

Wingless flight: An update on spider ballooning and an analysis of the terminology

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Abstract

Ballooning is an aerial dispersal mechanism commonly used by spiders, primarily observed in small adults and juveniles of some species. Spiders can navigate through the air by deploying silk threads, covering varying distances. During the last decades, there has been increased attention to spider aerial dispersal studies, and different use of terminologies associated with ballooning. We surveyed research literature on aerial dispersal studies from 1966 up to 2024 to assess the variances in the number of studies on these topics and analyse the use of pre-ballooning and ballooning terms. We found a total of 216 research articles containing pre-ballooning behaviour terms such as ‘tip-toe’/ ‘tiptoe’/ ‘tiptoeing’ (n = 17), ‘drop on dragline’/ ‘dropping on dragline’ (n = 15) and terms such as ‘ballooning’ (n = 146), ‘rappel/rappelling/bridging’ (n = 74), ‘aerial dispersal’ (n = 104), ‘aerial dispersion’ (n = 15), or ‘aeronautic behaviour’ (n = 7). These studies were distributed into 192 research articles, 9 reviews, 3 book chapters, and 7 into other categories. Spider families with the most reports of ballooning were Linyphiidae, Theridiidae, and Araneidae. Tiptoeing is considered an indicator of ballooning behaviour; however, according to our results, there are some differences in the use of the concepts ‘drop on dragline/dropping on a dragline’ and ‘rappelling’ as pre-ballooning, ballooning or non-ballooning behaviours. We discuss the importance of fine-scaled behavioural descriptions of ballooning and the need to homogenize the criteria to smooth the way for future studies of this phenomenon in spiders.

Keywords: aerial dispersion • Araneae • dispersal behaviour • tiptoe

Introduction

Animal dispersal is a crucial phenomenon that plays a fundamental role in the distribution and persistence of species (Nathan 2006; Clobert 2012). Animals have developed many strategies to colonize new habitats, expand their geographic ranges, avoid inbreeding, and minimize predation risk and/or competition for resources (Ronce 2007; Sheldon *et al.* 2017). Dispersal behaviour has received particular interest because of its relevance in shaping species distribution, population structure, and ecosystem dynamics, among others (Bowler & Benton 2005; Clobert 2012). In

this context, one of the most intriguing and remarkable strategies of aerial dispersal is the phenomenon known as ‘ballooning’, observed in spiders and some other small species like spider mites and moth larvae (Craig 1997; Bell *et al.* 2005b; Bidegaray-Batista *et al.* 2017). This unique ability allows spiders to travel big distances using silk threads, taking advantage of upward air currents and other atmospheric factors such as temperature, humidity, and electric fields (Richter 1970; Bishop 1990; Morley & Robert 2018; Cho 2021).

Studying ballooning is essential for understanding the impact of environmental changes on species survival, such as droughts, floods, chemical use in agriculture, and habitat fragmentation, reduction or modification (Bonte, Lens & Maelfait 2006; Bonte *et al.* 2012; Travis *et al.* 2013; Vanbergen *et al.* 2017; Piacentini *et al.* 2021). Some certain behaviours happening before aerial dispersal in spiders have been described as potential indicators of ballooning occurrence (Eberhard 1987; Bell *et al.* 2005b). One mechanism of pre-ballooning behaviour is named ‘tiptoe’/ ‘tip-toe’/ ‘tip toe’/ ‘tiptoeing’, in which the spider climbs to a high point, adopts a position with legs extended and abdomen raised facing an air current, and releases silk until taking off (Bristowe 1939; Decae 1987; Eberhard 1987). Another pre-ballooning behaviour is ‘dropping on a dragline’/ ‘dropping on a dragline’ in which the spider climbs to an elevated position, drops from a silk line, and slides down on the silk threads until they break and the spider balloons (McCook 1980; Coyle 1983; Decae 1987; Eberhard 1987). Some authors distinguish ballooning from other aerial dispersal mechanisms called ‘rappelling’/ ‘rappel’, also described as ‘bridging’ (Coyle 1985; Greenstone, Moran & Hultsch 1985; Bonte *et al.* 2008) which involves descending or moving downward from elevated locations using silk threads attached to the substrate to explore new habitats or escape from adverse situations. This shorter distance dispersal behaviour is considered to present a lower risk of dispersion compared to the high mortality costs associated with ballooning (Bonte *et al.* 2008). For a list of definitions of these terms and their references see Table 1.

