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**A faunal study of Bark beetles
(Coleoptera: Curculionidae: Scolytinae)
in Guilan province in North of Iran**

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Abstract

During the study of the Scolytinae fauna in Guilan province (North of Iran), twelve bark beetle species belonging to 5 genera in subfamily Scolytinae were collected and identified. In this study three species, *Scolytus pygmaeus* (FABRICIUS 1787), *Taphrorychus lenkoranus* (REITTER 1913) and *Phloeotribus caucasicus* (REITTER 1891) are recorded for the first time for Iranian fauna.

Key words: Coleoptera, Curculionidae, Scolytinae, Taxonomy, Fauna, New record, Iran.

Zusammenfassung

Beim Studium der Scolytinae Fauna der Provinz Guilan (Nordiran), wurden 12 Rüsselkäfer-Arten festgestellt und bestimmt. Es handelt sich um Vertreter von 5 Genera der Subfamilie Scolytinae. Weiters konnten in dieser Arbeit 3 Arten: *Scolytus pygmaeus* (FABRICIUS 1787), *Taphrorychus lenkoranus* (REITTER 1913) und *Phloeotribus caucasicus* (REITTER 1891) als neu für die Fauna des Iran festgestellt werden.

Introduction

Bark beetles are in subfamily Scolytinae (Coleoptera: Curculionidae: Scolytinae) (KUSCHEL et al. 2000). These beetles are among the most common borer beetles associated with wood packing materials (HACCK 2003). Bark beetles have approximately 220 genera with 6000 species in the world (WOOD 1982). Because of economical importance of these species in the forest, many studies have been done on this group of pests (MAY 1994; OBERPRIELER et al. 2007). The majority of species live in woody plants. They feed commonly on the phloem (bark beetles) or on fungi that grow in their tunnels in the wood (ambrosia beetles) (WOOD 1982). Most species prefer dead or dying host material but some are known to attack live trees that can lead to large-scale mortality, often involving plant pathogens transmitted by the beetles (WOOD 1982). Most bark beetle species are harmless to healthy living trees, but some, notably the spruce bark beetle *Ips typographus* (L.), can attack and kill healthy trees. *Pityogenes chalcographus* (L.) can also attack and kill trees, but it does not seem to threaten healthy trees (HEDGREN 2004).

Guilan province is located in the north of Iran bordered clockwise by Mazandaran, Qazvin and Zanjan provinces. Bark beetles fauna has been rarely studied in Guilan province (MODARERSE AWAL 1997). This study provides a list of Scolytinae species in Guilan province. In the current study twelve species including three new records are reported from Guilan province in the North of Iran.

Materials and Methods

This study was conducted in Guilan province during 2010-2011. By using a gardening knife and a small brush, specimens were collected under the bark of different trees and put in 1.5cc microtubes with labels containing host, collecting date and place. Specimens were identified with relevant taxonomic keys and identifications were confirmed by Dr. Michail Mandelshtam (Russia) and Sarah M. Smith (USA). All specimens were deposited at the insect collection of Natural history museum in University of Guilan, Iran.

Result

Twelve species belonging to 5 tribe and 6 genera of subfamily Scolytinae (Coleoptera) have been collected in this investigation. Three species among collected specimens are considered as new record for Iranian fauna.

Subfamily Scolytinae

Tribe Scolytini LATREILLE 1804

Scolytus ensifer (EICHHOFF 1880)

Material examined: Iran, Guilan province: Sangar, 47.4 m, (37°08'48"N - 49°40'11"E) August 2010. Emam zade hashem, 79.6 m, (37°05'30"N, 49°39'16"E) July 2010, Lahijan, -42.5 m, (37°12'26"N - 50°00'14"E) July 2010.

Comments: On *Ulmus minor* MILLER.

Distribution: Italy, Central Europe, Greece, Ukraine, Azerbaijani, Iran (PFEFFER & K1,ä(. 1995).

