

FAUNISTIC REPORT ON GENUS *HYLAEUS* FABRICIUS, 1793 (HYMENOPTERA: COLLETIDAE) FROM ANATOLIA (TÜRKIYE), WITH TWO NEW RECORDS FOR THE COUNTRY

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ABSTRACT

This study contributes to the knowledge of genus *Hylaeus* Fabricius, 1793 (Hymenoptera: Colletidae) in Türkiye based on specimens collected from Diyarbakır and Bingöl provinces in eastern Türkiye between 2016–2021. For eastern Türkiye 19 species of *Hylaeus* were recorded. Among them, *Hylaeus (Dentigera) alievi* Dathe & Proshchalykin, 2021 and *Hylaeus (Hylaeus) hungaricus* (Alfken, 1905) are new records for the Turkish fauna. Collection localities, distributions and photographs of all species are provided.

Keywords: Hymenoptera, Colletidae, *Hylaeus*, new records, Türkiye.

RESUMEN

Informe faunístico del género *Hylaeus* Fabricius, 1793 (Hymenoptera: Colletidae) de Anatolia (Türkiye), con dos nuevos registros para el país

Este estudio contribuye al conocimiento de la fauna del género *Hylaeus* Fabricius, 1793 (Hymenoptera: Colletidae) en Turquía con base en especímenes recolectados en las provincias de Diyarbakır y Bingöl ubicadas en el este de Turquía entre 2016 y 2021. Para la parte oriental de Turquía, 19 especies del género *Hylaeus* han sido identificadas. De estas, dos especies, a saber, *Hylaeus (Dentigera) alievi* Dathe & Proshchalykin, 2021 e *Hylaeus (Hylaeus) hungaricus* (Alfken, 1905) son nuevos registros para la fauna turca. Se proporcionan localidades de colecta, distribuciones y fotografías de todas las especies.

Palabras clave: Hymenoptera, Colletidae, *Hylaeus*, nuevos registros, Turquía.

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Introduction

The world bees are comprised of roundly 20 000 species of seven families: Andrenidae, Apidae, Colletidae, Halictidae, Megachilidae, Melittidae, and Stenotritidae (Michener, 2007; Ascher & Pickering, 2021). Among these families, the Colletidae family contains more than 2700 species worldwide (Zhou *et al.*, 2020). This family is represented in the Palearctic region with only two genera including *Colletes* Latreille, 1802 (Colletinae) and *Hylaeus* Fabricius,

1793 (Hylaeinae) (Michener, 2007). The genus *Hylaeus* contains 55 subgenera and more than 750 species worldwide (Michener, 2007; Dathe, 2015; Ascher & Pickering, 2021). The genus *Hylaeus* has more than 200 species belonging to 11 subgenera from the Palearctic region (Michener, 2007; Proshchalykin & Dathe, 2012, 2016, 2017; Dathe, 2015). Türkiye's *Hylaeus* fauna consists of 86 species belonging to 10 subgenera (Özbek & Dathe, 2020). Previous studies have been carried out on *Hylaeus* in Türkiye (Alfken, 1931; Warncke, 1972, 1981, 1992; Özbek,

1977; Çalmaşur & Özbek, 1999; Dathe, 2000; Özbek, 2008a, 2008b, 2011; Özbek & Dathe, 2020); however, the genus is still poorly known in this country.

In this study, a list of 19 species of Turkish *Hyleaus* with two new records is presented together with notes on their local and general distributions.

Material and methods

This study is based on specimens of the genus *Hyleaus* Fabricius, 1793 collected from Diyarbakır and Bingöl provinces located in the east of Türkiye between 2016–2021 (Fig. 1). Samples were collected with a sweep net in various localities, killed within ethyl acetate and pinned and labeled with needles suitable for body sizes subsequently. All samples were collected by Emin Kaplan and determined to species by Holger Dathe (Germany). Both classification and nomenclature followed Michener (2007) and Ascher & Pickering (2021). Photographs of morphological characters of adults were taken by using a digital camera attached to a stereomicroscope. The material is stored in Emin Kaplan's individual collection of the Department of Plant Protection, Faculty of Agriculture, Bingöl University (Bingöl-Türkiye). Local distributions are given according to biogeographic regions of Anonymous (2023).

Results

Family **Colletidae** Lepelletier, 1841
 Subfamily **Hylaeinae** Viereck, 1916
 Genus ***Hyleaus*** Fabricius, 1793
 Subgenus ***Abrupta*** Méhely, 1935

Hyleaus (Abrupta) cornutus Curtis, 1831 (Figs. 2a, 3a)

MATERIAL EXAMINED (Total 27 ♀♀, 63 ♂♂). **Bingöl**, Ağaçyolu, N 38° 56' 00.33", E 40° 30' 13.10", 1528 m, 22.V.2019, ♂; Akdurmuş, N 38° 50' 40.56", E 40° 28' 30.44", 1467 m, 23.V.2019, ♂; Beyaztoprak, N 38° 54' 53.68", E 40° 37' 25.71", 1067 m, 13.VI.2021, ♀; Büyükterkören, N 38° 49' 31.73", E 40° 34' 04.84", 1005 m, 29.V.2019, ♂; Çeltiksuyu, N 38° 51' 51.72", E 40° 34' 23.38", 1022 m, 16.V.2019, 2♂♂; N 38° 51' 53.01", E 40° 53' 44.99", 1016 m, 29.V.2019, ♂; Çevrîmpınar, N 38° 55' 49.40", E 40° 22' 12.63", 1318 m, 15.V.2019, ♀; Çiçekdere, N 38° 56' 57.98", E 40° 27' 04.84", 1379 m, 27.V.2017, ♀, ♂; Dikköy, N 38° 49' 21.02", E 40° 40' 33.96", 1010 m, 18.V.2019, ♂; Elmalı, N 38° 61' 30.13", E 40° 43' 30.27", 1352 m, 27.V.2017, ♀; Garip, N 38° 47' 20.82", E 40° 33' 24.93", 995 m, 19.V.2021, ♀; Gözler, N 38° 56' 44.27", E 40° 33' 38.98", 1498 m, 22.V.2019, ♂; Gümüşlü, N 38° 45' 66.81", E 40° 28' 49.70", 1087 m, 06.V.2018, ♀; Güveçli, N 38° 51' 17.54", E 40° 31' 57.43", 1050 m, 19.V.2019, ♂; Kardeşler, N 38° 54' 48.27", E 40° 40' 05.08", 1195 m, 26.V.2019, ♂; Sancak, N 39° 58' 46.96", E 40° 41' 05.14", 1142 m, 29.V.2016, ♀; Seitgölü, N 39° 04' 51.31", E 40° 20' 07.71", 1613 m, 27.V.2017, ♀; Adaklı, N 39° 12' 59.81", E 40° 28' 09.21", 1360 m, 12.VI.2019, ♂; Genç, Dedebağı,

