (Pfeffer 1995).

Material examined. Ca. 200 specimens (DONNU, IPP, KES, KUMN, APP, MColl, RColl, SIZK, NSPU, UZNU) from Cherkasy, Chernigiv, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Khmelnytsky, Kyiv, Lugansk, Lviv, Odesa, Ternopil, and Zakarpatska Provinces studied.

Biology. On *Quercus* spp., *Fagus* spp., *Ulmus* spp., *Acer* spp., *Carpinus* spp. etc. (Izhevsky *et al.* 2005); in Ukraine on *Quercus robur*, *Q. pubescens*, *Ulmus* spp., but known also on *Fraxinus excelsior*.

Xyleborus pfeilii (Ratzeburg)

Records. ČER CRI IFR ZAK ŽIT [Sokanovsky 1930: 804; Roubal 1936: 276; Stark 1952: 439–440; Rudnev 1953a: 1153; Stark 1955a: 732; Zagajkevich 1958: 101; Rudnev 1962: 85; Pogorilyak 1973: 64; Rudnev & Vasechko 1988b: 181; Pfeffer 1995: 204; Izhevsky *et al.* 2005: 194–195; Knížek 2011b: 248; Nikulina 2014: 103.]

Distribution. Europe, Caucasus (Stark 1952), Eastern North Palaearctics (Knížek 2011b).

Material examined. 2 females (DONNU) Chernivtsi Prov., Vyzhnytya Distr., environs of Beregomet urban settlement, National Nature park “Vyzhnytskyy”, window traps, T.V. Nikulina leg., 18.v.2008; 1 female (DONNU) Ivano–Frankivsk Prov., Tlumach Distr., environs of Isakiv vill., window traps, V.V. Martynov leg., 7.viii.2010.

Biology. On *Alnus* spp., *Populus* spp., *Quercus* spp., *Ulmus* spp., *Acer* spp., *Fagus* spp. etc. (Izhevsky *et al.* 2005); in Ukraine the host plants are unknown. According to Stark (1952) lives in flood land forests in the bottoms of the tree trunks immersed into the water.

Xyloterini (1 genus, 3 species)

Trypodendron domesticum (Linnaeus)

Records. ČER CRI ČRK IFR KHM KYI LWI TER VOL ZAK [Cherkunov 1889: 49; Bukowsky 1930: 131; Roubal 1936: 270; Bukowsky 1940: 179; Stark 1952: 363–364; Rudnev 1953a: 1153; Stark 1955a: 714; Zagajkevich 1958: 91; Kryshal' 1959: 82; Pogorilyak 1968: 7; Pogorilyak 1973: 46; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 170; Pfeffer 1995: 198; Izhevsky *et al.* 2005: 178–179; Kravchenko 2010: 62; Nikulina & Filyk 2010: 261; Knížek 2011b: 250; Nikulina 2014: 102.]

Distribution. West Palaearctics (Pfeffer 1995).

Material examined. Ca. 200 specimens (DONNU, IPP, KColl, KUMN, APP, RColl, UZNU, VColl) from Chernivtsi, Crimea, Ivano–Frankivsk, Khmelnytsky, Kyiv, Lviv, Ternopil, Volyn, and Zakarpatska Provinces studied.

Biology. On *Fagus* spp., *Alnus* spp., *Quercus* spp., *Betula* spp., *Carpinus betulus*, *Acer pseudoplatanus*, *Juglans regia* (Pfeffer 1995); in Ukraine on *Fagus sylvatica*, *Quercus robur*, *Carpinus betulus*, *Alnus glutinosa*, *Betula pendula*, *Malus domestica*, *Acer* sp., *Salix* sp. and *Fraxinus* sp.

Trypodendron lineatum (Olivier)

Records. ČNG CRI ČRK DON IFR KHR LWI SUM TER VOL ZAK ŽIT [Lomnicki 1868: 151; Miller 1868: 27; Krol 1877: 57; Golovjanko 1926: 21; Roubal 1936: 270; Stark 1952: 366–370; Rudnev 1953a: 1153; Zagajkevich 1958: 91–92; Rudnev 1962: 81; Rudnev *et al.* 1962: 53; Pogorilyak 1968: 7; Pogorilyak 1973: 47; Vasechko 1971: 750; Pavlenko *et al.* 1982: 189; Kozak 1983: 59; Rudnev & Vasechko 1988b: 171; Pfeffer 1995: 199; Tregub *et al.* 2000: 51; Izhevsky *et al.* 2005: 180–182; Nikulina 2005: 57; Nikulina & Martynov 2007: 93–94; Mateleshko *et al.* 2009: 490; Nikulina 2009b: 126; Kravchenko 2010: 62; Nikulina & Filyk 2010: 261; Nikulina 2014: 102.]

