

Article

Spread and Ecology of the Bumblebee *Bombus haematurus* (Hymenoptera: Apidae) in Northeastern Italy

Elena Cargnus ^{1,*} , Marino Quaranta ² , Alberto Villani ³ and Pietro Zandigiacomo ¹ 

¹ Department of Agricultural, Food, Environmental and Animal Sciences (DI4A), University of Udine, Via delle Scienze 206, 31000 Udine, Italy; pietro.zandigiacomo@uniud.it

² CREA—Council for Agricultural Research and Economics, Research Centre for Agriculture and Environment, Via di Corticella 133, 40128 Bologna, Italy; marino.quaranta@crea.gov.it

³ Agenzia Regionale per la Protezione dell'Ambiente—s.o.c. OSMER e GRN, Via Natisone 43, 33057 Palmanova, Italy; alberto.villani@arpa.fvg.it

* Correspondence: elena.cargnus@uniud.it; Tel.: +39-0432-558512; Fax: +39-0432-558501

Abstract

Bombus haematurus (Hymenoptera: Apidae), which arrived from the Balkan Peninsula, was first reported in Italy in 2020 in the Friuli Venezia Giulia region (FVG) (northeastern Italy) near the border with Slovenia. To study the spread and biology of the species, a survey was conducted at several sites of the FVG in the period 2023–2025. *Bombus haematurus* was recorded at 22 new sites across all four districts of the FVG (Trieste, Gorizia, Udine, and Pordenone), indicating its expansion towards the west. Bumblebees of this species were detected in plain and hilly areas at sites between 10 and 364 m a.s.l. They were observed more frequently at forest edges, undergrowth paths or clearings and meadows adjacent to woods, confirming the species is hylophilous. The activity of adults from February to July confirms that the bumblebee is an univoltine spring species. Specimens were observed foraging on the flowers of 19 wild and ornamental plants belonging to 12 families (in particular, Lamiaceae), confirming that the species is polylectic. The data collected indicate that *B. haematurus* are permanently established in the FVG and that a further spread of the species towards the west in the neighbouring Veneto region is likely.

Keywords: anthophila; Apoidea; blood-tailed bumblebee; climate change; distribution; food plants; phenology; pollinators; trophic interactions; wild bees



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1. Introduction

The blood-tailed bumblebee, *Bombus* (*Pyrobombus*) *haematurus* Kriechbaumer, 1870 (Hymenoptera: Apidae), unlike most other bumblebee species, in recent decades has expanded its distribution by approximately 1000 km from its native range, namely southeastern Europe, Turkey, and Iran, towards central and western Europe, reaching Slovakia, the Czech Republic, Austria, Slovenia, and Italy [1–6] (Figure 1). Most recently, *B. haematurus* has also been observed in Poland [7]. This rapid geographic dispersal of the bumblebee appears to benefit from global warming as mild winters and favourable ecological conditions in spring allow its expansion toward northern Europe [4,8,9].



Figure 1. Distribution map of the occurrence of the blood-tailed bumblebee *Bombus haematurus* in Europe and Asia. Occurrence of the species: yellow dots up to 2019, light orange dots 2019–2023 period, and dark orange dots 2024–2025 period. GBIF Occurrence Download. Available online: <https://doi.org/10.15468/ab3s5x> (accessed on 12 January 2025) [10].

In Italy, before the present study, the only known records for *B. haematurus* were limited to a few sites in the eastern part of the Friuli Venezia Giulia region (FVG) bordering Slovenia, three sites in 2017 [6] and one site in 2021 [10].

This generalist pollinator, previously described as a steno-hylophilous species [11], nowadays appears to be more of an euryoecious-hylophilous species, having been observed in a variety of habitats beyond forests, including orchards, grasslands, and park-like environments [3,4,8,12,13]. Nests are built in trees or under the ground's surface, in abandoned rodent holes or artificial nest boxes [13–15].

According to current taxonomic knowledge, 79 species of bumblebees are known from the West Palearctic region, with 68 species reported in Europe [4,16–18]. In Europe, bumblebees represent approximately 3.2% of the total Apoidea fauna (i.e., 2138 species [19]). In Italy, 44 bumblebee species, 4.2% of the national Apoidea fauna, have been reported [18–21], with 32 species recorded specifically in the FVG region [22]. However, both national and FVG species lists require updates due to taxonomic revisions and recent faunistic findings [23].