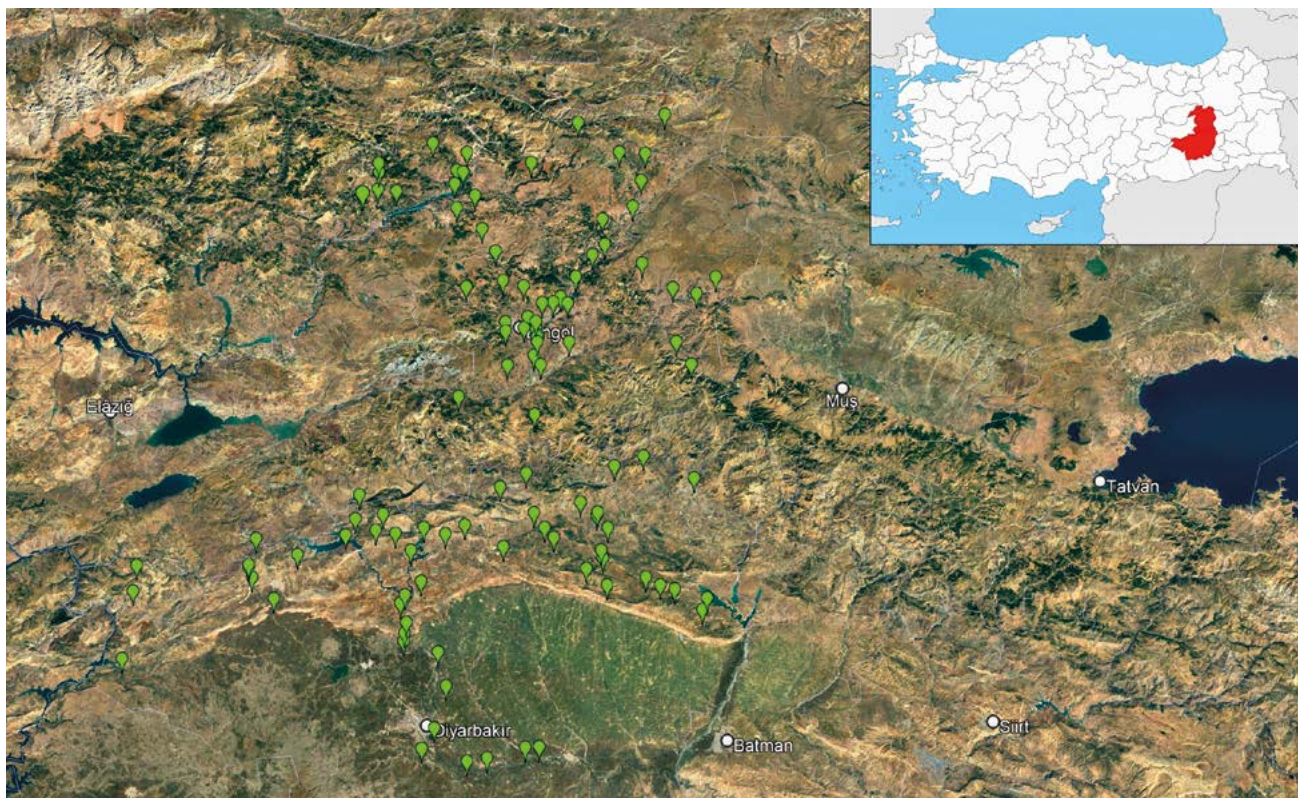


Fig. 1.— Map of the investigated area in Diyarbakır and Bingöl provinces in eastern Türkiye.

Fig. 1.— Mapa del área investigada en las provincias de Diyarbakır y Bingöl en el este de Turquía.

N 38° 40' 37.61", E 40° 19' 33.71", 1234 m, 16.V.2019, ♂; Derenköy, N 38° 45' 03.44", E 40° 40' 08.47", 1363 m, 08.V.2021, ♂; Dikpınar, N 38° 43' 24.50", E 41° 18' 35.18", 975 m, 17.V.2019, ♂; Doğanevler, N 38° 46' 14.54", E 40° 51' 18.82", 1571 m, 31.V.2020, ♂; Döşekkaya, N 38° 38' 11.11", E 40° 23' 07.23", 1015 m, 16.V.2019, ♂; Günköndü, N 38° 37' 17.87", E 40° 10' 42.03", 1651 m, 17.V.2019, ♂; Kırıcı, N 38° 39' 58.74", E 40° 27' 44.82", 1352 m, 16.V.2019, ♂; Meşedalı, N 38° 46' 45.53", E 40° 36' 49.91", 1010 m, 21.VII.2017, ♀; N 38° 47' 30.40", E 40° 38' 05.29", 1007 m, 26.VII.2017, ♀; Karlhova, Boncukgöze, N 39° 13' 45.23", E 40° 58' 21.98", 1463 m, 06.VI.2020, ♂; Hacılar, N 39° 04' 57.95", E 40° 48' 44.18", 1480 m, 28.V.2017, ♀; N 38° 05' 13.77", E 40° 48' 24.58", 1474 m, 27.V.2021, ♀; Kalencik, N 39° 09' 14.89", E 40° 54' 69.47", 1772 m, 31.V.2019, ♂; Kaşıkçı, N 39° 24' 12.94", E 41° 00' 20.64", 1917 m, 01.VI.2019, ♂; Kaynarpınar, N 39° 23' 02.82", E 40° 45' 42.74", 1767 m, 01.VI.2019, ♀; Sudurağı, N 39° 06' 52.44", E 40° 51' 06.87", 1648 m, 31.V.2019, ♂; Kiğı, Bakalı, N 39° 14' 18.36", E 40° 26' 25.80", 1126 m, 30.V.2021, ♀; Darköprü, N 39° 11' 58.53", E 40° 18' 02.73", 1226 m, 12.VI.2018, ♂; Duranlar, N 39° 15' 14.64", E 40° 21' 01.82", 1134 m, 30.V.2021, ♂; Solhan, N 38° 54' 38.51", E 40° 55' 42.87", 1210 m, 26.V.2019, ♀; Arakonak, N 38° 57' 26.93", E 41° 06' 54.36", 1612 m, 02.VI.2018, 2♂♂; Dilektepe, N 38° 56' 56.65", E 40° 59' 15.12", 1278 m, 24.V.2019, 2♂♂; Hazarşah, N 38° 58' 28.78", E 40° 35' 26.59", 1311 m, 26.V.2019, ♂; Yenibaşak Bucağı, N 38° 48' 06.69", E 41° 00' 45.85", 1481 m, 25.V.2019, ♂; Yayladere, N 39° 13' 09.93", E 40° 04' 27.53", 1486 m, 14.VI.2019, ♂; Boğazköy, N 39° 15' 13.64", E 40° 03' 32.56", 1772 m, 14.VI.2019, ♂; Yayladere, Aydınlar, N 39° 10' 24.61", E 40° 03' 53.16", 1626 m, 14.VI.2019, ♂; Günlük, N 39° 10' 19.47", E 40° 07' 41.06", 1144 m, 30.VI.2021, ♂; Yaylabağ, N 39° 10' 42.04", E 40° 05' 45.14", 1170 m, 30.V.2021, ♂. **Diyarbakır**, Ambasharabesi, N 37° 57' 57.43", E 40° 23' 31.40", 590 m, 30.IV.2017, ♂; Eretepe, N 38° 40' 33.74", E 40° 28' 26.94", 1462 m, 23.V.2019, ♂; Hantepe, N 38° 06' 19.87", E 40° 11' 44.24", 661 m, 29.III.2018, ♀; Karpuzlu, N 37° 50' 13.38", E 40° 14' 41.36", 587 m, 29.V.2017, ♂; Bismil, Ambar, N 37° 50' 50.62", E 40° 33' 13.36", 548 m, 19.III.2019, ♀; Göksu, N 37° 50' 00.00", E 40° 31' 40.57", 550 m, 19.III.2019, ♂; Çüngüş, N 38° 12' 27.82", E 39° 21' 58.48", 1000 m, 19.IV.2018, ♂; Dicle, Başköy, N 38° 23' 58.21", E 40° 14' 10.50", 1255 m, 27.III.2019, 2♂♂; Gölbaşı, N 38° 19' 50.01", E 40° 62' 06.03", 747 m, 28.III.2019, ♂; Kurudere, N 38° 23' 48.08", E 40° 01' 26.60", 995 m, 28.III.2019, ♂; Serin, N 38° 22' 45.02", E 40° 35' 00.90", 866 m, 18.IV.2019, ♂; Tepecik, N 38° 15' 20.90", E 40° 33' 56.36", 504 m, 14.V.2017, ♀; Eğil, Yatur, N 38° 09' 03.14", E 40° 10' 26.70", 663 m, 13.V.2017, ♀; N 38° 08' 09.41", E 40° 08' 56.18", 836 m, 28.III.2019, ♂; Ergani, Bozyer, N 38° 11' 04.25", E 39° 45' 19.47", 789 m, 12.V.2017, ♂; Dağlararası, N 38° 13' 27.80", E 39° 36' 46.68", 1020 m, 21.VI.2018, ♀; Değirmendere, N 38° 20' 48.68", E 39° 42' 45.71", 866 m, 24.III.2019, ♂; Pınarkaya, N 38° 14' 56.65", E 39° 42' 05.86", 860 m, 12.V.2017, ♀; Salar, N 38° 16' 01.70", E 39° 38' 59.32", 962 m, 12.V.2017, ♀; Yakacık, N 38° 16' 43.64", E 39° 49' 38.53", 933 m, 12.V.2017, ♀; Dicle, Kocaalan, N 38° 20' 50.61", E 40° 06' 59.42", 806 m, 12.V.2017, ♀; Tepebaşı, N 38° 19' 01.10", E 40° 10' 42.99", 786 m, 13.V.2017, ♂; Hani, Gürbüz, N 38° 23' 50.20", E 40° 21' 27.00", 902 m, 14.V.2017, ♂; Uzunlar, N 38° 24' 34.34", E 40° 27' 03.41", 923 m, 27.III.2019, ♂; Yukarıturalı, N 38° 28' 22.43", E 40° 27' 13.81", 988 m, 27.III.2019, ♀; Hazro, Dadaş, N 38° 16' 33.17", E 40° 42' 54.15", 1122 m, 21.V.2020, ♀; Ormankaya, N 38° 17' 59.97", E 40° 46' 48.65", 952 m, 15.V.2017, ♂; Uzunargıt, N 38°