Distribution. Holarctic (Wood & Bright 1992a).

Material examined. Ca. 300 specimens (DMLU, DONNU, IPP, KColl, KUMN, RColl, NSPU, UZNU) from Chernigiv, Chernivtsi, Crimea, Donetsk, Ivano–Frankivsk, Kharkiv, Lviv, Sumy, Ternopil, Zakarpatska, and Zhytomyr Provinces studied.

Biology. On *Picea* spp., *Pinus* spp., *Abies* spp., *Larix* spp., *Cedrus* spp., on fungi *Trichosporium ferrugineum* cultivated in tunnels (Pfeffer 1995); in Ukraine on *Pinus sylvestris*, *Picea abies*, *Larix decidua*.

Trypodendron signatum (Fabricius)

Records. ČNG CRI ČRK DON IFR KHR KYI LWI VOL ZAK [Roubal 1936: 270; Stark 1952: 364–365; Rudnev

1953a: 1153; Stark 1955a: 715; Zagajkevich 1958: 92; Rudnev 1962: 81; Pogorilyak 1968: 7; Pogorilyak 1973: 46; Pavlenko *et al.* 1982: 189; Rudnev & Vasechko 1988b: 169–171; Pfeffer 1995: 199; Izhevsky *et al.* 2005: 183–184; Nikulina & Martynov 2007: 94; Nazarenko V. 2008: 143; Mateleshko *et al.* 2009: 490; Kravchenko 2010: 62; Nikulina & Filyk 2010: 261; Knížek 2011b: 250; Nikulina 2011a: 268; Nikulina 2011b: 59; Nikulina 2014: 102.]

Distribution. Palaearctic (Pfeffer 1995).

Material examined. Ca. 200 specimens (DMLU, DONNU, KColl, KUMN, RColl, SIZK, UZNU) from Chernigiv, Donetsk, Kharkiv, Kyiv, Lviv, Volyn, and Zakarpatska Provinces studied.

Biology. On broad leaved trees, occasionally on coniferous trees (Izhevsky *et al.* 2005), in Donetsk Prov. observed on *Salix* sp., *Acer* sp., *Alnus glutinosa* and *Ulmus* sp., in western Ukraine on *Betula* sp., *Alnus* sp., *Fagus sylvatica*, *Quercus* sp. The species is attracted to window traps filled with ethanol.

Species not confirmed for the Ukraine

Pityophthorus exsculptus (Ratzeburg)

Records. ČER [Pfeffer 1955: 212; Zagajkevich 1958: 90; Pogorilyak 1973: 44; Pfeffer 1995: 175.]

Distribution. Central Europe and adjacent regions (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Picea abies* (Pfeffer 1995).

Pityophthorus knoteki Reitter

Records. ZAK [Pfeffer 1955: 217; Zagajkevich 1958: 90; Pogorilyak 1973: 44; Pfeffer 1995: 177; Knížek 2011b: 216.]

Distribution. Europe (Alps, Carpathians) (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Pinus cembra*, *P. peuce*, *P. mugo*, *P. rotundata* (Pfeffer 1995).

Pityophthorus morosovi Spessivtsev

Records. IFR [Stark 1952: 353–354; Zagajkevich 1958: 90; Pogorilyak 1973: 45.]

Distribution. North West and Central Palaearctic (North Europe, West Siberia, South Baikalian) (Stark 1952).

Material examined. No specimens from Ukraine were found.

Biology. On *Picea abies*, *P. obovata*, *Abies concolor* (Pfeffer 1995).

Pityophthorus pubescens (Marsham)

Records. “KARPATY” [Rudnev & Vasechko 1988b: 170.]

Distribution. Central Europe, Mediterranean (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Pinus* spp. (Pfeffer 1995).

Notes. In Vienna it is abundant on *Pinus nigra nigra*. It may be introduced to Crimea since occurrence of *Pinus nigra pallasiana* as a potential host plant. The species is not economically important, breeds in small twigs.

Pityophthorus traegardhi Spessivtsev

Records. IFR ZAK [Zagajkevich 1958: 91; Pogorilyak 1968: 7; Pogorilyak 1973: 45; Rudnev & Vasechko 1988b: 170.]

Distribution. North Palaearctic (Stark 1952).

Material examined. No specimens from Ukraine were found.

Biology. On *Picea abies*, *P. obovata* (Pfeffer 1995).

Cryphalus intermedius Ferrari

Records. [SW UKR] [KARPATY] [Stark 1952: 263–264; Stark 1955a: 688; Pogorilyak 1973: 38; Rudnev & Vasechko 1988b: 166; Knížek 2011b: 218.]

Distribution. Central Europe (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Larix decidua* (Pfeffer 1995).