There are divergent perspectives on what constitutes pre-ballooning behaviours. Although there is consensus that ‘tiptoe’ is a mechanism preceding ballooning, in the case of ‘drop on a dragline’ this is not so clear. It has been recorded that tiptoeing is performed before ballooning and sailing in certain spider species (Decae 1987; Hayashi *et al.* 2015; Carlozzi *et al.* 2018). Nevertheless, it does not always result in aerial dispersal (Lubin & Suter 2013). Several studies indicate that tiptoeing can occur without leading to ballooning, depending on environmental and physiological factors (Bonte, Deblauwe & Maelfait 2003; Cho *et al.* 2018; Narimanov *et al.* 2021). Given that tiptoeing is frequently used as an indicator of ballooning latency, future research should quantitatively assess the connection between these and other related behaviours. Drop on a dragline could be mistaken for web building or repairing or other mechanisms of locomotion in spiders (Vollrath 1992; Barth *et al.* 1998) or described as a defence mechanism (Rayor 1996). This is

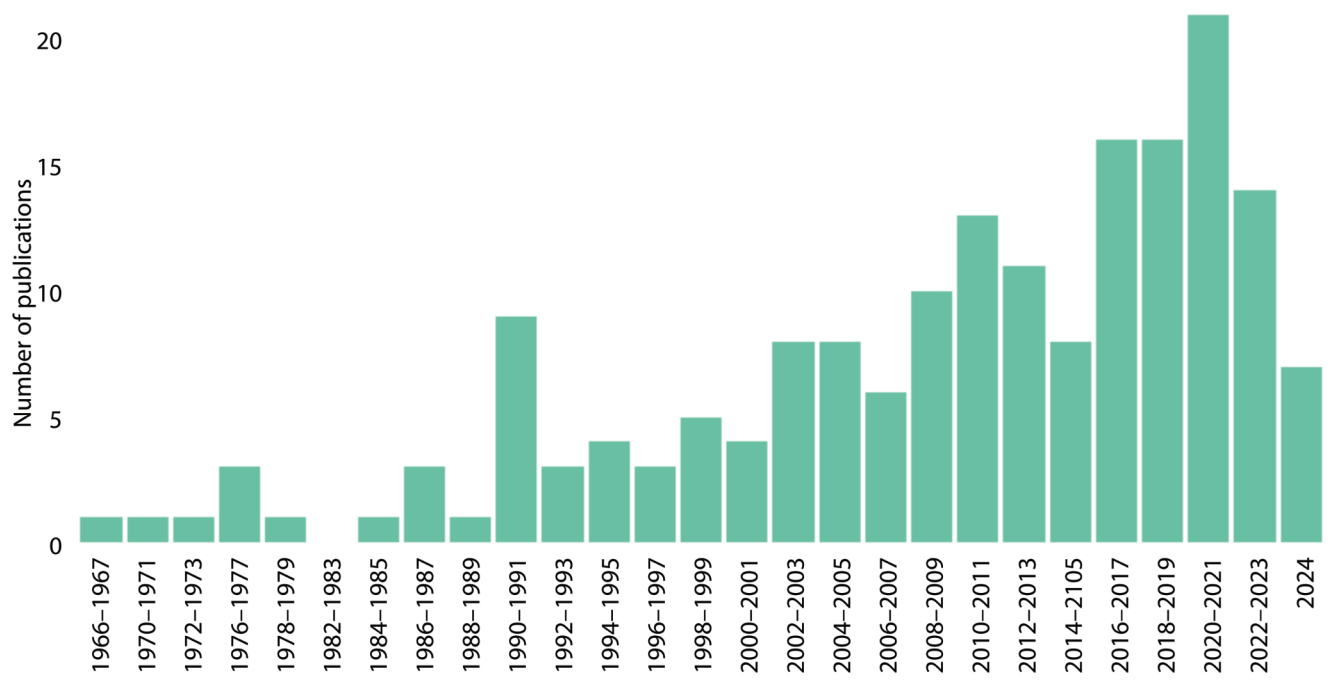


Fig. 1: Number of publications using the terms ‘ballooning’, ‘aerial dispersal’/ ‘dispersion’, ‘rappelling’/ ‘rappel’, ‘tip-toe’/ ‘tiptoe’/ ‘tip toe’ / ‘tiptoeing’ and ‘dropping on a dragline’/ ‘drop on a dragline’ as explained in Methods, published between 1966 and 2024.

why we will refer to them as ‘pre-dispersal behaviours’ in this work.

