New faunistic records of Curculionoidea (Coleoptera: Cucujiformia) from Oman

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Abstract. This communication reports on records of fourteen species and three morphospecies from Oman. Squamapion sp., Nanophyes sp., Schoenherr, 1838, Hoplopodapion tibesticola (Alonso-Zaragaza, 1983), Aegyptobaris arctithorax (Pic, 1899), Eumycterus albosquamatus Boheman, 1838, Proceses filum (Marshall, 1933), Rhamphus micros Colonelli, 2009, Sharpia sabulicola Colonelli, 2009, Smicronyx (Smicronyx) rufipennis Tournier, 1874, Amblyrhinus cylindricollis Magnano, 2009, Myllocerus undecimpustulatus Faust, 1891, Cosmogaster coryphus (Färreaeus, 1842), Hypolixus nubilusus (Boheman, 1836), Microlarinus irregularis Colonelli, 2009 are from norther Oman and Araecerus sp., Cylindroides bifasciatus (Quenedfeldt, 1887), Orfilaia arabica (Muizon, 1954) from Dhofar in southern Oman.

Keywords: Weevil, beetle, Coleoptera, distribution, Arabian Peninsula.

Curculionoidea is a large group of phytophagous Coleoptera. Members of this superfamly are known as “sn” beetles” or “weevils”. They are usually characterized by long and slender snout, geniculate antennae generally inserted on the snout and generally compact antennal club. The Curculionoidea fauna of Oman is poorly known with few studies in the literature. For example, Rheinheimer (2003) described Systates omanicus (=Nematocerus omanicus) and Magnano et al. (2009) reported 4 only species.

Despite the poor knowledge of Omani weevils, several studies have been carried out in areas in the Arabian Peninsula surrounding Oman. Some data on Curculionoidea fauna from Saudi Arabia, Yemen, UAE and a few from Oman have been published previously in Voss (1971); Colonelli (1985); Wanat (1990); Caldara (1993); Rheinheimer (2003); Harten (2005); Meregalli & Colonelli (2006); Meregalli (2008) and Magnano et al. (2009). The objective of this paper is to present additional records of Curculionoidea from Oman based on specimens collected in the country since 2008 and deposited in the private collection of the lead author. The lead author will deposit the specimens in the Oman Natural History Museum after death. The specimens were collected by using a sweeping net, an aspirator or by handpicking. The specimens were killed with ethyl acetate. The specimens were collected legally under the Permit n° 6210/10/87 issued by the Ministry of the Environment and Climate Affairs. Species are listed alphabetically in the list below. Records are presented following the standardized format of town, locality name, geographic coordinates, date of collection (day, month, year), number of specimens and collecting method.

In total 27 specimens were collected. Fourteen species and three morphospecies within three families of Curculionoidea are new records for Oman. Anthribidae: Araecerus sp., Cylindroides bifasciatus (Quenedfeldt, 1887), Orfilaia arabica (Muizon, 1954); Brentidae: Orfilaia arabica (Muizon, 1954), Hoplopodapion tibesticola (Alonso-Zaragaza, 1983), Nanophyes sp.; and Curculionidae: Aegyptobaris arctithorax (Pic, 1899), Eumycterus albosquamatus Boheman, 1838, Proceses filum (Marshall, 1933), Rhamphus micros Colonelli, 2009, Sharpia sabulicola Colonelli, 2009, Amblyrhinus cylindricollis Magnano, 2009, Myllocerus undecimpustulatus Faust, 1891, Hypolixus nubilusus (Boheman, 1836), Microlarinus irregularis Colonelli, 2009, Smicronyx (Smicronyx) rufipennis Tournier, 1874. The identification of the weevil species was based in the work of Magnano et al. (2009) from UAE. Weevil expert Dr. Enzo Colonelli from Italy identified 2 species.

Species list
Anthribidae Billberg, 1820
Araecerus Schönherr, 1823
Araecerus sp. Fig. 1
Specimen examined: Dhofar, Ain Ishat, 17.003 N 53.840 E, 9.ii.2018, 1 ♂ , light trap, leg. A. Al-Jahdhami.
Distribution: Cosmopolitan species (Alonso-Zaragaza et al. 2017).