14' 07.05", E 40° 46' 58.96", 942 m, 04.IV.2019, ♂; Ülgen, N 38° 15' 29.50", E 40° 54' 23.83", 1196 m, 26.IV.2019, ♂; Kocaköy, Saklat, N 38° 19' 44.89", E 40° 29' 36.83", 893 m, 01.IV.2019, ♂; Kulp, Narlıca, N 38° 30' 15.16", E 40° 58' 01.92", 874 m, 21.V.2017, ♀; Lice, Acar, N 38° 21' 52.84", E 40° 11' 88.34", 726 m, 20.V.2017, ♂; Tepe, N 38° 23' 47.61", E 40° 44' 15.82", 799 m, 20.IV.2019, ♂; Ziyaret, N 38° 20' 15.95", E 40° 33' 31.60", 996 m, 01.IV.2019, ♂; Yalaza, N 38° 20' 24.89", E 40° 40' 19.71", 963 m, 01.IV.2019, ♂; Silvan, Çiğdemli, N 38° 10' 55.91", E 41° 04' 22.96", 883 m, 25.IV.2019, ♂; Gürpınar, N 38° 11' 07.75", E 41° 04' 10.64", 908 m, 15.V.2017, ♂; Gürentepe, N 38° 13' 04.13", E 40° 58' 05.27", 1313 m, 14.V.2017, ♂. Frequent and common. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Adıyaman, Ağrı, Aksaray, Ankara, Bitlis, Diyarbakır, Erzurum, Hakkâri, Kars, Kırıkkale, Nevşehir, Şanlıurfa), Black Sea biogeographic region (Amasya, Bolu), Mediterranean biogeographic region (Adana, Antalya, Balıkesir, Bursa, Çanakkale, Denizli, Edirne, Hatay, İstanbul, İzmir, Kahramanmaraş, Kütahya, Mersin, Muğla, Osmaniye, Tekirdağ, Yalova) (Warncke, 1972; Özbek, 1977; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Nearctic, Palaearctic (Dathe & Proshchalykin, 2016, 2018; Khodarahmi Ghahnavieh & Monfared, 2019; Ascher & Pickering, 2021).

Subgenus *Dentigera* Popov, 1939

Hylaeus (Dentigera) alievi Dathe & Proshchalykin, 2021 (Figs. 2b, 3b)

MATERIAL EXAMINED (Total 1 ♀, 1 ♂). **Bingöl**, Nacaklı, N 39° 10' 05.38", E 40° 21' 33.32", 1537 m, 26.V.2018, ♀ (?). **Diyarbakır**, Ergani, Salar, N 38° 16' 01.70", E 39° 38' 59.32", 962 m, 12.V.2017, ♂. Rare. Host plant: *Euphorbia* spp.

COMMENT. This species is newly recorded from Türkiye.

GENERAL DISTRIBUTION. Palearctic (Proshchalykin & Dathe, 2021).

Hylaeus (Dentigera) gredleri Förster, 1871 (Fig. 3c)

MATERIAL EXAMINED (Total 2 ♂♂). **Bingöl**, İnalı, N 38° 52' 47.72", E 40° 32' 33.82", 1030 m, 20.V.2019, ♂; Yayladere, Yolgüden, N 39° 10' 37.60", E 40° 04' 16.59", 1462 m, 13.VI.2019, ♂. Rare. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ağrı, Erzurum, Hakkâri, Kars, Konya), Mediterranean biogeographic region (İzmir, Kahramanmaraş, Mersin, Nevşehir, Niğde) (Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Australian, Palearctic (Kiani Bakiani *et al.*, 2016; Ascher & Pickering, 2021).

Hylaeus (Dentigera) imparilis Förster, 1871 (Figs. 2c, 3d)

MATERIAL EXAMINED (Total 20 ♀♀, 8 ♂♂). **Bingöl**, Alatepe, N 39° 03' 17.42", E 40° 46' 58.41", 1357 m, 05.VI.2020, ♀; Altınışık, N 38° 49' 41.39", E 40° 27' 31.72", 1511 m, 23.V.2019, ♀; Büyükterkören, N 38° 49' 49.46", E 40° 34' 28.59", 1009 m, 16.V.2019, ♂; Çayağzı, N 38° 47' 57.65", E 40° 33' 40.63", 999 m, 19.V.2021, ♂; Göltepesi, N 38° 57' 05.89", E 40° 35' 40.86", 1496 m, 22.V.2019, ♀; İnalı, N 38° 52' 47.72", E 40° 32' 33.82", 1030 m, 20.V.2019, ♂; Genç, Yayla Bucağı, N 38° 38' 26.93", E 40° 30' 49.41", 1275 m, 16.V.2019, ♂; Karlhova, Viranşehir, N 39° 22' 41.05", E 40° 57' 56.43", 1843 m, 01.VI.2019, ♀; Solhan, Arakonak, N 38° 56' 49.39", E 41° 07' 40.76", 1639 m, 20.VII.2017,