The objective of the present revision was to survey the research literature on aerial dispersal in spiders, assess the variances in the number of studies on these topics, and analyse the use of pre-ballooning and ballooning terms during the period selected.

Methods

We conducted a survey with SCOPUS research literature database and examined articles, reviews, and books, within the subject areas of Agricultural and Biological Sciences, Environmental Science, or Earth and Planetary Sciences. We considered the period between 1966 and 2024. We recorded the texts which included in the title, keywords, and abstracts the following search terms: 1) ‘ballooning’, ‘aerial dispersal’, ‘aerial dispersion’, or ‘aeronautic behaviour’ and ‘spider’; 2) ‘tip-toe’, ‘tiptoe’, ‘tip toe’ or ‘tiptoeing’ and ‘spider’; 3) ‘drop on dragline’ or ‘dropping on dragline’ and

‘spider’; 4) ‘rappel’, ‘rappelling’, ‘bridging’ or and ‘spider’; 5) ‘tip-toe’ or ‘tiptoe’ or ‘tip toe’ or ‘tiptoeing’ and ‘ballooning’ and ‘spider’; ‘drop on dragline’ or ‘dropping on dragline’ and ‘ballooning’ and ‘spider’; and ‘rappel’, ‘rappelling’ or ‘bridging’ and ‘ballooning’ and ‘spider’. We performed this last search (number 5) using the specified combination of pre-balloning or ballooning terms to ascertain whether these concepts are used as synonymous or to denote distinct behaviours. Additionally, we recorded details such as spider taxa, descriptions of mechanisms related to aerial dispersal, timing of the experiments, and type of experiments reported throughout the entire text of the research literature reported by the SCOPUS search.

Results

We found 216 publications related to the terms ‘ballooning’ (146) ‘aerial dispersal’ (104), ‘aerial dispersion’ (15), and ‘aeronautic behaviour’ (7), distributed into 192 articles, 9 reviews, 3 book chapters, and 7 from other categories

Behaviour	Definition	Source
Ballooning/Aerial dispersal/ aerial dispersion	Long distance dispersing by releasing threads of silk in the air from their spinnerets and becoming airborne with the aid of meteorological forces	Duffey 1977; Eberhard 1987; Bonte <i>et al.</i> 2008
Rappelling/rappel/bridging	Dispersal over a short distance when the distal ends of the silk threads become attached to a substrate, and are used to disperse short distances.	Bonte <i>et al.</i> 2008
Tip-toe/tiptoe/tip toe/tiptoeing	The spider climbs to a high point and takes up a position with legs extended and abdomen raised while releasing silk.	Eberhard 1987
Dropping on a dragline	Spiderlings are dropped on a dragline and while suspended and holding this thread with leg pairs I and II, let out ballooning silk until they become airborne.	Tolbert 1977
Suspended ballooning	Mygalomorph spiders hang down from a silk line attached to the vegetation on an elevated position, and then rely on the wind to blow and carry them away ‘spider first’	Coyle 1985; Decae 1987

Table 1: Definitions of terms used in SCOPUS search, with their corresponding references.