Notes. Erroneously recorded from Ternopil (Nikulina 2005: 57).

Cryphalus saltuarius Weise

Records. ZAK [Roubal 1936: 263; Stark 1952: 267–268; Rudnev 1953a: 1152; Zagajkevich 1958: 87; Pogorilyak 1973: 37; Rudnev & Vasechko 1988b: 166; Pfeffer 1995: 185; Izhevsky *et al.* 2005: 83–84.]

Distribution. North Palaearctic (Stark 1952).

Material examined. No specimens from Ukraine were found.

Biology. On *Picea abies*, *P. obovata*, *P. orientalis*, *Abies sibirica*, *Pinus sibirica* (Pfeffer 1995).

Trypophloeus alni (Lindemann)

Records. UKR [Stark 1952: 283–284; Knížek 2011b: 226.]

Distribution. Central, Eastern and Northern Europe (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Alnus glutinosa*, *A. incana* (Pfeffer 1995), never observed both in Ukraine and in Russia by authors on *A. glutinosa*.

Trypophloeus bispinulus Eggers

Records. UKR [Sokanovsky 1954: 17.]

Distribution. North Europe (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Populus tremula* (Pfeffer 1995).

Taphrorychus siculus Eggers

Records. CRI [Sokanovsky 1954: 19; Stark 1955a: 704; Rudnev 1962: 81.]

Distribution. Sicilia, Southern Switzerland, Bosnia and Herzegovina, ?Caucasus (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Alnus* sp. (Pfeffer 1995).

Thamnurgus delphinii (Rosenhauer)

Records. CRI [Stark 1952: 312; Alexeev 1957: 159; Rudnev 1962: 80; Pfeffer 1995: 126; Knížek 2011b: 233.]

Distribution. Mediterranean region, Caucasus (Mandelstam *et al.* 2011).

Material examined. No specimens from Ukraine were found.

Biology. On *Consolida regalis*, *C. orientalis*, *Teucrium scorodonia* (Pfeffer 1995).

Thamnurgus euphorbiae (Küster)

Records. CRI [Stark 1952: 311; Rudnev 1962: 84; Knížek 2011b: 233.]

Distribution. East Mediterranean region (Mandelstam *et al.* 2011).

Material examined. No specimens from Ukraine territory were found.

Biology. In stems of *Euphorbia dendroides*, *E. wulfenii* (Pfeffer 1995).

Hylastes parallelus Chapuis

Records. ZAK [Pfeffer 1955: 114; Zagajkevich 1958: 85; Pogorilyak 1973: 33.]

Distribution. East Palaearctics (Wood & Bright 1992a).

Material examined. No specimens from Ukraine were found.

Biology. On *Picea* spp., *Pinus* spp. (Zagajkevich 1958).

Notes. Indication of this species for Ukraine in literature are not confirmed by collection material, and, according to our opinion, are erroneous. We consider reasonable to exclude this species from Ukraine Scolytinae faunal list. Most probably, in fact, the records refer to *Hylastes linearis* Erichson or to *H. ater* (Paykull).

Kissophagus novaki Reitter

Records. CRI [Pfeffer 1995: 48.]

Distribution. Central Europe, Mediterranean region (Knížek 2011b).

Material examined. No specimens from Ukraine were found.

Biology. Unknown.

Notes. Record from Ukraine is not supported by any confirmed finds.

Phloeosinus thujae serrifer Wichmann

Records. CRI [Stark 1952: 304; Rudnev 1962: 80; Rudnev & Vasechko 1988b: 168.]

Distribution. Balkans, Crimea (Stark 1952).

Material examined. No specimens from Ukraine were found.

Biology. Unknown.

Notes. Despite this species was recorded from Crimea, we able to recognize in Ukraine only *Ph. thujae thujae*.

Liparthrum genistae georgi Knotek

Records. ?CRI [Stark 1952: 241; Stark 1955a: 683; Rudnev 1962: 77; Pfeffer 1995: 89; Knížek 2011b: 211.]

Distribution. South Europe, Crimea?, Caucasus?.

Material examined. No specimens from Ukraine were found.

Biology. On *Calicotome spinosa*, *C. villosa*, *Spartium junceum*, *Anagyris foetida*, *Laburnum* spp. (Pfeffer 1995).

Liparthrum mori (Aubé)

Records. CRI [Stark 1952: 239; Stark 1955a: 683; Zagajkevich 1958: 88; Rudnev 1962: 78; Kuznetsov & Vasil'eva 1987: 67; Pfeffer 1995: 87; Knížek 2011b: 211.]

Distribution. Mediterranean countries, incl. North Africa, Asia Minor, Crimea and Caucasus (Abchasia) (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Morus alba* (Pfeffer 1995).