New record for Oman.
Notes: Araecerus species are important storage pests of some crops such as cocoa (Malvaceae) and coffee (Rubiacese) (Barrere 2008). Both plant families grow in Oman and the Arabian Peninusula. Coffee is cultivated as an economic crop in both Oman and Saudi Arabia. We collected this species from wadi habitat in the Dhofar region. This fertile region of southern Oman has a microclimate with monsoon rains from the Indian Ocean and lower temperatures during May to September. The biogeography of the Dhofar region is strongly affected by the Afrotropical region (Al-Jahdhami 2021).

Anthribidae Billberg, 1820
Corrhecerini Lacordaire, 1865
Cylindroides Fairmaire, 1886
Cylindroides bifasciatus (Quenedfeldt, 1887) Fig. 2
Specimen examined: Dhofar, Ain Ishat, 17.003 N 53.840 E, 9.ii.2018, 1 ♂ , light trap, leg. A. Al-Jahdhami.
Distribution: Saudi Arabia (Alonso-Zaragaza et al. 2017).

New record for Oman.
Notes: Based on our observations, this species seems to be restricted to the microclimate of Dhofar region which is adjacent to Yemen.
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Brentini Billberg, 1820
Orfíolia Haedo Rossi, 1955
Orfíolia arabica (De Muizon, 1954) Fig. 3
Specimen examined: Dhofar, Ain Ishtat, 17.003 N 53.840 E, 9.ii.2018, 2 ♀, light trap, leg. A. Al-Jahdhami.
Distribution: Only previously known from Yemen (Alonso-Zarazaga et al. 2017). New record for Oman.
Notes: This species seems to be restricted to the microclimate of the Dhofar region adjacent to Yemen.

Apioninae Schönherr, 1823
Apionini Schönherr, 1823
Hoplopopodon Solari, 1933
Hoplopopodon tibeticola (Alonso-Zarazaga, 1983) Fig. 4
Specimen examined: Al Mudhaibi, Al warjiah, 22.986N 58.292E, 1 ♀, 21.vi.2019, hand net, leg. A. Al-Jahdhami.
Distribution: Algeria, Chad (Hoffmann 1962) and UAE (Magnano et al. 2009). New record for Oman.
Notes: This species reproduces on xeric habitats such as the flowers of Tamarix and Reaurnia (Tamaricaceae), and on Calligonum (Polygonaceae) (Magnano et al. 2009). We collected this from Tamarix from wadi habitat.

Squamapion Bokor, 1923
Squamapion sp. Fig. 5
Al Mudhaibi, Samad Ashan, 22.856N 58.122E, 1 ♀, 30.v.2020, attracted to light, leg. A. Al-Jahdhami.
Distribution: Asia, Europe, Africa (Alonso-Zarazaga et al. 2017). New record for Oman.
Notes: The specimens of Squamapion from UAE could not be named, due to the lack of recent revision of the difficult genus Squamapion (Magnano et al. 2009). The biology of all members of Squamapion are known to live on Lamiaceae Magnano et al. 2009).

Nanophyinae Gistel, 1848
Nanophyini Gistel, 1848
Nanophyes Schönherr, 1838
Nanophyes sp. Fig. 6
Specimens examined: Al Mudhaibi, Al Khadhra, 22.778N 58.008E, 3 ♀ 1 ♂, 14.iii.2020, hand net, leg. A. Al-Jahdhami.
Distribution: Asia, Europe, Africa (Alonso-Zarazaga et al. 2017). New record for Oman.
Notes: The specimens of Nanophyes from UAE is not identified to species level; due to the systematics of this widespread genus, which are hard to differentiate (Magnano et al. 2009). The specimen was collected from flowers of Tamarix (Tamaricaceae). We believe this species reproduces on flowers of Tamarix due to the high number of Nanophyes found in this plant from different localities in northern Oman.

Curculionidae Latreille, 1802
Conoderinae Schönherr, 1833
Baridini Schönherr, 1836
Aegyptobaris Pic, 1899
Aegyptobaris arctithorax (Pic, 1899) Fig. 7
Specimens examined: Al Mudhaibi, Samad Ashan, 22.827N 58.151 E, 1 ♀, 3.v.2019, handpicking, leg. A. Al-Jahdhami.
Distribution: Egypt (Hustache 1938) and UAE (Magnano et al. 2009). New record for Oman.
Notes: Larvae of A. arctithorax induce galls on stems of Portulaca oleracea (Magnano et al. 2009). This member of Portulacaceae is widespread across Oman.