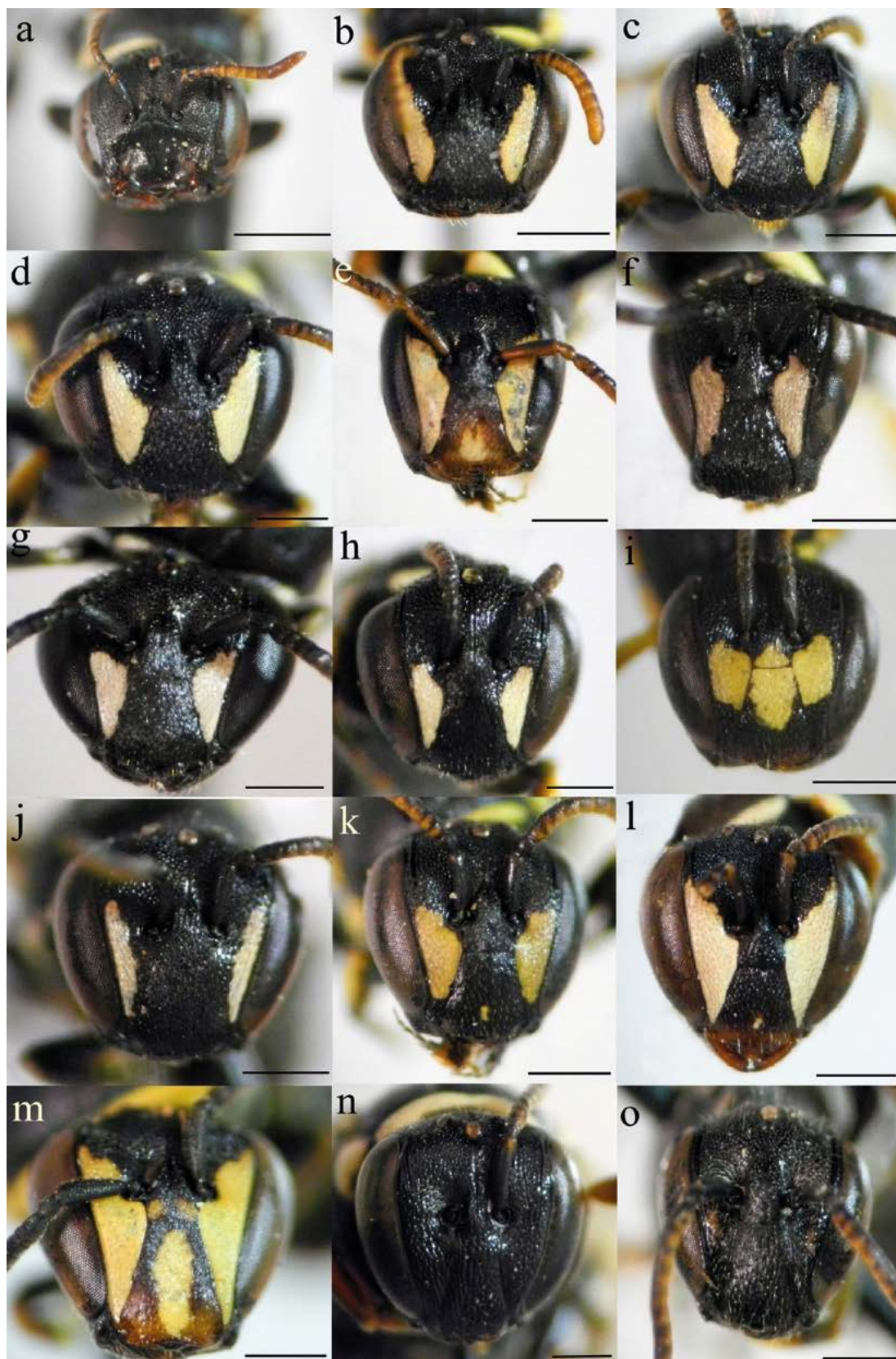


Fig. 2.— Frontal view of female *Hylaeus* Fabricius, 1793; a) *H. cornutus*, b) *H. alievi*, c) *H. imparilis*, d) *H. intermedius*, e) *H. rubicola*, f) *H. hungaricus*, g) *H. leptocephalus*, h) *H. trifidus*, i) *H. scutellatus*, j) *H. lineolatus*, k) *H. taeniolatus*, l) *H. meridionalis*, m) *H. pictus*, n) *H. rugicollis*, o) *H. longimaculus*. Scale bars: 1 mm.

Fig. 2.— Vista frontal de hembras de *Hylaeus* Fabricius, 1793; a) *H. cornutus*, b) *H. alievi*, c) *H. imparilis*, d) *H. intermedius*, e) *H. rubicola*, f) *H. hungaricus*, g) *H. leptocephalus*, h) *H. trifidus*, i) *H. scutellatus*, j) *H. lineolatus*, k) *H. taeniolatus*, l) *H. meridionalis*, m) *H. pictus*, n) *H. rugicollis*, o) *H. longimaculus*. Escala: 1 mm.

♀; Bozkanat, N 38° 51' 56.46", E 40° 52' 41.10", 1230 m, 23.V.2021, ♀; Yayladere, Akçadamar, N 39° 12' 11.02", E 40° 04' 08.93", 1385 m, 13.VI.2019, ♀. **Diyarbakır**, Sivritepe, N 38° 03' 65.75", E 40° 14' 25.19", 650 m, 23.III.2019, ♀; Çermik, Karakaya, N 38° 03' 24.42", E 39° 18' 54.30", 618 m, 13.IV.2018, ♀; Çınar, Şükürlü, N 37° 50' 57.29", E 40° 26' 13.39", 625 m, 07.V.2020, ♀; Dicle, Bahçedere, N 38° 18' 52.41", E 40° 02' 11.77", 802 m, 28.III.2019, ♀; Baltacı, N 38° 23' 17.24", E 38° 23' 17.24", 903 m, 27.III.2019, ♀; Ergani, Dağlararası, N 38° 13' 08.55", E 39° 35' 55.84", 1029 m, 21.IV.2018, ♀; Yakacık, N 38° 16' 43.64", E 39° 49' 38.53", 933 m, 12.V.2017, ♀; Hani, Süslü, N 38° 23' 28.52", E 40° 19' 01.95", 1098 m, 29.III.2019, ♂; Kalaba, N 38° 25' 52.76", E 40° 25' 02.34", 1106 m, 27.III.2019, ♀; Hazro, Dadaş, N 38° 16' 01.30", E 40° 42' 28.51", 1082 m, 04.IV.2019, ♀; Kulp, Karabulak, N 38° 29' 57.77", E 41° 03' 50.42", 985 m, 12.IV.2019, ♂; Lice, Dalhca, N 38° 23' 36.64", E 40° 47' 27.94", 790 m, 20.IV.2019, ♀; Gürbeyli, N 38° 26' 54.31", E 40° 42' 48.20", 854 m, 20.V.2017, ♂; Savat Bucağı, N 38° 20' 25.69", E 40° 39' 10.87", 997 m, 01.IV.2019, ♂; Oyuklu, N 38° 18' 58.82", E 40° 46' 26.68", 963 m, 16.V.2020, ♀; Yalaza, N 38° 20' 07.75", E 40° 41' 03.75", 919 m, 01.IV.2019, ♀; Silvan, Boyunlu, N 38° 13' 57.13", E 40° 58' 42.54", 1031 m, 25.IV.2019, ♂. Frequent and common. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ağrı, Ankara, Bingöl, Bitlis, Diyarbakır, Erzincan, Erzurum, Hakkâri, Karaman, Kayseri, Konya, Mardin, Şanlıurfa), Black Sea biogeographic region (Amasya, Artvin, Kastamonu, Trabzon), Mediterranean biogeographic region (Adana, Aksaray, Antalya, Aydın, Balıkesir, Burdur, Bursa, Denizli, Eskişehir, Hatay, İstanbul, İzmir, Isparta, Kütahya, Mersin, Muğla, Nevşehir, Osmaniye, Tekirdağ, Yalova) (Warncke, 1972; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Khodarahmi Ghahnavieh & Monfared, 2019; Ascher & Pickering, 2021).