Following the first records of *B. haematurus* on the eastern border of the FVG reported in the literature [6], a study was initiated to monitor its colonisation pattern across the region and to collect ecological data, including habitat preferences, flight period, and visited flowering plants.

2. Materials and Methods

After a new single discovery of a specimen in June 2022, we decided to survey the distribution of *B. haematurus* in the FVG from February 2023 to March 2025 at 37 sites across the four regional districts: Trieste, Gorizia, Udine, and Pordenone. Data were collected up to March 2025 to cover the emergence of overwintering queens over three different years. The study sites were distributed across an area of approximately 3500 km² within the regional territory and located at varying altitudes, from plains to hills, diverse habitats within natural and semi-natural landscapes featuring seasonal flowering vegetation. To check the presence of *B. haematurus*, the sites were visited once or more times according to the following scheme. The sites where the species was detected during the initial visit were typically not resampled. In contrast, sites where the bumblebee was not observed initially were revisited, and the surrounding areas were checked as well. If the bumblebee was still not detected, this confirmed the previous observation of its absence at that location. The list of study sites, the number of visits per site in the same or different years, and environmental features are reported in detail in Tables 1, S1 and S2. Additional inspections at several sites where *B. haematurus* was present were useful in collecting preliminary data

on the species' flight period within our region (Table 1). In 2024 and 2025, two sites (GO2 and UD1; Tables 1 and S1) were monitored weekly from mid-February until the emergence of the first overwintering queens.

Table 1. *Bombus haematurus* bumblebees recorded at 22 sites in the Friuli Venezia Giulia region of northeastern Italy during the survey period (2023–2025). Each site was visited on one or more sampling dates and, in the latter cases, in the same year (1y), two years (2y), or three years (3y). For each site, the total number of bumblebees, along with the counts for queens (Q), workers (W) and males (M), is reported. For each site and month, the number of bumblebees observed is indicated. When the sampling dates are more than one, their number is noted in parentheses. Sites are differently labelled based on their collocation in natural (underlined) or semi-natural areas (i.e., suburbs and rural) (no label). * Data on one worker captured at site GO1 in June 2022 are included.

District	Geographic Area	Site	m a.s.l.	N. of Visits	<i>Bombus haematurus</i>									
					Total	Q	W	M	Feb	Mar	Apr	May	June	July
Gorizia	Eastern Friulian plains (Isonzo plain)	GO1	33	2 *	2	-	2	-	-	-	-	1	1	-
		GO2	118	7; 3y	26	6	18	2	-	6 (3)	6 (2)	14 (2)	-	-
		GO3	116	1	1	-	1	-	-	-	1	-	-	-
		GO4	55	1	1	-	1	-	-	-	-	-	1	-
		GO5	33	3; 1y	13	3	6	4	-	-	7 (2)	6	-	-
		GO6	108	1	2	2	-	-	-	2	-	-	-	-
Trieste	Coast Karst plateau	TS1	90	2; 2y	2	2	-	-	1	-	1	-	-	-
		TS2	197	1	1	-	1	-	-	-	-	1	-	-
		TS3	128	1	1	1	-	-	-	1	-	-	-	-
		TS4	165	1	1	1	-	-	-	1	-	-	-	-
Udine	Morainic hills	UD1	142	16, 3y	147	40	80	27	-	29 (5)	14 (5)	103 (5)	1	-
		UD2	161	2, 1y	6	6	-	-	-	6 (2)	-	-	-	-
		UD3	143	5, 1y	6	5	1	-	-	2 (2)	3 (2)	-	1	-
		UD4	218	1	4	4	-	-	-	4	-	-	-	-
		UD5	147	1	1	1	-	-	-	1	-	-	-	-
	Julian Prealps	UD6	210	2, 2y	2	2	-	-	-	1	1	-	-	-
		UD7	364	1	5	5	-	-	-	-	-	5	-	-
	Central Friulian plains	UD8	64	2, 1y	3	-	2	1	-	-	-	1	2	-
		UD9	29	5, 1y	10	-	10	-	-	-	-	4	5 (3)	1
		UD10	10	1	1	-	1	-	-	-	-	-	-	1
Pordenone	Carnic Prealps	PN1	135	1	1	1	-	-	-	-	1	-	-	-
		PN2	247	1	2	-	2	-	-	-	-	-	2	-
Total				57	238	79	125	34	1	53	34	135	13	2

The time spent searching for *B. haematurus* at each site, under favourable weather conditions (sunny and calm or moderately windy days), varied depending on the location. Typically, at each sampling date, if no individuals were detected after walking for 1 km for at least one hour and surveying an area of 3000–5000 m², the species was considered absent from that site. Depending on the season, sampling was preferably carried out either in the morning or in the mid to late afternoon (between 9:00–11:00 or 15:00–18:30, local time).