Scolytus ecksteini (BUTOVITSCH 1829)

Material examined: Iran, Guilan province: Sangar, 47.4 m, (37°08'48"N - 49°40'11"E) August 2010, Emam zade hashem, 79 m, (37°05'30"N - 49°39'16"N) July 2010, Lahijan, -42.5 m, (37°12'26"N - 50°00'14"E) July 2010.

Comments: on *Ulmus minor* MILLER.

Distribution: Turkmenistan, Azerbaijani (PFEFFER & K1,ä(. 1995).

Scolytus rugulosus (MÜLLER 1818)

Material examined: Iran, Guilan province: Lahijan, -42.5 m, (37° 12' 26" N - 50° 00' 14" E) July 2010, Lasht-e-nesha, -16.2 m, (37°21'58"N - 49°51'32"E) August 2010, Asalem, 164 m, (37°38'00"N - 48°48'07"E), Koochesfahan, 18 m, (37°16'46"N - 49°46'20"E), Sangar, 47.4 m, (37°08'48"N - 49°40'11"E), Shaft, 43.4 m, (37°09'46"N - 49°24'07"E), Astaneh-ye-Ashrafiyeh, -10 m, (37°15'07"N - 49°56'58"E), Khoshkebijar, -13.9 m, (37°22'24"N - 49°45'36"E).

Comments: on *Prunus* sp., *Malus* sp.

Distribution: Europe, North of Africa, West of Siberia, Asia Minor (PFEFFER & K1,ä(. 1995).

Scolytus mali (BECHSTEIN 1805)

Material examined: Iran, Guilan province: Lahijan, -42.5 m, (37°12'26"N - 50°00'14"E) July 2010, August 2010, Shaft, 43.4 m, (37°09'46"N - 49°24'07"E), Khoshk-estalak, 21 m, (37°26'21"N - 49°50'11"E) August 2011.

Comments: on *Malus* sp.

Distribution: Central and Southern Europe, Southern Scandinavia, Caucasia, Central Asia, Siberia, Asia Minor (PFEFFER & K1,ä(. 1995).

Scolytus pygmaeus (FABRICIUS 1787)

Material examined: Iran, Guilan province: Sangar, 47.4 m, (37°08'48"N - 49°40'11"E) August 2011.

C o m m e n t s : on *Ulmus minor* MILLER.

D i s t r i b u t i o n : Central and Southern Europe, Caucasus, Crimea (PFEFFER & K1,ä(. 1995).

***Scolytus multistriatus* (MARSHAM 1802)**

M a t e r i a l e x a m i n e d : Iran, Guilan province: Sangar, 47.4 m, (37°08'48"N - 49°40'11"E) August 2010. Emam zade hashem, 79.6 m, (37°05'30"N - 49°39'16"E) July 2010, Lahijan, -42.5 m, (37°12'26"N - 50°00'14"E) July 2010

C o m m e n t s : on *Ulmus minor* MILLER.

D i s t r i b u t i o n : Russia, Europe, Ukraine, South of Moscow (PFEFFER & K1,ä(. 1995).

Tribe C r y p h a l i n i

***Hypothenemus eruditus* (WESTWOOD 1836)**

M a t e r i a l e x a m i n e d : Iran, Guilan province: Lahijan, -42.5 m, (37°12'26"N - 50°00'14"E) June 2011, Saliksar, 54.1 m, (37°09'36"N - 49°34'28" E) August 2011, Rasht, -12 m,(37°16'39" N - 49°33'55"E) September 2011.

C o m m e n t s : on *Ficus* sp. and *Morus* sp.

D i s t r i b u t i o n : Tropical and subtropical regions of Asia, Africa, America, Mediterranean areas (PFEFFER & K1,ä(. 1995).

Tribe D r y o c o e t i n i LINDEMANN 1877

***Taphrorychus lenkoranus* (REITTER 1913)**

M a t e r i a l e x a m i n e d : Iran, Guilan province: Pare-sar, Visadar cascade, 681 m, (37°35'43"N - 48°56'30"E), October 2011.

C o m m e n t s : on *Carpinus* sp.

D i s t r i b u t i o n : Armenia, Azerbaijan (PFEFFER & K1,ä(. 1995).