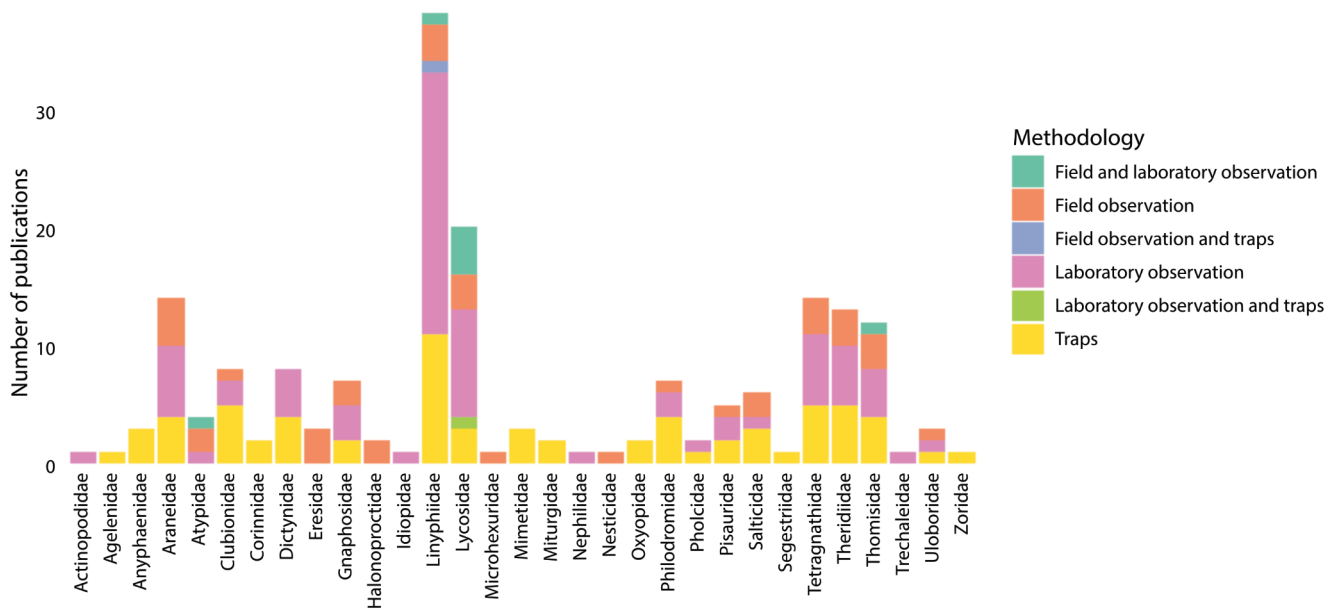


Fig. 2: Number of publications involving each family and methodology of the study. ‘Field observation’ includes direct observation of aerial dispersal on the field; ‘Laboratory observation’ includes direct observation of aerial dispersal in the laboratory; ‘Traps’ include different types of traps or manual collection specific for ballooners. The different types of traps are detailed in the Appendix for each species.

(conference paper, erratum, note and short survey) (see Supplementary Material at 10.5281/zenodo.15007003). Thirty-nine publications were not considered since they involved spider mites or other acari. Results show an increasing number of publications related to the topic of aerial dispersal in spiders over the years (Fig. 1). The families with most publications were Linyphiidae (37), Lycosidae (20), Araneidae (14), Tetragnathidae (14) and Theridiidae (13) (Fig. 2). The list of publications distinguishing between families and species is summarized in the Appendix. Eighty-eight genera or species were reported as aerial dispersers through direct

observation under laboratory conditions, and 61 were identified by direct field observations. In contrast, 240 genera or species were reported as aerial dispersers by indirect methods, such as various types of traps, with 183 of these not being reported through any other method of direct observation. Linyphiidae and Lycosidae are the families in which most direct observations were reported (by laboratory or field observations), as we summarize in Fig. 2. We found 120 genera or species reported for Linyphiidae and 46 for Lycosidae in the reviewed articles, and they were the families with most species reported as ballooners (Appendix). To avoid overestimation, we only reported identifications at genus or species level in this table with their updated names (World Spider Catalog 2024). In the specific searches of pre-dispersal behaviours, the terms ‘tip-toe’ or ‘tiptoe’ or ‘tip toe’ or ‘tiptoing’ and ‘spider’, we found 15 articles and two reviews from species belonging to Linyphiidae (six), Lycosidae (five), Theridiidae (one), Araneidae (one), Eresidae (one) and spiders in general (four). ‘Drop on dragline’ or ‘dropping on dragline’ and ‘spider’ were reported on 15 texts (seven were discarded from the search since the keywords were used in another context not related to aerial dispersal behaviour in spiders), eight were articles about Lycosidae (three), Linyphiidae (one), Theridiidae (one), Araneidae (one), Actinopodidae (one), and Ctenidae (one) families. In the case of ‘rappel’ or ‘rappelling’ or ‘bridging’ and ‘spider’ there were 74 texts mentioning these terms, but 53 of them were also discarded because of previously mentioned reasons. The 21 remaining texts (20 articles, one book chapter) studied species from Linyphiidae (five), Theridiidae (three), Araneidae (two), Pisauridae (one), Lycosidae (one), Salticidae (one), Pholcidae (one), Nephilidae (one), Thomisidae (one), Eresidae (one), and spiders in general (five). In most studies, we did not find details about whether the observations were conducted during the day or