Specimens were identified as *B. haematurus* following Pittioni [24] and Gokcezade et al. [25]. The diagnostic characters based on body colouration alone [7,25] were observable in the field, allowing for species identification without the need to collect all encountered bumblebees. Consequently, only a representative sample of bumblebees per site was captured as a voucher. The specimens are deposited in the Apoidea collections of Agricultural, Food, Environmental and Animal Sciences (DI4A), University of Udine, and the Research Centre for Agriculture and Environment (CREA), Bologna.

Plants visited by *B. haematurus* were identified to species level and characterized for the flowering period, and nectar and pollen production using available data in the literature [26–30].

3. Results

3.1. Specimens Recorded and Species Distribution

During the study years (2023–2025), the *B. haematurus* bumblebees (N. 238 adults, of which 112 captured) were found at 22 out of 37 sites visited across the four regional districts of the FVG in northeastern Italy (Tables 1, S1 and S2; Figure 2). In the eastern part of the FVG, *B. haematurus* was recorded in the Isonzo plain of the Gorizia district (sites GO1–6) as well as in the coastal area and the Karst plateau of the Trieste district (sites TS1 and TS2–4, respectively). In the central part of the FVG, the species was found at 10 sites within the Udine district, including the Morainic hills (sites UD1–5), the Julian Prealps (sites UD6,7), and the central Friulian plains (sites UD8–10). To the west, the bumblebee was found in the foothills of the Carnic Prealps in the Pordenone district (sites PN1,2). The highest number of *B. haematurus* specimens was recorded at site UD1 (N. 147, 62% of the total) as this site was the most frequently visited (16 times) during the present survey (Table 1).

