

## Unusual wintering records of pipits (Aves: Motacillidae) in Hatay, Eastern Mediterranean Region of Turkey

Ali ATAHAN, Orhan GÜL\*, Mehmet ATAHAN, Mehmet GÜL  
Subaşı Birdwatching Society, Subaşı Beldesi, Hatay, Turkey

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**Abstract:** We studied the unusual wintering records of some rare pipit species during winter in Hatay Province, in the Eastern Mediterranean Region of Turkey. Through intensive field observations performed between 2007 and 2013, 8 pipit species were recorded in the province. Among the observations, 59 were unusual wintering records belonging to 5 pipit species. In this article, we present observations on frequency and seasonality of each pipit species observed in Hatay Province. Meadow, water, and red-throated pipits were already known as winter visitors to the region, but for the first time in this study, we observed buff-bellied, Richard's, tree, tawny, and Blyth's pipits in Hatay Province during winter. In light of our observations, we suggest that all 5 species—especially buff-bellied, Richard's, and tree pipits—might be regular winter visitors to Hatay.

Key words: *Anthus* spp., Aves, Eastern Mediterranean, Hatay, pipits, Turkey, unusual wintering records

### 1. Introduction

Pipits are a group of wagtails, which are small, mainly terrestrial, and insectivorous birds generally observed in grasslands and wet meadows, although a few prefer shrubby or rocky habitats (Snow and Perrins, 1998; Alström and Mild, 2003).

Nine pipit species are known to occur in Turkey, all belonging to the genus *Anthus*, and the majority of them are known as migratory species (Snow and Perrins, 1998; Alström and Mild, 2003; Kirwan et al., 2008). Among them, meadow and red-throated pipits are known as migratory winter visitors; tawny and tree pipits are known as migratory summer visitors; Richard's pipit is known as a passage migrant; Blyth's, buff-bellied, and olive-backed pipits are known as vagrant; and water pipit is known as a resident breeder and partial/altitudinal migrant in Turkey (Mullarney et al., 1999; Kirwan et al., 2008).

Hatay Province is known to be among the 3 major migration bottlenecks in Turkey. It also is a junction point of the eastern and western parts of the East Mediterranean Flyway (Cameron et al., 1967; Bildstein, 2006). Thousands of migratory passerines pass through Hatay during different periods of autumn and spring migration (Atahan et al., 2013). Among those passerines, common species of pipits are observed frequently in small numbers, both during migration and winter in Hatay. In 2008, buff-bellied pipit, a vagrant to Turkey, was recorded for the first time in the country in Hatay (Atahan and Atahan, 2009).

Following this unusual observation, we decided to study the region in detail to explore the possibility of pipits not only passing through Hatay during migration but also using the region as a regular wintering ground, given the presence of adequate habitats and suitable weather conditions.

The aim of this study was to investigate unusual records of some rare pipit species during winter in Hatay and to determine their observation frequency and seasonality in the Eastern Mediterranean Region of Turkey. To our knowledge, there has been no previous study focusing on the wintering range and status of these rare pipit species in the region; we therefore hope that this study will help fill in the gaps of knowledge in the literature.

### 2. Materials and methods

#### 2.1. Study area

Hatay is a province located in the Eastern Mediterranean Region of Turkey, at the Syrian border. The study area has a typical Mediterranean climate with hot and dry summers and mild, rainy, and windy winters. Long-term annual average temperature is 18.3 °C, and long-term annual average rainfall is 1092.2 mm. Most of the rainfall occurs between November and April (Meteorological Data Archive and Management System of Turkey, 2014).

In the study, we have focused on 3 sites in Hatay Province—namely, Milleyha wetland, Subaşı village, and Gölbaşı Lake (Figure 1). These sites were mainly chosen