Terminology	Entire article	Title, abstract, and keywords		
		Pre-ballooning	Pre-rappelling	Different from ballooning
Ballooning	69			
Aerial dispersal/dispersion	49			
Dropping on a dragline or similar	18	4	1	
Tip-toe/tiptoe/tip toe/tiptoing	38	12	1	
Aeronautic behaviour/dispersal	15			
Rappelling	15			7
Rafting	4			
Bridging	5			
Sailing	2			
Suspended ballooning	2			
Airborne	2			

Table 2: Terminology used in the reviewed publications throughout the entire text, including the title, abstract, and keywords. We specifically analysed when the terms ‘dropping on a dragline’, ‘tiptoe’, or ‘rappelling’, and their variants were used as synonyms for ballooning or as pre-dispersal behaviours. Additionally, we included terms such as ‘rafting’, ‘bridging’, ‘sailing’, ‘suspended ballooning’ and ‘airborne’ found in the text of some articles, as we considered them relevant to mention in relation of aerial dispersal in spiders.

night. This occurs in 258 of 393 species reported in this work (Appendix). Definitions of the terms used in the revised text are detailed in Table 2.

We found that when ballooning and rappel/rappelling are reported in an article (nine cases), they are always treated as different behaviours of aerial dispersal (Bonte *et al.* 2008; Bonte *et al.* 2009; Bonte 2009; De Meester & Bonte 2010; Bonte, De Meester & Matthysen 2011; Mestre & Bonte 2012; Lubin & Suter 2013; Woolley *et al.* 2016; Hogg & Dane 2018; Řezáč & Řezáčová 2018; Řezáč, Řezáčová & Heneberg 2019; Wolz *et al.* 2020; Narimanov *et al.* 2021; Řezáč *et al.* 2021; Narimanov, Bonte & Entling 2022; Mowery Lubin, & Segoli 2022; Monsimet *et al.* 2022). In the case of tip toe/tiptoe/tip-toe, it is treated as pre-ballooning behaviour in the majority of cases ($n = 12$ of 14), but Narimanov *et al.* (2021) considered that it also precedes rappelling, and Mowery, Lubin, & Segoli (2022) treat it as a pre-dispersal behaviour, without specifying if it precedes ballooning, rappelling or both. Drop on dragline/dropping on a dragline is considered a synonym for ballooning in most cases ($n = 5$ of 6), except Řezáč & Řezáčová (2018), who defines it as a mechanism that precedes rappelling dispersal. The texts obtained on each search are detailed in Supplementary Material (10.5281/zenodo.15007003).

Discussion

In this study, we analysed 216 research texts from 1966 to 2024, and we found different uses of terms like ‘drop on dragline’ and ‘rappelling’ as indicators of ballooning behaviour. While ‘tiptoe’ is widely accepted as a precursor to ballooning, the use of the previous terms strictly associated with ballooning remains debated. Additionally, the incomplete information on experimental conditions during ballooning observations further complicates data interpretation. Our findings highlight the need for standardized terminology on spider aerial dispersal.

We highlight descriptions made by some authors about differentiation in short- and long-distance dispersal. ‘Bridging’ is described by Jackson & Joseph (1973) as a different mechanism from ‘aerial migration’. Coyle (1985) later introduced the term ‘rappelling’ or ‘bridging’ in which spiders release silk lines to the wind to establish connections to distant objects. The term ‘bridging’ has been applied in different studies since then (e.g. Schneider *et al.* 2001; Corcobado *et al.* 2012; Lubin & Suter 2013; Lee & Kuntner 2015). Quiñones-Lebrón and collaborators (2019) further detailed that spiders use bridging to move across gaps, a behaviour critical for mate searching, especially in species with marked sexual size dimorphism. The term ‘rappelling’ resurfaced in Bonte *et al.* (2008), where both ballooning (long-distance) and rappelling (short-distance, also termed ‘bridging thread’) are described as being preceded by tiptoe behaviour. ‘Rappelling’ involves the spider stretching the legs, raising the abdomen, and producing long silk threads until they attach one to the substrate before taking off; they use this behaviour to disperse short distances. During bal-

looning, spiders take off attached to the silk, dispersing over distances of several hundred meters. Bonte and colleagues further explored these distinct aerial strategies in subsequent studies (Bonte 2009; De Meester & Bonte 2010; Bonte, De Meester & Matthysen 2011; Mestre & Bonte 2012; Bonte 2012). Reynolds, Bohan & Bell (2007) suggested that spiders have limited control over their aerodynamic drag and dispersal, with silk length being crucial only at lift-off. While tiptoeing is the most common pre-ballooning behaviour, some spiders, particularly mygalomorphs, use alternative behaviours like dropping from elevated points while attached to a dragline (Eberhard 1987). The mechanism of silk release during tiptoeing, whether actively pulled or propelled by muscle action, remains debated (Eberhard 1987; Jones 1994; Bell *et al.* 2005b).