Hylaeus (Dentigera) intermedius Förster, 1871 (Figs. 2d, 3e)

MATERIAL EXAMINED (Total 1 ♀, 8 ♂♂). **Bingöl**, Beyaztoprak, N 38° 54' 53.68", E 40° 37' 25.71", 1067 m, 22.V.2021, ♂; Ekinyolu, N 38° 54' 00.00", E 40° 34' 17.58", 1036 m, 01.VI.2021, ♂; Kardeşler, N 38° 54' 39.23", E 40° 38' 29.93", 1099 m, 06.VI.2021, ♂, ♀. **Diyarbakır**: Dicle, Yokuşlu, N 38° 24' 12.59", E 40° 01' 23.94", 921 m, 28.III.2019, ♂; Eğil, Meşeler, N 38° 14' 13.79", E 40° 11' 33.11", 845 m, 24.IV.2021, ♂; Lice, Ergin, N 38° 30' 09.96", E 40° 32' 21.33", 1016 m, 25.IV.2021, 2♂♂; Yolçatı, N 38° 23' 50.16", E 40° 41' 02.65", 910 m, 20.V.2017, ♂. Sporadic. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ankara, Bingöl, Erzincan, Erzurum, Kars, Konya), Black Sea biogeographic region (Artvin), Mediterranean biogeographic region (Antalya, Muğla) (Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Mediterranean and Black Sea countries, Palearctic (Özbek & Dathe, 2020).

Hylaeus (Dentigera) rubicola Saunders, 1850 (Figs. 2e, 3f)

MATERIAL EXAMINED (Total 3 ♀♀, 2 ♂♂). **Bingöl**, Büyükterkören, N 38° 49' 54.31", E 40° 34' 21.97", 1008 m, 19.V.2021, ♀; Karlıova, Sudurağı, N 39° 07' 01.10", E 40° 50' 50.75", 1601 m, 27.V.2021, ♂; Yayladere, Yaylabağ, N 39° 10' 42.04", E 40° 05' 45.14", 1170 m, 30.V.2021, ♀. **Diyarbakır**, Kulp, Çağlayan, N 38° 30' 47.41", E 40° 48' 47.46", 874 m, 29.IV.2021, ♂; Lice, Budak, N 38° 24' 35.20", E 40° 44' 55.07", 867 m, 29.IV.2021, ♀. Sporadic. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Black Sea biogeographic region (Konya), Mediterranean biogeographic region (Antalya, Bursa, İzmir) (Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Eastern Mediterranean and Aegean islands, Palearctic (Ornosa & Ortiz-Sánchez, 2004; Özbek & Dathe, 2020).

Subgenus *Hylaeus* Fabricius s. str.

Hylaeus (Hylaeus) communis Nylander, 1852 (Fig. 3g)

MATERIAL EXAMINED (Total 1 ♂). **Diyarbakır**, Dicle, N 37° 51' 13.82", E 40° 14' 46.09", 588 m, 30.III.2018, ♂. Frequent and common. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ankara, Bitlis, Erzincan, Erzurum, Hakkâri, Kars, Konya, Van), Black Sea biogeographic region (Amasya, Artvin, Bolu, Rize, Sinop), Mediterranean biogeographic region (Antalya, Aydın, Bursa, İzmir, Kocaeli, Kütahya, Manisa, Mersin, Nevşehir, Niğde, Yalova) (Warncke, 1972; Özbek, 1977; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Dathe & Proshchalykin, 2018; Özbek & Dathe, 2020).

Hylaeus (Hylaeus) hungaricus (Alfken, 1905) (Fig. 2f)

MATERIAL EXAMINED (Total 1 ♀). **Bingöl**, Büyükterkören, N 38° 50' 15.99", E 40° 34' 09.11", 1009 m, 24.III.2019, ♀. Rare. Host plant unknown.

COMMENT. This species is newly recorded from Türkiye.

GENERAL DISTRIBUTION. Palearctic (Ascher & Pickering, 2021).

Hylaeus (Hylaeus) leptocephalus (Morawitz, 1870) (Fig. 2g)

MATERIAL EXAMINED (Total 1 ♀). **Bingöl**, Yukarıpınar, N 38° 51' 09.52", E 40° 28' 08.13", 1465 m, 23.V.2019, ♀. Frequent and common. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ağrı, Aksaray, Ankara, Bingöl, Bitlis, Diyarbakır, Erzincan, Erzurum, Iğdır, Kars, Kayseri, Kırıkkale, Konya, Şanlıurfa, Tunceli, Van), Black Sea biogeographic region (Bayburt), Mediterranean biogeographic region (Adana, Antalya, Aydın, Balıkesir, Burdur, Bursa, Denizli, Kahramanmaraş, Kütahya, Mersin, Muğla, Nevşehir, Sakarya, Yalova) (Warncke, 1972; Özbek, 1977).

GENERAL DISTRIBUTION. Nearctic, Palearctic (Özbek & Dathe, 2020; Ascher & Pickering, 2021).

Hylaeus (Hylaeus) trifidus (Alfken, 1936) (Fig. 2h)

MATERIAL EXAMINED (Total 1 ♀). **Diyarbakır**, Eğil, Konak, N 38° 10' 44.39", E 40° 05' 08.55", 853 m, 12.V.2017, ♀. Rare. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Adıyaman, Ankara, Hakkâri, Konya, Mardin), Mediterranean biogeographic region (Balıkesir, Burdur, Eskişehir, Mersin, Muğla, Nevşehir) (Warncke, 1972, 1981; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Warncke, 1981; Dathe, 2015; Ascher & Pickering, 2021).

Subgenus *Lambdopsis* Popov, 1939

Hylaeus (Lambdopsis) scutellatus (Spinola, 1838) (Figs. 2i, 3h)

MATERIAL EXAMINED (Total 3 ♀♀, 3 ♂♂). **Bingöl**, Çayağzı, N 38° 47' 57.65", E 40° 33' 40.63", 999 m, 05.VI.2021, ♂; Kardeşler,

N 38° 54' 39.23", E 40° 38' 29.93", 1099 m, 06.VI.2021, ♂; Kiğı, Demirkanat, N 39° 13' 03.85", E 40° 19' 55.88", 1289 m, 29.V.2021, ♂. **Diyarbakır**, Çüngüş, Keleşevleri, N 38° 11' 40.95", E 39° 21' 15.33", 968 m, 19.IV.2018, ♀; Dicle, Döğür, N 38° 21' 15.55", E 40° 13' 31.17", 735 m, 24.IV.2021, ♀; Eğil, Selmanköy, N 38° 11' 20.01", E 40° 10' 14.79", 771 m, 24.IV.2021, ♀. Frequent and common. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Adıyaman, Ankara, Aksaray, Ardahan, Erzurum, Hakkâri, Iğdır, Kayseri, Konya, Şanlıurfa, Şırnak), Black Sea biogeographic region (Artvin, Çorum), Mediterranean biogeographic region (Antalya, Denizli, Edirne, Hatay, Isparta, İzmir, Mersin, Muğla, Nevşehir, Niğde, Osmaniye) (Warncke, 1972; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Eastern Mediterranean, Palearctic (Khodarahmi Ghahnavieh & Monfared, 2019; Özbek & Dathe, 2020; Ascher & Pickering, 2021).