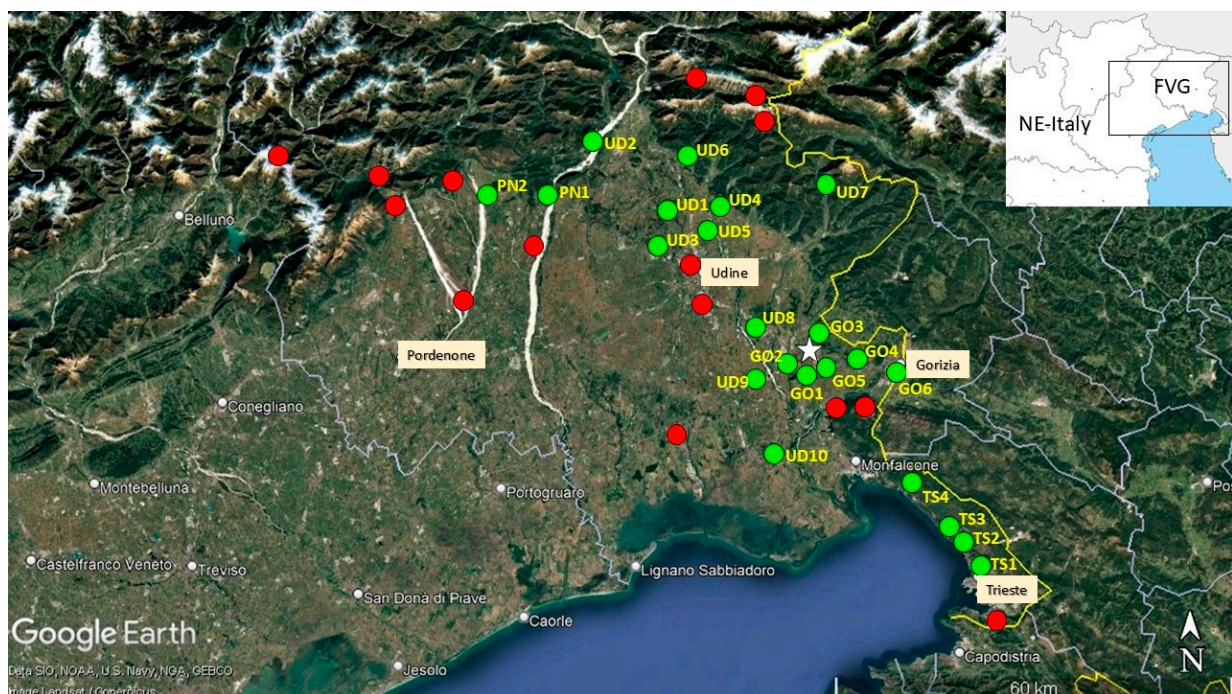


Figure 2. Distribution of *Bombus haematurus* in the Friuli Venezia Giulia region of northeastern Italy. Bumblebees of this species recorded during the 2023–2025 survey at 22 sites (green marks): Sites TS1–4 in the Trieste district, sites GO1–6 in the Gorizia district, sites UD1–10 in the Udine district, and sites PN1,2 in the Pordenone district. Red marks: Fifteen sites without *Bombus haematurus* during the 2023–2025 survey. White star: First record of *Bombus haematurus* for Italy in 2017 [6]. Data on one worker captured at the site GO1 in June 2022 are included (image modified from Google Earth).

Bombus haematurus was not observed in eight lowland sites and seven hilly sites in the FVG (4–115 and 315–881 m a.s.l., respectively) (Figure 2 and Table S2). These sites included one coastal area (Trieste district), two inner Karst sites (Gorizia district), three central Friulian plains sites (Udine district), three Julian Prealps sites (Udine district), as well as two western Friulian plains sites and four Carnic Prealps sites (Pordenone district).

3.2. Habitats

Bombus haematurus was observed in different habitats (Tables 1 and S1). The bumblebee was mainly detected in natural areas, such as the edges of deciduous forests, undergrowth paths or clearings and meadows adjacent to woods (15 out of 22 sites) (Tables 1 and S1).

In semi-natural areas (i.e., suburbs and rural landscapes), bumblebees were found within gardens featuring fruit trees or ornamental shrubs (GO1, TS1, and UD3,10), uncultivated margins (UD9) and hedgerows near vineyards (GO5, UD8). However, habitats associated with suburbs and rural landscapes were near woodlands.

3.3. Preliminary Data on the Flying Season

Queens of *B. haematurus* were observed from mid-February to the end of May, workers from mid-April to early July, and males from mid-May to mid-June (Tables 1 and S1; Figure 3). The first queen was found in mid-February only at the site TS1 (Trieste suburb), whereas in other sites weekly sampled from February to March (sites UD1 and GO2), the first queens were observed in the first week of March.

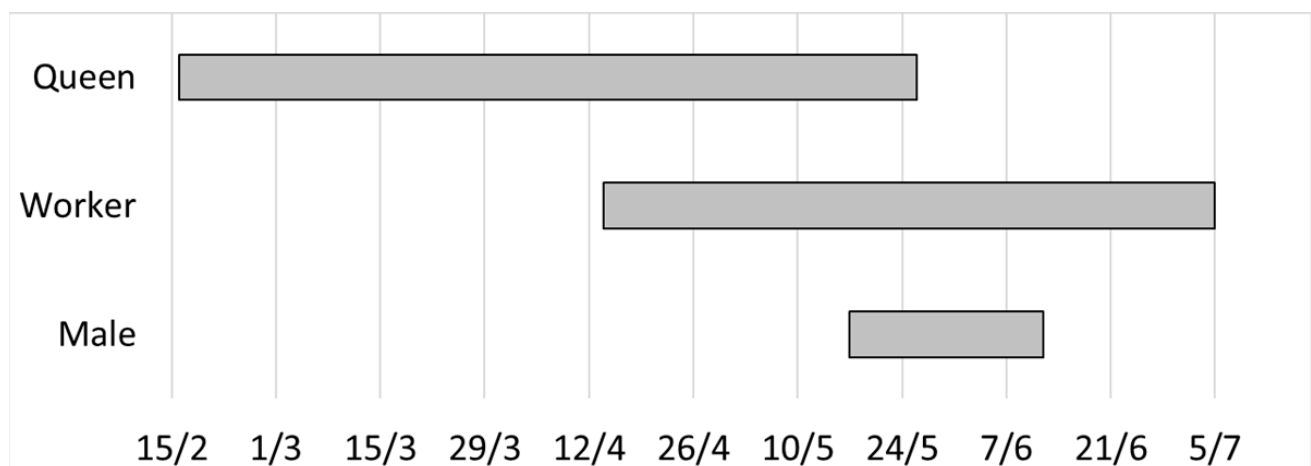


Figure 3. Flight period of three castes of *Bombus haematurus* observed during the survey 2023–2025 in the Friuli Venezia Giulia region of northeastern Italy.