Tribe P h l o e o t r i b i n i CHAPIUS 1869

***Phloeotribus caucasicus* (REITTER 1891)**

M a t e r i a l e x a m i n e d : Iran, Guilan province: Roodbar, 684 m, (36°48'49"N - 49°27'26"E), August 2011, October 2011.

C o m m e n t s : on *Olea* sp.

D i s t r i b u t i o n : Caucasus, southern Ukraine, central Asia, and Austria (PFEFFER & K1,ä(. 1995).

Tribe *Hypoborini* NÜSSLIN 1911

Hypoborus ficus (ERICHSON 1836)

Material examined: Iran, Guilan province: Lahijan, -42.5 m, (37°12'26"N - 50°00'14" E) July 2010, Rasht, -12 m, (37°16'39"N - 49°33'55"E) August 2011.

Comments: on *Ficus* sp.

Distribution: Canary Islands, The Mediterranean (PFEFFER & K1,ä(. 1995).

Tribe *Ipini* BEDEL 1888

Orthotomicus erosus (WOLLASTON 1857)

Material examined: Iran, Guilan province: Rasht 47.4 m, (37°08'48"N - 49°40'11"E), August 2011, Saraavaan forest, 66.2 m, (37°05'50"N - 49°30'09"E) July 2011.

Comments: on *Pinus* sp.

Distribution: It is native of Asia and Europe, South of Europe, Crimea, Caucasus, Asia Minor, Mediterranean Islands, North of Africa, Madeira (PFEFFER & K1,ä(. 1995).

Tribe *Phloeosinini* NÜSSLIN 1912

Phloeosinus aubei (PERRIS 1855)

Material examined: Iran, Guilan province: Sangar 47.4 m, (37°08'48"N - 49°40'11"E), October 2011.

Comments: on *Juniperus* sp.

Distribution: Mediterranean areas, Crimea, Caucasus, Armenia, Turkmenistan, Part of Austria, Part of tropical Africa, North of Central Europe, South of Slovakia (PFEFFER & K1,ä(. 1995).

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Buchbesprechung

BLÖSCH M.: **Grabwespen**. Illustrierter Katalog der einheimischen Arten. – NBB Scout, Band 2, Westarp Wissenschaften, Hohenwarsleben, 2012. 219 S.

Grabwespen zeigen ein faszinierendes, hochkomplexes Verhaltenssystem, welches sich in einem komplizierten Fortpflanzungsverhalten, verschiedenen Grabtechniken beim Nestbau, unterschiedlichen Jagdmethoden und diversen Formen des Beutetransportes, des Nestverschließens, der Abwehr von Parasitoiden sowie der Orientierung äußert.

In diesem kompakten Taschenbuch (in der Tat im Taschenformat von 15 x 11 cm) werden alle 246 derzeit aus Deutschland bekannten Arten aufgelistet und mit Farbfotos anhand von 137 ausgewählten Arten (viele davon in beiderlei Geschlecht) dargestellt. Zum Teil sind auch Vertreter der weiteren 63 aus Österreich und der Schweiz bekannten Arten berücksichtigt. Da das Hauptverbreitungsgebiet in den wärmeren Zonen nördlich der Alpen liegt, erreichen viele Arten bei uns die nördliche Grenze ihrer Verbreitung. Systematisch werden die Grabwespen (Spheciformes) heute in die drei Familien Ampulicidae, Sphecidae und Crabronidae eingeteilt. Auf eine kurze Einleitung folgt der illustrierte Artenkatalog, dessen Kurzbeschreibungen Kennzeichen, Größe, Flugzeit, Verbreitung, Lebensraum und Lebensweise beinhaltet. Gegebenfalls werden bei bestimmten Gattungen weitere Arten kurz erwähnt.

Als Biologe hätte man sich vielleicht einen Bestimmungsschlüssel zu den Gattungen gewünscht, ansonsten gibt es an diesem fantastischen Büchlein nichts auszusetzen. Eine sehr schöne, kompakte Darstellung dieser auffälligen, aber oft zu wenig berücksichtigten Insektengruppe.

R. Gerstmeier

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