\* Correspondence: orhan\_gul@yahoo.com

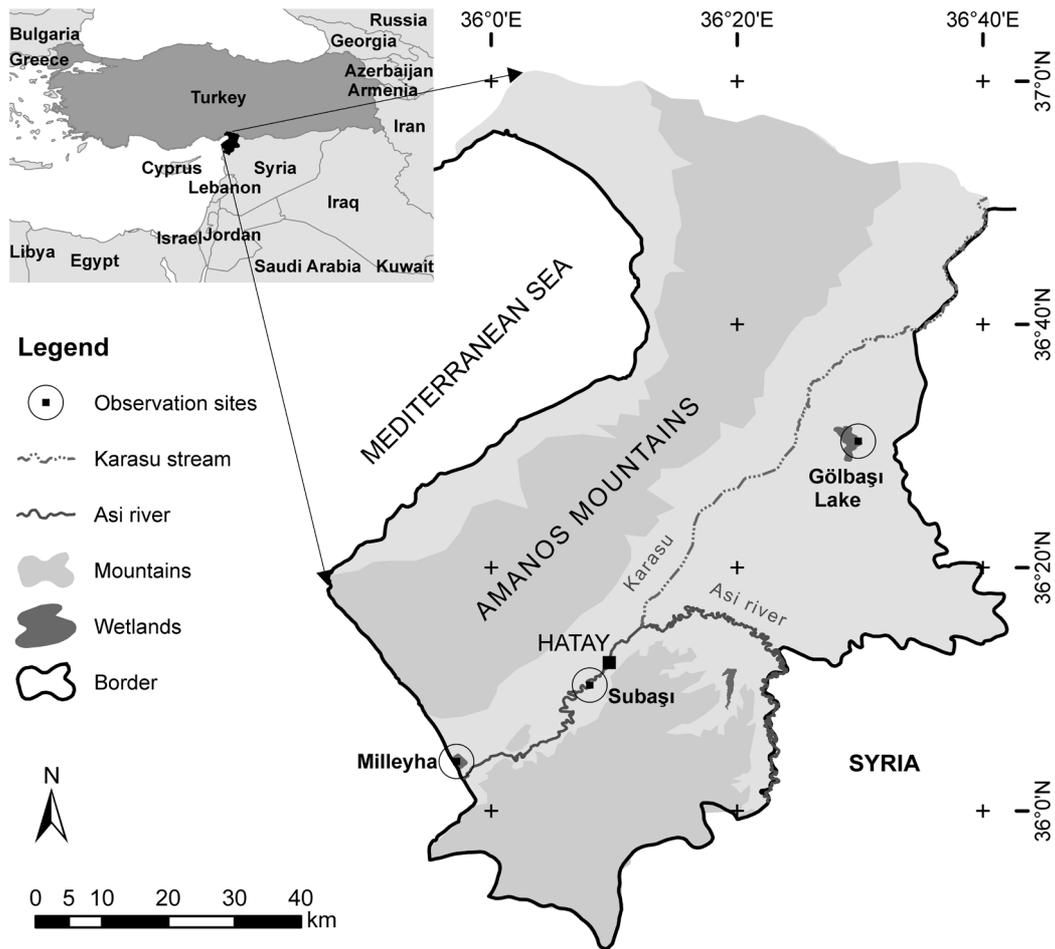


Figure 1. Location of Hatay Province and the study sites.

based on the presence of adequate habitats for pipit species. Milleyha is a small wetland located in western Hatay Province, along the coast of the Mediterranean Sea. The site is frequently used by pipit species due to the presence of mud flats, sand flats, a sandy beach, and temporary wet grasslands. Subaşı is a small village located beside the Asi River. Riparian habitats, grasslands, and farmlands were the main habitats where pipits were observed around the village. Gölbaşı Lake is the only freshwater lake within the province and is also known to have formed the northern part of Amik Lake, which has been dry since the 1960s (Kumerloeve, 1966). Grasslands, mudflats, and temporary water ponds were the main habitats suitable for pipits around the site.

## 2.2. Methods

In the framework of this study, intensive field observations were carried out at each site between 2007 and 2013. Different sites were surveyed during different visits. Observation was standardized among study sites; all 3 sites were surveyed by the same group of observers using

20–60× telescopes, 8–10× binoculars, DSLR cameras with 300 and 400 mm lenses, and digiscoping in the field. We identified pipits in the field mainly by their distinctive characteristics, i.e. streaking on breasts and upper parts, and typical songs. Specific field guides (Mullarney et al., 1999; Alström and Mild, 2003) were also employed for identification. When it was difficult to identify the species due to bad weather, light conditions, long distance, or other reasons, we tried to take photographs of the individuals as a means of identification.

All data collected during the 26 months between November and February of 2007 and 2013 were combined together to establish wintering records for each pipit species. Furthermore, we used the records collected throughout the year to show seasonality and present status of each pipit species in Hatay Province. We grouped observations belonging to species observed outside of their usual observation period and location as “unusual observations”. Such unusual wintering records of pipits in the Middle Eastern countries were collected

from published studies, including records listed under the “Around the Region” section and bird reports published by the Ornithological Society of the Middle East (OSME), to be able to compare and discuss our observations.