3.4. Flowering Plants Visited

Overall, 90% of the *B. haematurus* specimens were observed foraging on the flowers of 19 species (17 wild and two cultivated as ornamental species) from 12 families, while one worker was active on honeydew produced by aphids infesting the leaves of *Malus domestica*, and the other 10 specimens were flying above ground level (Tables 2 and S1). Lamiaceae were widely represented during the samplings at nearly all sites where the bumblebee was present, except in two cases (sites UD6,8). In March, queens initially foraged on the early spring-flowering *Lamium purpureum* (five sites). From April to June, queens, workers and males were observed visiting *L. orvala*, *L. maculatum*, and *L. galeobdolon* in several sites (see Table S1, Figure 4). During the May to July period, workers frequented *Salvia pratensis*, *S. verticillata*, and the ornamental *Lavandula angustifolia*. In one case, a queen was seen feeding on the ornamental *Teucrium fruticans*. Both workers and queens observed on *Lamium* spp. carried yellow- and orange-coloured pollen in corbiculae on their hind legs. In addition to Lamiaceae, queens of *B. haematurus* foraged on several early-spring-flowering species, such as *Asperula taurina*, *Corydalis cava*, *Crocus heuffelianus*, *Erythronium dens-canis*, *Helleborus odorus*, *Lathraea squamaria*, *Scilla bifolia*, and *Veronica persica* (Figure 4). Most of these plants were recorded in the flowering undergrowth of site UD1, as it was the most frequently visited site early in the season (see Table S1). In May and June, a few workers were observed feeding on *Echium vulgare*, *Vicia cracca*, and *Knautia drymeia*, with a male also collected from the latter.

Table 2. Number of *Bombus haematurus* recorded per month (February–July) on flowering plant species during the 2023–2025 survey across 22 sites in the Friuli Venezia Giulia region of northeastern Italy. Plant species identified as new food resources are in bold. Nectar and pollen per plant species were evaluated using three degrees of assessment (+++, excellent; ++, good; and +, poor). The number of events refers to the total observations per plant species in the same or different sites. Data on one worker captured on *Lavandula angustifolia* in June 2022 are included.

Family	Species	Plant Features			N. of Events	N. of <i>Bombus haematurus</i>						
		Flowering Period	Nectar	Pollen		Feb	Mar	Apr	May	June	July	Tot.
Boraginaceae	<i>Echium vulgare</i> L.	IV–IX	+++	++	4, 1 site	-	-	-	4	4	-	8
Caprifoliaceae	<i>Knautia drymeia</i> Heuff.	V–VII	++ (*)	++ (*)	2, 1 site	-	-	-	1	1	-	2
Lamiaceae	<i>Lamium galeobdolon</i> (L.)	IV–VIII	++	+	11, 4 sites	-	-	6	101	2	-	109
	<i>Lamium maculatum</i> L.	III–XII	+	++	12, 5 sites	-	3	13	13	1	-	30
	<i>Lamium orvala</i> L.	III–VI	++	+	11, 7 sites	-	5	10	7	1	-	23
	<i>Lamium purpureum</i> L.	III–X	+	++	6, 5 sites	-	13	-	-	-	-	13
	<i>Lavandula angustifolia</i> Mill.	VI–IX	+++	+	3, 3 sites	-	-	-	-	1	2	3
	<i>Salvia pratensis</i> L.	V–III	++ (*)	NR	1	-	-	-	8	-	-	8
	<i>Salvia verticillata</i> L.	VI–VII	++ (*)	NR	1	-	-	-	-	1	-	1
	<i>Teucrium fruticans</i> L.	IV–VIII	++	+	1	-	-	1	-	-	-	1
Fabaceae	<i>Vicia cracca</i> L.	V–VIII	+	+	2, 2 sites	-	-	-	1	1	-	2
Orobanchaceae	<i>Lathraea squamaria</i> L.	III–VI	NR	NR	3, 2 sites	-	3	1	-	-	-	4
Papaveraceae	<i>Corydalis cava</i> (L.)	III–V	+	++	3, 1 site	-	16	-	-	-	-	16
Plantaginaceae	<i>Veronica persica</i> Poir.	I–XII	+	+	1	-	1	-	-	-	-	1
Rubiaceae	<i>Asperula taurina</i> L.	III–VI	+	+	1	-	-	1	-	-	-	1
Iridaceae	<i>Crocus heuffelianus</i> Herb.	II–IV	+	++	1	-	1	-	-	-	-	1
Liliaceae	<i>Erythronium dens-canis</i> L.	III–IV	NR	NR	1	-	1	-	-	-	-	1
Ranunculaceae	<i>Helleborus odoratus</i> Waldst. & Kit.	II–IV	++	++	2, 1 site	-	2	-	-	-	-	1
Asparagaceae	<i>Scilla bifolia</i> L.	III–IV	+	++	1	-	1	-	-	-	-	1
Aphid (Hemiptera: Aphidoidea) honeydew on leaves of apple trees					1	-	-	-	1	-	-	1
Flying above ground					6, 3 sites	1	5	2	-	-	-	8
N. of <i>Bombus haematurus</i>						1	53	34	136	12	2	238