Subgenus *Paraprosopis* Popov, 1939

Hylaeus (Paraprosopis) lineolatus (Schenck, 1861) (Figs. 2j, 3i)

MATERIAL EXAMINED (Total 2 ♀♀, 1 ♂). **Bingöl**, Karlıova, Derinçay, N 39° 08' 13.50", E 40° 51' 53.21", 1697 m, 27.V.2021, 2♀♀; Solhan, Dilektepe, N 38° 57' 18.96", E 40° 59' 35.60", 1306 m, 31.V.2017, ♂. Frequent and common. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Aksaray, Ankara, Bingöl, Bitlis, Diyarbakır, Erzurum, Hakkâri, Kahramanmaraş, Kayseri, Konya, Malatya, Mardin, Muş), Black Sea biogeographic region (Artvin, Çorum, Gümüşhane, Şanlıurfa, Şırnak, Sivas, Van, Yozgat), Mediterranean biogeographic region (Adana, Antalya, Balıkesir, Bilecik, Burdur, Bursa, Çanakkale, Denizli, Edirne, Eskişehir, Hatay, Isparta, İzmir, Kütahya, Mersin, Muğla, Nevşehir, Niğde, Osmaniye, Yalova) (Warncke, 1972; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Ascher & Pickering, 2021).

Hylaeus (Paraprosopis) soror (Pérez, 1903) (Fig. 3j)

MATERIAL EXAMINED (Total 3 ♂♂). **Bingöl**, Genç, Yayla Bucağı, N 38° 37' 45.24", E 40° 30' 45.83", 1247 m, 26.V.2017, ♂. **Diyarbakır**, Bismil, Başaklı, N 37° 49' 42.46", E 40° 28' 49.43", 558 m, 20.III.2018, ♂; Hani, Kırım, N 38° 23' 44.75", E 40° 26' 24.13", 863 m, 27.III.2019, ♂. Frequent and common. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Adıyaman, Ağrı, Aksaray, Ankara, Bingöl, Diyarbakır, Erzurum, Hakkâri, Kahramanmaraş, Kars, Kayseri, Kırşehir, Konya, Malatya, Mardin, Şırnak, Tunceli, Van), Mediterranean biogeographic region (Antalya, Burdur, Bursa, Kütahya, Mersin, Muğla, Nevşehir, Niğde, Uşak, Yalova) (Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Western Palearctic (Özbek & Dathe, 2020).

Hylaeus (Paraprosopis) taeniolatus Förster, 1871 (Fig. 2k)

MATERIAL EXAMINED (Total 21 ♀♀). **Bingöl**, Büyükterkören, N 38° 49' 54.31", E 40° 34' 21.97", 1008 m, 19.V.2021, 2♀♀; Çeltiksuyu, N 38° 51' 37.39", E 40° 34' 03.65", 1013 m, 21.V.2021, ♀; Ekinyolu, N 38° 54' 00.00", E 40° 34' 17.58", 1036 m, 12.VI.2021, ♀; Garip, N 38° 47' 20.82", E 40° 33' 24.93", 995 m, 05.VI.2021, 2♀♀; İnalı, N 38° 53' 27.46", E 40° 31' 29.97", 1073 m, 26.V.2019, ♀; Kardeşler, N 38° 54' 39.23", E 40° 38' 29.93", 1099 m, 06.VI.2021, ♀; Genç, Harmancık, N 38° 33' 40.32", E 40° 16' 39.89", 883 m,

17.V.2019, ♀; Sırmalıhoya, N 38° 38' 04.53", E 40° 11' 28.70", 1858 m, 17.V.2019, ♀; Yağızca, N 38° 48' 35.03", E 40° 45' 36.73", 1140 m, 09.V.2021, ♀; Karlıova, Derinçay, N 39° 08' 13.50", E 40° 51' 53.21", 1697 m, 27.V.2021, ♀; Solhan, Bozkanat, N 38° 51' 56.46", E 40° 52' 41.10", 1230 m, 23.V.2021, 2♀♀; Yedisu, Elmalı, N 39° 23' 01.20", E 40° 37' 41.99", 1569 m, 29.V.2017, ♀. **Diyarbakır**, Dicle, Yokuşlu, N 38° 24' 12.59", E 40° 01' 23.94", 921 m, 28.III.2019, ♀; Kocaköy, Şaklat, N 38° 19' 44.89", E 40° 29' 36.83", 893 m, 01.IV.2019, ♀; Kulp, Narlıca, N 38° 30' 15.16", E 40° 58' 01.92", 874 m, 21.V.2017, ♀; Lice, Angül, N 38° 24' 23.81", E 40° 33' 50.23", 866 m, 25.IV.2021, ♀; Budak, N 38° 24' 35.20", E 40° 44' 55.67", 867 m, 29.IV.2021, ♀; Kiralan, N 38° 28' 54.61", E 40° 33' 10.12", 982 m, 25.IV.2021, ♀. Sporadic. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Bitlis, Hakkâri), Mediterranean biogeographic region (Adana, Antalya, Bursa, Hatay, Mersin, Muğla) (Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Western Palearctic (Central Europe, Mediterranean, Türkiye) (Özbek & Dathe, 2020).

Subgenus *Prosopis* Fabricius, 1804

Hylaeus (Prosopis) excelsus (Afken, 1935) (Fig. 3k)

MATERIAL EXAMINED (Total 1 ♂). **Bingöl**, Çeltiksuyu, N 38° 51' 37.39", E 40° 34' 03.65", 1013 m, 21.V.2021, ♂. Rare. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Bingöl, Hakkâri, Malatya, Şanlıurfa, Van) (Warncke, 1972; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Khodarahmi Ghahnavieh & Monfared, 2019; Özbek & Dathe, 2020; Ascher & Pickering, 2021).

Hylaeus (Prosopis) meridionalis Förster, 1871 (Fig. 2l, 3l)

MATERIAL EXAMINED (Total 2 ♀♀, 6 ♂♂). **Bingöl**, Genç, Şehitköy, N 38° 39' 48.18", E 40° 29' 31.00", 1308 m, 26.V.2017, ♂; Kiğı, Çanakal, N 39° 09' 16.98", E 40° 18' 43.73", 1585 m, 13.VI.2019, ♂; Demirkanat, N 39° 13' 03.85", E 40° 19' 55.88", 1289 m, 29.V.2021, ♂; Yayladere, Battayaz, N 39° 11' 14.81", E 40° 08' 16.49", 1383 m, 30.V.2019, ♀. **Diyarbakır**, Baykara, N 38° 04' 05.26", E 39° 52' 05.38", 756 m, 30.IV.2017, ♂; Hazro, Mutluca, N 38° 16' 44.84", E 40° 53' 50.71", 1017 m, 15.V.2017, ♂; Ülgen, N 38° 14' 41.98", E 40° 53' 36.99", 1080 m, 04.IV.2019, ♀; Lice, Savat Bucağı, N 38° 20' 25.69", E 40° 39' 10.87", 997 m, 01.IV.2019, ♂. Frequent and common. Host plant unknown.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ağrı, Aksaray, Ankara, Bingöl, Bitlis, Erzincan, Erzurum, Hakkâri, Kahramanmaraş, Karaman, Kars, Kayseri, Konya, Malatya, Sivas, Şanlıurfa, Tunceli, Van), Black Sea biogeographic region (Amasya, Artvin, Çankırı, Kastamonu, Tokat), Mediterranean biogeographic region (Adana, Antalya, Aydın, Balıkesir, Bolu, Burdur, Bursa, Çanakkale, Denizli, Edirne, Eskişehir, Hatay, Isparta, İstanbul, Kütahya, Manisa, Mersin, Muğla, Nevşehir, Niğde, Tekirdağ, Yalova) (Warncke, 1972; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Özbek & Dathe, 2020; Ascher & Pickering, 2021).