Neoscharpiini Hoffmann, 1956
Eumycerus Schönherr, 1838
Eumycerus albosquamulatus Boheman, 1838 Fig. 8
Specimen examined: Al Mudhaibi, Samad Ashan, 22.827N 58.151 E, 1 ♀, 3.v.2019, handpicking, leg. A. Al-Jahdhami.
Distribution: Afghanistan, Algeria, Cyprus, Ethiopia, Greece, Iran, Iraq, Jordan, Lebanon, Syria, Tunisia, Turkey, Turkmenistan, Uzbekistan (Normand 1937; Hustache 1938; Zumpt 1938; Voss 1959; Korotyaev 2002) and UAE (Magnano et al. 2009). New record for Oman.
Notes: We collected this specimen from wild vegetation in a wadi habitat near date palm gardens.

Cossosonia Schönherr, 1825
Proecini Voss, 1956
Proecus Schönherr, 1838
Proecus filum (Marshall, 1933)
Specimens examined: Northern Oman (no precise location). Distribution: Democratic Republic of Congo and UAE (Magnano et al. 2009). New record for Oman.
Notes: Proecus filum breeding inside dead petioles of oil palm Elaeis guineensis (Arecaceae) and it is strongly considered to have been introduced into the UAE in conjunction with the cultivation of that plant (Magnano et al. 2009). We found this species on a sticky trap accidently hung on date palm (Phoenix dactylifera) fronds for dubas bug monitoring. Unfortunately, collection details were not fully documented at the time. This is the second report of this introduced species in Arabian Peninsula. We believe it is reproducing on date palm due to the similarity of the two plant host family.

Curculioninae Latreille, 1802
Rhamphini Rafinesque, 1815
Rhamphus Clairville, 1798
Rhamphus micros Colonelli, 2009
Specimens examined: Alkhoudh, Oman Botanical Garden, 23.559N 58.129E, 1 ♀ 1 ♂, 18.ix.2018, Light trap, leg. Asma Al-Jaradi.
Distribution: UAE (Magnano et al. 2009). New record for Oman.
Notes: This species is previously known only from UAE, collected by beating branches of Acacia tortilis (Fabaceae). Larvae biology shows Rhamphus species are leafminers, and their small size is most probably an adaptive response to the selective pressure in extremely dry climates (Magnano et al. 2009). This specimen was collected by light trap from Oman Botanical Garden. There are several species of Acacia grow in the garden, but the Acacia tortilis is the most abundant.

Smicronychini Seidlitz, 1891
Sharpia Tournier, 1873
Sharpia sabulicola Colonelli, 2009 Fig. 9
Specimens examined: Al Mudhaibi, Samad Ashan, 22.856N 58.122E, 1 ♀ 1 ♂, 25.v.2020, attracted to light, leg. A. Al-Jahdhami.
Distribution: UAE (Magnano et al. 2009). New record for Oman.
Notes: This species was previously only known from UAE from the base of grazed Convolvulus prostratus (Convolvulaceae), growing on sandy dunes (Magnano et al. 2009).
Smicronyx (Smicronyx) rufipennis Tourner, 1874 Fig. 10
Specimens examined: Al Mudhaibi, Samad Ashan, 22.856N 58.122E, 1 ♀, 25.v.2020, hand picking, leg. A. Al-Jahdhami.
Distribution: Northern Africa, Sudan, Camerun, Congo (Hoffmann 1965) and UAE (Magnano et al. 2009). New record for Oman.
Notes: All members of Smicronyx of the nomenclotypical subgenus whose biology is known live on Cuscutaceae, and just a few of them live on Gentianaceae, as most probably develops on Cuscuta planiflora in UAE (Magnano et al. 2009). We collected this specimen from date palm gardens, which the Cuscuta planiflora is common.