### 3. Results

A total of 213 individual observations at 3 study sites were carried out during the field surveys during the winter periods, and the average number of observations was  $8 \pm 4$  per month during the study. Eight pipit species were recorded 359 times in the winter periods and, among these, the meadow, water, and red-throated pipits were the most abundant pipit species (Figure 2). Fifty-nine of the records (16%) were unusual wintering observations belonging to 5 species: Blyth's, buff-bellied, Richard's, tawny, and tree pipits (Table).

Out of the 8 pipit species, red-throated, tawny, and tree pipits were observed for the longest period in the region (from August to May), whilst the 2 most abundant species, meadow and water pipits, were observed between October and April. Among the rare pipit species in the region, Richard's pipit was observed from September to April including migration seasons partially, while buff-bellied and Blyth's pipits were mostly observed during winter (Figure 3). The details of the observations are presented below for all species, from the most common to the rarest.

Meadow pipit *Anthus pratensis* Linnaeus, 1758: It was the most abundant species observed during winter periods at all study sites. Individuals were observed over a long period of time, including migration seasons partially: from October to April. It was common to observe up to 30 birds on a single day during the winter periods in the region.

Water pipit *Anthus spinoletta* Linnaeus, 1758: The species was observed between October and April in Hatay Province. It was common to observe groups of up to 10 individuals on a single day during the winter periods, and it was recorded a total of 68 times at all 3 study sites in Hatay Province during winter periods.

Red-throated pipit *Anthus cervinus* Pallas, 1811: It was a fairly common species observed over a long period of time, including migration seasons and winter, between August and May. Furthermore, groups of up to 15 individuals were observed regularly in Milleyha wetland and Subaşı village for a total of 30 times during winter periods.

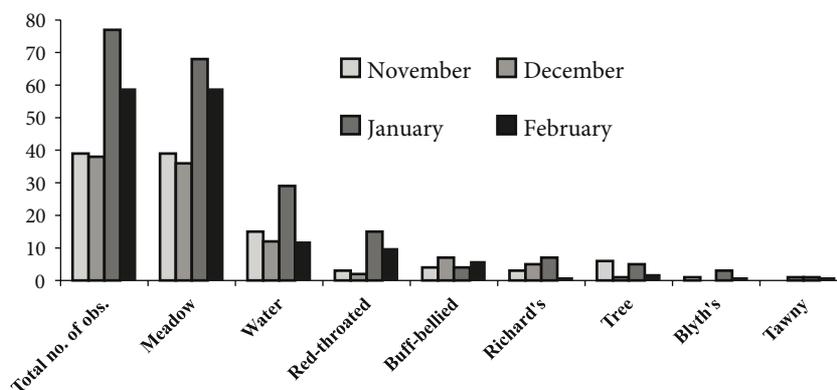
Buff-bellied pipit *Anthus rubescens japonicus* Tunstall, 1771: The species was observed for the first time in Turkey at Milleyha wetland by Atahan and Atahan (2009). After this first record, in the framework of this study, the species was observed regularly in Milleyha wetland during the winter periods (from November to March). Up to 5 individuals were recorded a total of 20 times in Milleyha wetland, while only 1 individual was observed in Gölbaşı Lake.

Richard's pipit *Anthus richardi* Vieillot, 1818: During the study, individuals were observed to arrive at Hatay in September and to leave the region in April. Groups of up to 4 individuals were observed regularly in Milleyha wetland, and a total of 16 observations were recorded during winter in the study.

Tree pipit *Anthus trivialis* Linnaeus, 1758: The species was observed between August and May in Hatay Province. Except for the migration period, groups of up to 3 individuals were observed regularly in Subaşı village and alongside the Asi River; a total of 14 observations were recorded during winter periods.

Blyth's pipit *Anthus godlewskii* Taczanowski, 1876: Up to 2 individuals were observed a total of 5 times in Milleyha wetland from November 2012 to February 2013. These observations constituted the second to sixth records of Blyth's pipit in Turkey.