(*) Data reported at genus level; NR—Not reported in the literature.

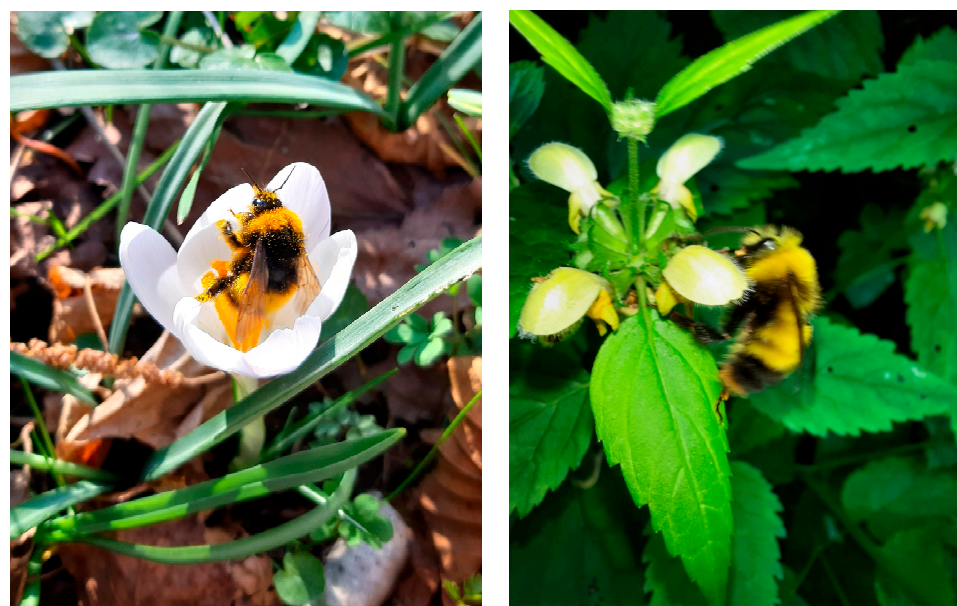


Figure 4. *Bombus haematurus* queen (left) and male (right) on *Crocus heuffelianus* and *Lamium galeobdolon*, respectively.

Bombus terrestris (L.), *B. pascuorum* (Scopoli), and *B. argillaceus* (Scopoli) were the most frequently recorded bumblebees foraging on the flowering plants alongside *B. haematurus* at the sites visited.

4. Discussion

The occurrence of *B. haematurus* at several sites of the FVG (northeastern Italy) suggests a successful and ongoing spread of the species throughout the investigated area. These findings confirm the range expansion of the blood-tailed bumblebee from its native distribution through the Balkans into northwestern Europe. The newly detected populations likely arrived from neighbouring Slovenia, where the species was first recorded over 15 years ago (in 2007) [3] and subsequently inhabited the bordering Gorizia district in Italy (in 2017) [6]. The study confirms the establishment of *B. haematurus* populations in the eastern part of the FVG (Gorizia district), with queens, workers, and males recorded over four consecutive years (2022–2025) at the visited sites (GO1–5). These findings are further supported by recent observations from the eastern part of the Region (Gorizia and Trieste districts) [10], which agree with the results of the present study. The detection of *B. haematurus* in the central and western parts of the region (Udine and Pordenone districts) indicates continued westward expansion of the species, which has now reached its westernmost point at 12°49' E longitude (Pordenone district, site PN2). However, its absence in at least six sites further west suggests that *B. haematurus* has not yet reached the neighbouring Veneto region. As in our region, the spread of *B. haematurus* occurs in other central and northern European countries [7,13,31,32].