Entiminae Schönherr, 1823
Cyplicerini Lacordaire, 1863
Amblyrhinus Schönherr, 1826
Amblyrhinus cylindricollis Magnano, 2009 Fig. 11
Specimens examined: Alkhoudh, Oman Botanical Garden, 23.559N 58.129E, 1 ♀ 1 ♂, 18.ix.2018, Light trap, leg. Asma Al-Jaradi.
Distribution: UAE (Magnano et al. 2009). New record for Oman.
Notes: This species is described from UAE and the host plant is unknown. We observed this species on the branches of Acacia tortilis (Fabaceae), but we are not certain this was the host plant.

Cyplicerini Lacordaire, 1863
Mylocerus Schönherr, 1823
Mylocerus undecimpustulatus Faust, 1891 Fig. 12
Specimen examined: Alkhoudh, Oman Botanical Garden, 23.559N
Figs. 1-15. Habitus of Curculionoidea: 1. *Araecerus* sp.; 2. *Cylindroides bifasciatus* (Quedenfeldt, 1887); 3. *Orfilaia arabica* (De Muizon, 1954); 4. *Hoplopodapion tibesticola* (Alonso-Zarazaga, 1983); 5. *Squamion* sp.; 6. *Nonophyes* sp.; 7. *Aegyptobaris arctithorax* (Pic, 1899); 8. *Eumycterus albosquamulatus* Boheman, 1838; 9. *Sharpia sabulicola* Colonnelli, 2009; 10. *Smicronyx (Smicronyx) ruflpennis* Tournier, 1874; 11. *Amblyrhinus cylindricollis* Magnano, 2009; 12. *Myloceorus undecimpustulatus* Faust, 1891; 13. *Cosmogaster cordofanus* (Fåhraeus, 1842); 14. *Hypolixus nubilosus* (Boheman, 1836); 15. *Micolarinus irregularis* Colonnelli, 2009.
58.129E, 1°, 18.ix.2018, Light trap, leg. Asma Al-Jaradi.

Distribution: India, Bangladesh, Pakistan (Ramamurthy & Gai 1988) and UAE (Magnano et al. 2009). New record for Oman.

Notes: A polyphagous weevil, which occasionally damages cultivated economic crops or ornamental plants (Ramamurthy & Gai 1988). We found this species in Oman Botanical Garden and a mango garden. Certainly, it is a pest on several plants in Oman.

**Lixinae Schönherr, 1823**

Cleonini Schönherr, 1822

Cosmolixus Desbrochers des Loges, 1898

Hypolixus Desbrochers des Loges, 1898

Hypolixus nubilous (Bohemian, 1836) Fig. 14

Specimens examined: Al Mudhaibi, Samad Ashan, 22.827N 58.151 E, 2°, 25.v.2020, handpicking, leg. A. Al-Jahdhami.

Distribution: Saudi Arabia, Sudan, Djibouti, Ethiopia, Niger, Senegal (Faust 1904; Hustache 1925; Csiki 1934; Marshall 1950) and UAE (Magnano et al. 2009). New record for Oman.

Notes: This species is found mostly in cultivated areas, and seems to be polyphagous.

**Lixini Schönherr, 1823**

Hypolixus Desbrochers des Loges, 1898

Hypolixus nubilous (Bohemian, 1836) Fig. 14

Specimens examined: Al Mudhaibi, Samad Ashan, 22.827N 58.151 E, 2°, 25.v.2020, handpicking and light trap, leg. A. Al-Jahdhami.

Distribution: Egypt, Jordan, Syria, Iraq, Sudan, Cyprus, Ethiopia, Chad, Niger, Senegal, Togo, Congo (Csiki 1934; Marshall 1950) and UAE (Magnano et al. 2009). New record for Oman.

Notes: This species was attracted to a light trap and was found on the branches of Acacia tortilis (Fabaceae).

Microxanthon irregularis Colonelli, 2009 Fig. 15

Specimens examined: Al Mudhaibi, Samad Ashan, 22.827N 58.151 E, 2°, 3.v.2019, handpicking, leg. A. Al-Jahdhami.

Distribution: UAE (Magnano et al. 2009). New record for Oman.

Notes: This species is described from UAE, collected under the prostrate branches of Tribulus pentandrus (Zygophyllaceae) (Magnano et al. 2009). We found this species from this same plant host in Oman.

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Authors’ contributions

Ali A. Al-Jahdhami performed species identification, reviewed the literature and wrote the manuscript. All authors performed data collection.

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