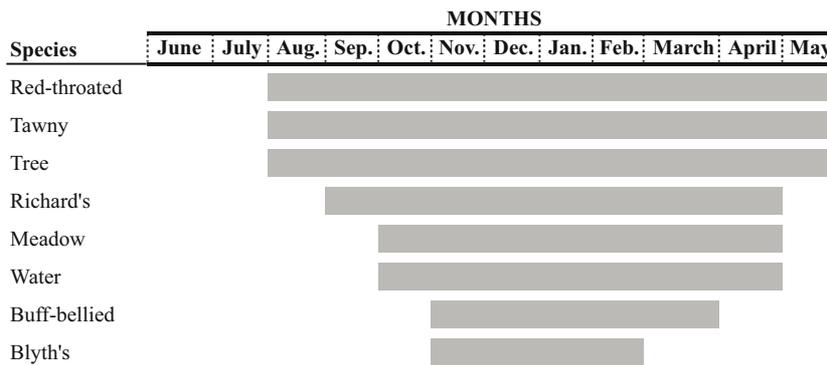
Tawny pipit *Anthus campestris* Linnaeus, 1758: This species was observed over a long period of time in Hatay: between August and May, but mostly during autumn and spring migrations, not in winter. During the study, unusual winter observations of the species were collected



**Figure 2.** The total number of observations in comparison with the number of records of each pipit species during the 4 months of the winter period in the study.

**Table.** The number of observations of each pipit species during the winter per study year and the frequency of unusual wintering records (given in bold).

Species	2007	2008	2009	2010	2011	2012	2013	Total	Frequency (n = 59)
Meadow	16	35	40	44	32	19	16	202	-
Water	2	13	16	13	15	6	3	68	-
Red-throated		5	6	4	7	4	4	30	-
Buff-bellied		3		1	7	7	3	<b>21</b>	<b>36%</b>
Richard's		5		1	4	2	4	<b>16</b>	<b>27%</b>
Tree	1			2	3	5	3	<b>14</b>	<b>24%</b>
Blyth's						1	4	<b>5</b>	<b>8%</b>
Tawny					2	1		<b>3</b>	<b>5%</b>
Total	19	61	62	65	70	45	37	359	<b>100%</b>



**Figure 3.** Seasonality of pipit species in Hatay.

in the region: the species was observed a total of 3 times in Milleyha wetland during the winter periods.

**4. Discussion**

This study presents a complete review on the wintering ranges of 8 pipit species recorded in the Eastern Mediterranean Region of Turkey. Meadow, water, and red-throated pipits are already known as winter visitors in the Eastern Mediterranean Region of Turkey (Alström and Mild 2003; Kirwan et al., 2008); thus, no further discussions will be held on these species in this paper. On the other hand, our findings on the remaining 5 pipit species wintering in Hatay were contrary to the available literature and merit further discussion.

The buff-bellied pipit is known to be mainly distributed in Central Asia and the Far East, and winters in India and Pakistan (Snow and Perrins, 1998). It is accepted as a rare and vagrant species in Turkey (Kirwan et al., 2008). On the other hand, after its first observation in 2008, it was observed regularly during winter, and it was also the most abundant species (36%) among the rare pipit species

observed in Hatay during the study period. The species rarely occurs in the Middle Eastern countries (Balmer and Murdoch, 2011), while there is a small regularly wintering population in southern Israel (Snow and Perrins, 1998). Furthermore, it has been accepted as a winter vagrant to Oman (Balmer and Betton, 2006) and UAE (Balmer and Betton, 2008), while considered a vagrant but possibly rare winter visitor in Syria (Murdoch and Betton, 2008). In light of this information, we think some individuals of buff-bellied pipit may have spread out from the population existing in Israel. Following our study, it was shown that the species was using the study sites—even in small numbers—regularly and should rather be considered as a rare winter visitor to Hatay Province.

Richard's pipit is mainly distributed in Central and East Asia and rarely winters in southwest Europe and North Africa (Sibley and Monroe, 1990; Snow and Perrins, 1998; Porter and Aspinall, 2010). This species was identified as a regular passage migrant in very small numbers and a winter visitor on some occasions in Turkey by Kirwan et al. (2008), while only 1 wintering record was known from

İskenderun, Hatay, in 1969. However, in our study, we found that it was the second most abundant species (27%) among rare pipits and was observed regularly during winter in Hatay Province. It has also been regarded as a fairly common to common migrant and winter visitor to UAE (Pedersen and Aspinall, 2011), a passage migrant and winter visitor to Israel (IsraBirding, 2013), and a vagrant to Syria (Murdoch and Betton, 2008). It is also known as a scarce passage migrant and occasional winter visitor to Cyprus (Balmer and Murdoch, 2011; Harrison and Grieve, 2012). In light of this information and according to our observations, Richard's pipit should be treated as a regular winter visitor—even in small numbers—around the Eastern Mediterranean Region of Turkey.