Hylaeus (Prosopis) pictus (Smith, 1853) (Fig. 2m, 3m)

MATERIAL EXAMINED (Total 2 ♀♀, 26 ♂♂). **Bingöl**, Beyaztoprak, N 38° 54' 53.68", E 40° 37' 25.71", 1067 m, 13.VI.2021,



Fig. 3.– Frontal view of male *Hylaeus* Fabricius, 1793; a) *H. cornutus*, b) *H. alievi*, c) *H. gredleri*, d) *H. imparilis*, e) *H. intermedius*, f) *H. rubicola*, g) *H. communis*, h) *H. scutellatus*, i) *H. lineolatus*, j) *H. soror*, k) *H. excelsus*, l) *H. meridionalis*, m) *H. pictus*, n) *H. rugicollis*, o) *H. longimaculus*. Scale bars: 1 mm.

Fig. 3.– Vista frontal de machos de *Hylaeus* Fabricius, 1793; a) *H. cornutus*, b) *H. alievi*, c) *H. gredleri*, d) *H. imparilis*, e) *H. intermedius*, f) *H. rubicola*, g) *H. communis*, h) *H. scutellatus*, i) *H. lineolatus*, j) *H. soror*, k) *H. excelsus*, l) *H. meridionalis*, m) *H. pictus*, n) *H. rugicollis*, o) *H. longimaculus*. Escala: 1 mm.

2♂♂; Çayağzı, N 38° 47' 57.65", E 40° 33' 40.63", 999 m, 05.VI.2021, ♂; Çeltiksuyu, N 38° 51' 37.39", E 40° 34' 03.65", 1013 m, 21.V.2021, ♂; Çukurca, N 38° 55' 13.31", E 40° 31' 17.62", 1215 m, 05.V.2018, ♂; Düzyayla, N 38° 48' 05.38", E 40° 28' 57.28", 1373 m, 06.V.2018, ♂; Ekinyolu, N 38° 54' 00.00", E 40° 34' 17.58", 1036 m, 12.VI.2021, ♂; Karlıova, Derinçay, N 39° 08' 13.50", E 40° 51' 53.21", 1697 m, 27.V.2021, ♂; Elmalı, N 39° 01' 00.57", E 40° 43' 12.15", 1286 m, 05.V.2018, ♂; Köklü, N 38° 55' 52.81", E 40° 38' 31.61", 1086 m, 17.V.2018, ♂; Sarıçiçek, N 38° 55' 28.42", E 40° 35' 44.37", 1040 m, 06.VI.2021, ♂; Adaklı, Kamışgölü, N 39° 13' 04.16", E 40° 25' 56.89", 1215 m, 29.V.2021, ♂; Genç, Dilektaş, N 38° 46' 06.45", E 40° 46' 27.64", 1653 m, 08.V.2021, ♂; Sürekli, N 38° 46' 01.97", E 40° 35' 51.85", 1036 m, 08.V.2021, 2♂♂; Karlıova, Derinçay, N 39° 08' 13.50", E 40° 51' 53.21", 1697 m, 27.V.2021, ♂; Ilıpınar, N 39° 22' 44.70", E 40° 56' 47.05", 1808 m, 06.IV.2018, ♂; Kıraçtepe, N 39° 12' 33.66", E 40° 57' 24.32", 1734 m, 03.VI.2018, ♂; Toklular, N 39° 15' 57.30", E 40° 59' 28.61", 1787 m, 03.VI.2018, ♂; Kiğı, Duranlar, N 39° 15' 14.64", E 40° 21' 01.82", 1134 m, 30.V.2021, ♂; Solhan, Düzkanat, N 38° 53' 12.79", E 40° 55' 38.36", 1282 m, 23.V.2021, ♂; Yayladere, Günlük, N 39° 10' 19.47", E 40° 07' 41.06", 1144 m, 30.V.2021, ♂; Yayladere, Korlu, N 39° 10' 36.36", E 40° 09' 19.47", 1231 m, 13.VI.2018, ♂. **Diyarbakır**, Çiçekliyurt, N 37° 50' 29.63", E 40° 07' 10.30", 705 m, 30.IV.2017, ♀; Ergani, Salar, N 38° 16' 01.70", E 39° 38' 59.32", 962 m, 12.V.2017, ♀; Lice, Ergin, N 38° 30' 09.96", E 40° 32' 21.33", 1016 m, 25.IV.2021, ♂. Frequent and common. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Sivas, Şanlıurfa), Mediterranean biogeographic region (Adana, Antalya, Bursa, Hatay, İstanbul, Mersin, Yalova) (Straka & Bogusch, 2011; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic (Khodarahmi Ghahnavieh & Monfared, 2019; Özbek & Dathe, 2020; Ascher & Pickering, 2021).

Hylaeus (Prosopis) rugicollis Morawitz, 1874 (Fig. 2n, 3n)

MATERIAL EXAMINED (Total 20 ♀♀, 16 ♂♂). **Bingöl**, Beyaztoprak, N 38° 55' 32.50", E 40° 38' 24.54", 1089 m, 21.V.2019, ♀; Çavuşlar, N 38° 55' 03.54", E 40° 46' 23.84", 1453 m, 25.V.2019, ♂; Çeltiksuyu, N 38° 51' 37.39", E 40° 34' 03.65", 1013 m, 05.VI.2021, ♂; Kılçadır, N 38° 46' 21.51", E 40° 28' 51.09", 1160 m, 06.V.2018, ♀; Sivritepe, N 38° 06' 30.86", E 40° 13' 19.38", 630 m, 19.III.2018, ♂; Genç, Gözütök, N 38° 46' 51.24", E 40° 41' 07.08", 1283 m, 18.V.2019, ♀; Koçsırtı, N 38° 47' 07.12", E 40° 49' 06.97", 1277 m, 10.V.2018, ♂; Tavus, N 38° 48' 08.64", E 40° 58' 08.43", 1893 m, 25.V.2019, ♂; Karlıova, Toklular, N 39° 15' 57.61", E 40° 59' 13.07", 1792 m, 03.VI.2018, ♂; Kiğı, Demirkanat, N 39° 13' 03.85", E 40° 19' 55.88", 1289 m, 29.V.2021, ♂; Nacaklı, N 39° 10' 03.31", E 40° 20' 40.59", 1569 m, 13.VI.2019, ♂; Solhan, N 38° 56' 23.25", E 41° 08' 18.56", 1727 m, 02.VI.2018, ♂; Arakonak, N 38° 57' 26.93", E 41° 06' 54.34", 1612 m, 02.VI.2018, ♀; Yayladere, Yolgüdün, N 39° 10' 28.62", E 40° 04' 20.21", 1509 m, 13.VI.2018, ♀; Yedisu, Güzgülü, N 39° 26' 17.68", E 40° 29' 05.83", 1424 m, 02.VI.2019, ♀. **Diyarbakır**, Mermer, N 38° 10' 17.25", E 40° 27' 46.01", 771 m, 01.IV.2019, ♀; Hani, Akçayurt, N 38° 28' 21.76", E 40° 21' 55.14", 1188 m, 27.III.2019, ♂; Belen, N 38° 24' 55.61", E 40° 22' 14.45", 931 m, 27.III.2019, ♂; Çüngüş, Akbaşak, N 38° 15' 47.59", E 39° 18' 27.74", 1372 m, 24.III.2019, ♀; Hazro, Mutluca, N 38° 15' 41.58", E 40° 53' 14.98", 971 m, 27.IV.2018, ♂; Kulp, Seyrek, N 38° 28' 06.24", E 40° 51' 31.86", 864 m, 21.V.2017,