Notes. It was recorded for the Southern coast of Crimea (Stark 1952) this record could not be confirmed by collection material.

Ips cembrae (Heer)

Records. IFR ZAK [Roubal 1936: 272; Stark 1952: 406–407; Stark 1955a: 720; Zagajkevich 1958: 94; Pogorilyak 1973: 55; Rudnev & Vasechko 1988b: 178; Pfeffer 1995: 165; Izhevsky *et al.* 2005: 120–121.]

Distribution. Central Europe (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Larix decidua*, *L. gmelinii*, *L. sibirica*, *Picea abies* (Pfeffer 1995).

Notes. Records from Carpathians could not be confirmed by the collection materials.

Ips typographus japonicus Niisima

Records. KARPATY [Pogorilyak 1968: 7; Pogorilyak 1973: 56; Krivolutskaya 1996: 356.]

Distribution. Japan, southern Kuril Islands, coastal regions of southern Sachalin (Krivolutskaya 1996; Mandelshtam & Petrov 2009).

Material examined. No specimens available.

Biology. On *Picea* spp. (Krivolutskaya 1996).

Notes. The record of *I. typographus japonicus* from Carpathians highlands (Krivolutskaya 1996) is obviously based on misidentification of *I. amitinus*.

Phloeotribus rhododactylus rhododactylus (Marsham)

Records. CRI ZAK [Roubal 1936: 265; Stark 1952: 298; Stark 1955a: 699; Rudnev 1962: 79; Pogorilyak 1968: 7; Pogorilyak 1973: 40; Rudnev & Vasechko 1988b: 167; Pfeffer 1995: 55; Knížek 2011b: 213.]

Distribution. Middle and Southern Europe, Crimea (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Sarothamnus scoparius*, *Spartium junceum*, *Ulex europaeus*, *Laburnum* spp., *Calycotome spinosa*, and *C. villosa* (Pfeffer 1995).

Notes. Out of two known subspecies *Phl. rhododactylus rhododactylus* and *Phl. rhododactylus austriacus* only first was indicated in literature for Crimea (Pfeffer 1995). According to literature cited the species is known from Zakarpatska and Crimea regions of Ukraine.

Carphoborus teplouchovi Spessivtsev

Records. VOL [Kozak 1983: 59.]

Distribution. North and Central Europe, East Siberia, Far East (Knížek 2011b).

Material examined. No specimens available.

Biology. On *Picea abies*, *P. obovata*, *P. ajanensis* and *Larix sibirica* (Pfeffer 1995).

Notes. Records from zone of mixed forests based on misidentification of *C. minimus* (Kozak 1983). The data on the biology given by Kozak also correspond to *Carphoborus minimus*.

Scolytus amygdali Guérin-Ménéville

Records. CRI [Pfeffer 1995: 104; Knížek 2011b: 237.]

Distribution. Mediterranean countries (Pfeffer 1995).

Material examined. No specimens from Ukraine were found.

Biology. On *Amygdalus communis*, *Armeniaca vulgaris*, and *Persica vulgaris* (Pfeffer 1995).

Notes. For the first time indicated for Crimea in Pfeffer's key (1995) and later in the palaeartic Catalogue of beetles (Knížek 2011b). However, authors did not recognize specimens originating from the Ukraine territory.

Scolytus dahuricus Chapuis

Records. ŽIT [Sokanovsky 1930: 803.]

Distribution. East Palearctic (Knížek 2011b: 237).

Material examined. No specimens from Ukraine were found.

Biology. On *Ulmus* spp., *Betula costata* (Stark 1952).

Notes. Far Eastern species was indicated by B.V. Sokanovsky (1930) from the environs of Zhytomyr. Later he wrote about the same specimen that it is in fact a variety of *S. mali* with prolonged abdomen bearing median sulcus and long pubescence (Sokanovsky 1954). It was misidentified by Eggers as *S. dahuricus*.

Scolytus jaroschewskii Shevyrew

Records. CRI [Eggers 1914a: 185–186; Korotnev 1926: 66; Stark 1952: 109; Sokanovsky 1954: 14; Stark 1955a: 660; Rudnev 1962: 72; Pfeffer 1995: 97; Knížek 2011b: 238.]

Distribution. Crimea, Caucasus (Stark 1952), Zentral Asia (Pfeffer 1995; Petrov 2005).

Material examined. No specimens from Ukraine were found.

Biology. On *Elaeagnus angustifolia*, *Ulmus laevis*, *U. minor* (Pfeffer 1995).

Notes. Besides the record by Eggers (1914) who described it as *S. tauricus*, a junior synonym of *S. jaroschewskii*, no further findings of this species in Ukraine were recorded. Apparently *S. jaroschewskii* can be also found in eastern provinces adjacent to Rostov Province of Russian Federation where it is known.

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