The tree pipit breeds in the north (including northern Turkey) and migrates to the south towards its wintering areas in Africa (Sibley and Monroe, 1990; Mullarney et al., 1999; Kirwan et al., 2008; Porter and Aspinall, 2010). The species is mainly known as a passage migrant in the Middle Eastern countries (Sibley and Monroe, 1990; Snow and Perrins, 1998), while additionally known as a winter visitor in Israel and UAE (Pedersen and Aspinall, 2011; IsraBirding, 2013). On the other hand, few previous wintering records of tree pipit are known from the southeastern Mediterranean (Alström and Mild, 2003), and 1 winter record is known from the Aegean Region of Turkey (Kirwan et al., 2008). In this study, we observed a few individuals of tree pipits a total of 14 times during the winter period in Hatay Province throughout the study period. Individuals of this species arrive at Hatay in the beginning of the autumn migration and can be observed until late in the spring migration (as shown in Figure 3). We think that during their migration to the south some individuals may prefer to stay close to their breeding sites and/or winter through their migration routes like Hatay Province, because of suitable weather conditions and habitats. In light of this information, we propose the tree pipit to be treated as a regular winter visitor—even in small numbers—in the Eastern Mediterranean Region of Turkey.

The last 2 species, namely Blyth's and tawny pipits, were observed just a few times during the winters in Hatay Province. Blyth's pipit is a rare and vagrant species both in Turkey and the Middle Eastern region (Alström and Mild, 2003; Kirwan et al., 2008). The species has been recorded only once in Turkey in the past (Kirwan et al., 2008; Balmer and Murdoch, 2009). It has been recorded in Israel just a few times from September to November (IsraBirding, 2013), while mentioned as a locally fairly common migrant and winter visitor in UAE (Alström and Mild, 2003; Pedersen and Aspinall, 2011). On the other hand, the tawny pipit is a migrant breeder in a wide range of the western Palearctic, including almost all of Turkey, and it winters in the Arabian Peninsula and northern Egypt

(Alström and Mild, 2003; Kirwan et al., 2008). The species has been previously recorded a total of 4 times in Turkey during winter (Kirwan et al., 2008). It is mainly known as a passage migrant in the Middle Eastern countries, while additionally known as a winter visitor in Israel and UAE (Alström and Mild, 2003; Pedersen and Aspinall, 2011; IsraBirding, 2013). Although there are just a few wintering records of these 2 species in Hatay, we think that both species have the potential to be treated as rare and scarce winter visitors in the Eastern Mediterranean Region of Turkey.

In conclusion, we determined in our study that buff-bellied, Richard's, and tree pipits have been wintering regularly in Hatay; they should be treated as regular winter visitors in small numbers around the region, contrary to the available literature. Furthermore, both Blyth's and tawny pipits are possibly wintering in Hatay in small numbers, but not as regularly. However, to be able to say more on this, further information and data acquired through longer-term observations are required.

After a long period of monitoring, we feel obliged to underline some important issues on the difficulties of this study to shed light on further studies. Because pipits are very similar, it is usually difficult to identify rare ones in the field (Alström and Mild, 2003). They are extensively dispersive as small flocks throughout their wintering range, and this also make pipits elusive to observers (Snow and Perrins, 1998). In addition, pipits are not very noticeable because of their uncolored feathers in comparison to many other bird species, especially in winter, when water birds are in focus. Moreover, pipits spend most of their time on the ground and they can easily be obscured behind vegetation. All of these limiting factors may have caused pipits to be overlooked, and may explain the low number of records in Turkey. This idea was supported by the absence of unusual wintering records of any pipit species in Kuşbank Database over a period of nearly 30 years (Kuşbank, 2013). However, we should also take into account that Hatay Province and its environs are generally warmer than other parts of Turkey. Its geographical location, average annual temperature (18.3 °C), and habitats are also suitable for pipits during winter, and this could be another reason for pipits to choose this area. More regular and species-specific observations, together with ringing studies, are necessary to clarify the status of pipit species around the region in Turkey.

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