♂; Lice, Çavuşlar, N 38° 19' 36.25", E 40° 40' 53.59", 1040 m, 19.IV.2021, ♂; Serenli, N 38° 19' 30.64", E 40° 13' 38.46", 750 m, 24.IV.2021, ♂; Yalaza, N 38° 20' 07.75", E 40° 41' 03.75", 919 m, 01.IV.2019, ♂; Silvan, Gürpınar, N 38° 11' 56.07", E 41° 04' 33.08", 997 m, 05.IV.2019, ♀. Frequent and common. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Ağrı, Bingöl, Bitlis, Elazığ, Erzurum, Hakkâri, Kars, Kayseri, Konya, Muş, Şanlıurfa), Black Sea biogeographic region (Amasya, Bayburt), Mediterranean biogeographic region (Denizli, Isparta, Mersin, Nevşehir, Niğde) (Warncke, 1972; Özbek, 1977; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic South-eastern Europe (Dathe & Proshchalykin, 2018; Ascher & Pickering, 2021).

Subgenus *Spatulariella* Popov, 1939

Hylaeus (Spatulariella) longimaculus (Alfken, 1936) (Fig. 2o, 3o)

MATERIAL EXAMINED (Total 2 ♀♀, 10 ♂♂). **Bingöl**, Adaklı, Gökçeli, N 39° 12' 12.57", E 40° 24' 16.71", 1406 m, 29.V.2017, ♂; Genç, N 38° 44' 07.30", E 40° 30' 35.06", 986 m, 15.V.2018, ♂; Çanakçı, N 38° 45' 55.39", E 40° 43' 58.57", 1531 m, 21.VII.2017, ♂; Kiğı, Kabaoluk, N 39° 17' 48.55", E 40° 20' 40.76", 1419 m, 29.V.2017, ♂; Nacaklı, N 39° 10' 17.26", E 40° 20' 33.73", 1439 m, 29.V.2016, ♀; Solhan, N 38° 57' 06.75", E 41° 02' 04.00", 1321 m, 24.V.2018, ♂. **Diyarbakır**, Kırkkoyun, N 37° 47' 01.85", E 39° 58' 21.62", 1018 m, 30.IV.2017, ♂; Dicle, Koruköy, N 38° 18' 17.87", E 39° 59' 56.64", 885 m, 13.V.2017, ♂; Hani, Serenköy, N 38° 24' 10.19", E 40° 30' 14.36", 870 m, 14.V.2017, ♂; Hazro, Koçbaba, N 38° 15' 06.64", E 40° 51' 31.14", 1029 m, 13.V.2017, ♀; Ormankaya, N 38° 17' 59.97", E 40° 46' 48.65", 952 m, 15.V.2017, ♂; Silvan, Babakaya, N 38° 15' 09.18", E 41° 01' 25.08", 777 m, 15.V.2017, ♂. Frequent and common. Host plant: *Euphorbia* spp.

DISTRIBUTION IN TÜRKİYE. Anatolian biogeographic region (Adıyaman, Ağrı, Aksaray, Ankara, Bingöl, Bitlis, Diyarbakır, Erzurum, Hakkâri, Kahramanmaraş, Konya, Samsun, Tunceli, Van), Black Sea biogeographic region (Gümüşhane, Kastamonu), Mediterranean biogeographic region (Adana, Afyonkarahisar, Antalya, Balıkesir, Bursa, Denizli, Eskişehir, Hatay, İstanbul, İzmir, Kütahya, Manisa, Mersin, Muğla, Nevşehir, Siirt, Sivas, Şanlıurfa, Tekirdağ, Yalova) (Warncke, 1972; Özbek & Dathe, 2020).

GENERAL DISTRIBUTION. Palearctic Southern Mediterranean (Özbek & Dathe, 2020; Ascher & Pickering, 2021).

Discussion

In this study, 19 species from seven subgenera of *Hylaeus*: *Abrupta* (one species), *Dentigera* (five species), *Hylaeus* s. str. (four species), *Lambdopsis* (one species), *Paraprosopis* (three species), *Prosopis* (four species), and *Spatulariella* (one species) are listed. Among them, two species, *Hylaeus (Dentigera) alievi* and *Hylaeus (Hylaeus) hungaricus* are new records for the Turkish fauna. Thus, the number of species of genus *Hylaeus* reported from Türkiye is increased from 86 to 88 by the present study. Also, seven species for Bingöl and ten species for Diyarbakır are new records for provincial fauna. According to the number of specimens,

H. cornutus, *H. rugicollis*, *H. imparilis*, *H. pictus* and *H. taeniolatus* are respectively dominant species in the study area. The species *H. cornutus*, *H. imparilis*, *H. rugicollis*, and *H. longimaculus* are dominant in all biogeographic regions of Turkey. On the other hand, only single specimens could be collected for *H. communis*, *H. hungaricus*, *H. leptocephalus*, *H. trifidus* and *H. excelsus*. While only male individuals were collected from the species *H. gredleri*, *H. communis*, *H. soror*, and *H. excelsus*, only female individuals were collected from the species *H. hungaricus*, *H. leptocephalus*, *H. trifidus*, and *H. taeniolatus*. Both male and female individuals were collected from other species. It is thought that the real number of species of *Hylaeus* in the Türkiye is higher. Therefore, future research in this region will certainly reveal many new species not only for the fauna of Türkiye but also for science. The eastern part of Türkiye proved to be an important centre of diversity for *Hylaeus* species (Özbek & Dathe, 2020).

Morphological differences among the identified species, and between males and females, are very distinctive in frontal view character combinations. For example, in females of *H. cornutus* character combinations (face all black and clypeus anterior margin pointed and forked; scape completely black, not dilated; flagellum black above, brown underneath) differ from males of the same species (face all black and clypeus anterior margin not pointed and not forked; scape completely yellow and dilated; flagellum black above, yellow underneath). While the face is completely black in *H. rugicollis*, there are dark white spots in the paraocular area in *H. longimaculus*. Clypeus yellow spots are present in females of *H. rubicola*, *H. scutellatus*, and *H. pictus*. The supraclypeal area yellow spot is characteristic of female *H. scutellatus*. In females of *H. hungaricus* the malar area is long. In males of *H. alievi*, *H. scutellatus*, *H. meridionalis*, and *H. rugicollis*, the face is yellow, with less punctuation and shiny; the scape is yellow and black, fairly well dilated, whereas the scape is completely black and not dilated in males of *H. longimaculus*.

The contributions made to the number of Turkish *Hylaeus* species in the current study could mirror the ecological importance and high biodiversity of the Turkish fauna. Although a few studies have been done before, the Turkish *Hylaeus* fauna corresponds to approximately 44% of the Palaearctic region fauna, suggesting future faunistic studies in the country can reveal additional species in the *Hylaeus* fauna of Türkiye.

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