The term ‘dropping on a dragline’ was originally described by Tolbert (1977) as a behaviour in which spiderlings suspend from a dragline, continue releasing silk until becoming airborne, and then detach the line. Coyle (1983) expanded this definition to mygalomorph spiders, noting that spiderlings hang from a dragline, which eventually breaks and serves as the ballooning thread. We consider further research is required to determine if draglines released during pre-ballooning behaviour are cut by the air currents, by the spider when they are close to take off, any of the two mechanisms, or both of them. Some studies describe similar behaviours with alternative terms, such as ‘drop and swing dispersal behaviour’ (Barth *et al.* 1991), wherein the dragline is only rarely ruptured by the drag forces of the wind. Furthermore, ‘dropping on a dragline’ is also used in contexts like web-building or as a safety mechanism in orb-weaving spiders (Wilson 1969; Zschokke 1996; Jörger & Eberhard 2006).

Our results show that Linyphiidae and Lycosidae are the most studied families regarding aerial dispersal, in general including sticky traps as detection method. However, this method provides limited information on the exact timing and climatic conditions of ballooning behaviour. In Linyphiidae, authors have studied how conditions such as starvation, environmental conditions, inbreeding, and population density, affect aerial dispersal in *Erigone* Audouin, 1826 species. Bonte, Lukáč & Lens (2008) showed that the duration of tiptoe behaviour in *Erigone atra* Blackwall, 1833, which correlates with silk thread length, decreases after starvation. According to Mestre & Bonte (2012) in *Erigone dentipalpis* (Wider 1834) starvation promotes aerial dispersal in juveniles; but, conversely, in males of this species rappelling decreases under food deprivation. Temperature variations have also been reported to affect dispersal behaviours, influencing long-distance ballooning and short-distance rappelling. Specifically, temperature affects the aerial dispersal of *E. atra*, with a higher propensity for ballooning in cooler conditions and for rappelling under warmer temperatures (Bonte *et al.* 2008). Also, females raised at lower temperatures build smaller webs, indicating reduced energy investment (measured by the size of webs after settlement). This suggests that thermal conditions during development influence energy allocation and disper-

sal strategies in adulthood in *E. atra* (Bonte *et al.* 2008). Other studies revealed reduced dispersal due to inbreeding in *Erigone* species (Bonte 2009). Population density significantly impacts dispersal decisions, with increased pre-dispersal behaviours observed under higher densities (De Meester & Bonte 2010).

Wolf spiders (Lycosidae) have also been thoroughly studied regarding ballooning behaviour. Bonte & Lens (2007) found that *Pardosa purbeckensis* F. O. Pickard-Cambridge, 1895 tiptoe behaviour (ballooning motivation) has a significant genetic basis, with heritability increasing under unfavorable wind conditions, and no genetic correlation between different wind velocities, suggesting independent selection pressures across varying environmental conditions. Furthermore, Bonte, Bossuyt & Lens (2007) reported that aerial dispersal propensity of this species decreased with smaller salt marsh size, but increased in larger marshes under strong winds. Puzin, Bonte & Pétillon (2018) showed that local density negatively affected juvenile dispersal in *P. purbeckensis*, while habitat structure had no significant impact, highlighting the dominance of environmental factors over genetic influences on aerial dispersal. Postiglioni *et al.* (2017) documented ballooning behaviour in Lycosidae, focusing on *Allocosa senex* (Mello-Leitão, 1945), *Allocosa marindia* Simó, Lise, Pompozzi & Laborda, 2017, and *Schizocosa malitiosa* (Tullgren, 1905). They observed pre-ballooning behaviours like ‘tiptoe’ and ‘dropping on dragline’ under natural conditions during the day and night. They found that diurnal ballooning was positively correlated with both wind speed and humidity, but negatively correlated with atmospheric pressure. Differences in temperature effects over ballooning between *A. senex* and *A. marindia* were likely linked to their specific coastal dune microhabitats. Additionally, *Allocosa* Banks, 1900 coastal species from fragmented landscapes exhibited higher frequencies of pre-ballooning behaviours compared to *S. malitiosa*, a generalist species from neighboring suburban areas with more vegetation cover of exotic species. Carlozzi *et al.* (2018) further explored aerial dispersal of the same three species under laboratory conditions, reporting a higher frequency of pre-ballooning in *Allocosa* during the day. Kacevas *et al.* (2024) recently studied the ballooning behaviour of the funnel-web wolf spider *Aglaoctenus lagotis* (Holmberg, 1876), under both laboratory and field conditions. They found that this species can disperse via ballooning, primarily during the day. Notably, the behaviour was preceded by dropping on a dragline other than tiptoeing, which was absent in this species.