Bombus haematurus was recorded at altitudes ranging from 10 up to 287 m a.s.l. and, except for a single record in a foothill valley site at 364 m a.s.l. (UD6) of the Julian Prealps, no specimens have been recorded at five higher elevation sites ranging from 408 to 881 m a.s.l. (in the Julian and Carnic Prealps; see data in Table S2). Several occasional checks conducted at the three sites above 800 m a.s.l. suggest that the species is currently absent from these higher altitudes. However, further observation will be necessary to confirm these results. Also in other European countries, Slovenia, Austria, and Slovakia, the species is most commonly found at low altitudes (up to 300–350 m a.s.l.) [1,3,12–14], whereas in the native area it occurs at higher altitudes, as reported for southern Balkan Peninsula (900–2000 m a.s.l.) [11], Greece (up to 700 m a.s.l.) [33], Turkey (600–2600 m a.s.l.) [34] or northern Iran (up to 1200 m a.s.l. and accidentally even to 2150 m a.s.l.) [35]. Indeed, it is well known that, according to the principle of latitudinal–altitudinal compensation, bumblebee species that occur at low elevations in northern latitudes are typically found at increasingly higher altitudes toward the south [4,36]. This pattern reflects the species' thermal preferences and their adaptation to similar climatic conditions across geographic gradients. However, single observations of the bumblebee at higher altitudes (up to 755 m a.s.l.) were recorded in Hungary and Poland [7,13].

This study confirms that the occurrence of *B. haematurus* in a specific habitat is associated with the presence of deciduous forests and forest edge, which agrees with other studies [3,4,8,12,13]. Specifically, in this study, *B. haematurus* was frequently observed in natural environments, on herbaceous flowering plants in woodland undergrowth, hedgerows, or meadows on forest edges. In rural and suburban areas, visiting wild flowering herbaceous species under hedgerows alongside farm roads, uncultivated fields or ornamental flowers in gardens is favoured by the proximity of woods to these sites, indicating that *B. haematurus* is closely related to forest landscapes. These data suggest that *B. haematurus* is a hylophilous species (of euryoecius type), which agrees with other studies (see [3,4,8,11–13]). On the contrary, sites with the presence of flowers but with few wood trees or far from forested areas appeared unfavourable to *B. haematurus*. For example, this situation occurs at

two sites from the Friulian plains in suburban and rural landscapes (Rizzi and Sant’Osvaldo, respectively, Udine district; see data in Table S2) where the bumblebee was absent.

This study presents the first data on the phenology of *B. haematurus* in Italy. In both the lowland and foothill sites visited in the FVG, the overwintered queens emerged at the end of winter, remaining active until the end of May, with no marked differences in flying duration based on site altitudes (plains vs hills). In particular, in 2024 and 2025, the first queens emerged from their hibernation sites within the first week of March, both in a foothill and a plain site. Regarding these events, similar daily temperatures were recorded for these sites (mean 7.1–11.8 °C, max 12.5–17.0 °C, and min 1.5–6.3 °C) [ARPA-OSMER <http://www.osmer.fvg.it/> (accessed on 15 February 2025) at the nearest weather stations to the sites UD1, UD6, GO2]. Queens, males (active from mid-May to mid-June), and workers (active from mid-April to early July) were no longer observed during some samplings conducted in mid-July and August, which could indicate that diapause for this species begins in mid-summer. Therefore, *B. haematurus* appears to be a univoltine spring species for the study area. Similar data on phenological traits for the species have been detected in Slovenia [15] and Slovakia [13].