Moreover, linyphiids and lycosids have been linked to massive web aggregations resulting from the ballooning dispersal of thousands of individuals. In 2018, Řezáč & Řezáčová studied large web aggregations of the linyphiid *Oedothorax apicatus* (Blackwall, 1850) in northeast Moravia, Czech Republic, finding that most spiders exhibited tiptoeing behaviour, suggesting the webs were accumulations of draglines. Piacentini *et al.* (2021) reported similar events with wolf spiders in Argentina and Uruguay, after a

flood. These spiders used elevated land as a refuge and ballooning platform, exhibiting tiptoe behaviour.

Although most reports of aerial dispersal in spiders focus on Araneomorphae, some mygalomorphs have also been reported (Bell *et al.* 2005b; Ferretti *et al.* 2013). Notably, these reports often involve trapdoor or purse-web spiders, typically poor walkers. A review by Buzatto, Haeusler & Tamang (2021) indicates other species from the families Actinopodidae, Atypidae, Halonoproctidae by direct observation, and Barychelidae, Microstigmatidae, Migidae, and Pycnothelidae by indirect inference. Recently, Rossi *et al.* (2021) described the first case of ballooning in the Idiopidae family, *Neocteniza toba* Goloboff, 1987. They observed a behaviour they called ‘suspended ballooning’ in which spiderlings drop from a surface while anchored by a silk thread, eventually being carried away by the breeze. This mechanism had been documented by Enock (1885) for mygalomorph species. Given the challenges in collecting and observing these individuals, it is likely that more mygalomorphs are capable of aerial dispersal than currently recognized.

Most of the studies mentioned in this review were performed using field traps (Figure 2), including sticky traps, water traps, window traps, and suction traps, methods that are often labor-intensive and costly, in comparison with other methods (Thorbek *et al.* 2002, Woolley *et al.* 2007). Recently, more efficient techniques have been developed. Thorbek *et al.* (2002) estimated the costs and efforts of each trapping method, including suction traps, deposition traps and sticky traps. They also calculated Ballooning Index (BI) considering the time required to collect and process the samples, as well as the costs of materials and equipment involved, and compared the weekly time investment and costs for each trapping method. For instance, in the estimations for BI authors monitored spiders climbing 30 cm wooden sticks and eventually dispersing through the air. A more effective approach is the trap proposed by Woolley *et al.* (2007), which uses a removable bottle attached to a vertical metal rod or ‘climbing stick’, which spiders ascend during their normal behaviour. They catch significantly more spiders compared to sticks treated with insect-trapping adhesive, increasing capture rates while reducing effort and cost. Manual collections, which imply gathering large numbers of spiders from the snow or massive webs, can also be effective in confirming the occurrence of ballooning (Crawford & Edwards 1986; Bell *et al.* 2005b; Řezáč & Řezáčová 2018; Piacentini *et al.* 2021). It is crucial to emphasize the importance of laboratory or field studies that record behaviours directly to avoid extrapolating aerial dispersal behaviours to species or families that have not been tested in detail. Huber (2023) reviewed ballooning records in the Pholcidae family, noting few and often ambiguous reports. Buzatto, Haeusler & Tamang (2021) summarized ballooning studies in mygalomorph species; here, we extend this information to araneomorphs, focusing on families, genera, and species with direct records (Appendix).