The several plants visited by the *B. haematurus* (19 species of 12 families) allow us to confirm that the species is polylectic, in agreement with observations from other studies [3,8,13,35,37]. As reported in these studies and observed during this survey, the bumblebee visited both deep-corolla flowers with hidden nectar (e.g., several species of Lamiaceae) and flowers with open corollas and more accessible nectar (e.g., *E. vulgare* and *V. persica*). However, at a site with flowering *E. vulgare* and *L. angustifolia*, *B. haematurus* foraged exclusively on the former species, while in a meadow scattered with flowering *L. purpureum* and *V. persica*, *B. haematurus* visited both plants. Following the literature, *B. haematurus* frequently foraged on the flowering *Lamium* species, such as *L. galeobdolon*, *L. purpureum*, and *L. maculatum* [5,12,13]. The spring flowers of *Lamium* spp. were the most visited, including *L. orvala*, which is not reported as a food plant for *B. haematurus* in the literature. The other flowering species visited by the bumblebee in this study, including ornamental plants, are reported as food plants, at least at the genus level, in other studies (notably *C. cava*, *E. vulgare*, *L. squamaria*, *Lavandula* sp., *S. officinalis*, *Teucrium* sp., *V. cracca*) [8,14,37,38]. Although *A. taurina* and *L. squamaria* are rarely visited by *Bombus* spp. according to Ricciardelli d’Albore and Intoppa [27], in this study, *B. haematurus* was observed on both flowering plants and, in the latter, also in other studies [8,39]. The late-winter flowering *C. heuffelianus*, *E. dens-canis*, *H. odoratus*, and *S. bifolia* attracted the overwintering queens, highlighting the significant role of these plants as a food source for the bumblebee before the onset of early-spring flowering Lamiaceae in this geographic area.

The bumblebee visits flowers of woody plants as well (e.g., *Prunus* spp., *Tilia* spp., and *Viburnum* sp.) [3,8,33,35]. Nevertheless, no *B. haematurus* were recorded foraging on flowers of tree species in this study. The event of a worker consuming aphid honeydew on leaves of an apple tree is like that reported in the study of Šima et al. [13]. Some queens were recorded flying close to the ground; they were likely searching for cavities suitable for nesting.

Bombus haematurus was observed in this study with native *Bombus* species, mainly *B. terrestris*, *B. pascuorum*, and *B. argillaceus*, on the same flowering plants as already reported in the literature [1,37]. In the study area, competition between *B. haematurus* and these generalist species for floral resources and nesting sites appears unlikely. This may be partly due to the fact that *B. haematurus* is an early-season species with a relatively short flight period, as observed in the present study and Biella et al. [8], in contrast to species with long flight periods, such as *B. argillaceus* (February to October), *B. pascuorum* (April to

September), and *B. terrestris* (March to October) [22]. However, if *B. haematurus* spreads into higher-altitude areas in the future, potential competition with more specialized native wild bees could occur.

The expansion of the hylophilous *B. haematurus* in our region appears to be directed not only westward but also northward; however, the high elevations of the Carnic and Julian Alps, which extend in a west–east direction, constitute a barrier to further northward spread of the species. This pattern of spread may be due to the continuous presence of natural areas characterized by deciduous forest landscapes in the foothills, as opposed to the fragmented woodland areas found in the semi-urban and rural landscapes of the plains to the south of the FVG. In our region, as in other European countries, the expansion of woodland into agricultural land, particularly in hilly areas, due to socio-economic changes, combined with the effects of global warming, may have facilitated the spread of this species [3,13].

Similar to *B. haematurus*, other *Bombus* species (e.g., *B. argillaceus*, *B. niveatus* Kriechbaumer, *B. schrencki* Morawitz, and *B. semenoviellus* Skorikov) may also benefit from climate change and potentially expand their current ranges in Europe, even if for other bumblebee species a reduction in their distribution is reported [4,8,9,19,40–43].

5. Conclusions

The present study indicates that *B. haematurus* is now permanently established in FVG in northeastern Italy and that a further spread of the species towards the west, into the neighbouring Veneto region, is likely in the short term.

Bombus haematurus joins some new native species of Apoidea recently detected in Italy [44] and a few other wild bees that have reached the country in recent years, such as the megachilids *Megachile sculpturalis* (Smith), which has become naturalised [45] as well as *Megachile disjunctiformis* Cockerell [46], and the apid *Xylocopa aestuans* (L.) [47]. These non-native species were likely accidentally introduced through human activities rather than by autonomous migration.

In any case, further studies on the diffusion, biology, and ecology of *B. haematurus* and its potential impact on the environment will be necessary.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/d17080534/s1>, Table S1: *Bombus haematurus* recorded in 22 sites of the Friuli Venezia Giulia region of northeastern Italy from 2023 to 2025. Sites: GO1–6, Gorizia district; TS1–4, Trieste district; UD01–10, Udine district; PN1,2, Pordenone district. Observations are listed chronologically for each site. Data on one worker captured at the site GO1 in June 2022 are included; Table S2: Data on 15 sites in the Friuli Venezia Giulia region of northeastern Italy where *Bombus haematurus* was not observed in the 2023–2025 period. For each district, sites are listed chronologically.

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