Most observational studies do not specify whether they were performed during the day, night, or both. Some studies

have noted differences between these periods. For example, *Stegodyphus dumicola* Pocock, 1898 (Eresidae) exhibited tiptoe behaviour and released long silk lines at night, though this did not lead to dispersal (Lubin & Suter 2013). Tiptoe behaviour was more frequent in the evening and among smaller individuals. *Allocosa* spp. showed significantly higher pre-ballooning frequencies compared to *S. malitiosa* in both day and night trials, though no within-species differences were found between day and night. Thorbek *et al.* (2002) found that ballooning was rare at night in their Ballooning Index study, which used suction traps and wooden sticks to monitor aerial activity. These findings suggest that future studies should account for the time of day to better understand species-specific patterns.

Cho (2021) reviewed meteorological and aerodynamic factors influencing spider ballooning, finding that temperature, humidity, and wind speed significantly impact ballooning activity. Higher temperatures and low humidity favor ballooning, with optimal wind speeds for takeoff ranging from 0.35 to 2.1 m/s (Richter 1970; Salmon & Horner 1977; Woolley *et al.* 2016). Turbulent airflows near the ground, known as 'ejection regimes' also promote ballooning (Cho *et al.* 2018). Additionally, atmospheric instability and chaotic wind currents extend air suspension time (Suter 1999; Reynolds, Bohan & Bell 2007). The role of electric fields has also been highlighted, with charged ballooning fibers potentially providing buoyancy (defined as the ability of electrically charged silk fibers to generate an upward force, allowing spiders to remain suspended in the air) (Gorham 2013; Morley & Robert 2018). Morley & Robert (2018) demonstrated that spiders can detect and respond to electric fields, with trichobothria acting as electroreceptors. This discovery of aerial electroreception in spiders suggests that the atmospheric potential gradient (APG) may influence ballooning by signaling meteorological conditions and providing physical force. However, further research is needed to interpret these findings and confirm the role of electric fields in natural settings (Morley & Gorham 2020). While electric fields may play a supplementary role, Narimanov *et al.* (2021) proposed that wind would remain the primary factor facilitating passive aerial dispersal in linyphiid spiders.

Conclusions and perspectives

Our study highlights the varied terminology used for describing spider aerial dispersal behaviours and underscores the need for standardization of definitions, and the importance of fine scale descriptions for determining the mechanics and functions of aerial dispersal in spiders. Updated points of view (as an example, Bonte *et al.* (2008)) highlighting as distinct forms of long and short distance dispersal the behaviours of ballooning and rappelling, respectively, contribute to this direction. Furthermore, providing full and clear descriptions of the array of pre-ballooning behaviours and determining whether they are strictly associated with ballooning or other functions, is essential for a

more comprehensive understanding of dispersal mechanisms in spiders.

Despite extensive research on Linyphiidae and Lycosidae, available information on most spider families is scarce or absent. Moreover, aerial dispersal data is focused on few species and, in several cases, based on anecdotal observations. Future studies should also include diurnal and nocturnal observations considering seasonal, climatic and physical variations. Finally, studying aerial dispersal is key for understanding spider diversity and distribution patterns in the past and present, and for predicting their viability in the future in a planet in environmental crisis.

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Appendix

Genera and species reported in the publications reviewed in this work. We compiled information on study methods, time of day when the studies were conducted, and the terminology used in the articles.

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Actinopus</i> sp.	Actinopodidae	Laboratory observation	Night	Ballooning, aerial dispersal, dropping on a dragline, suspended ballooning	Buzatto <i>et al.</i> (2021); Ferretti <i>et al.</i> (2013)
<i>Aculepeira ceropegia</i> (Walckenaer, 1802)	Araneidae	Laboratory observation, suction trap	n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Aculepeira packardii</i> (Thorell, 1875)	Araneidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Agalenatea redii</i> (Scopoli, 1763)	Araneidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Aglaoctenus lagotis</i> (Holmberg, 1876)	Lycosidae	Laboratory observation, field observation	Day and night	Ballooning, aerial dispersal, aerial dispersion, bridging, tiptoeing, dropping on dragline	Kacevas <i>et al.</i> (2024)
<i>Agyneta cauta</i> (O. Pickard-Cambridge, 1903)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Agyneta mollis</i> (O. Pickard-Cambridge, 1871)	Linyphiidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Agyneta nigripes</i> (Simon, 1884)	Linyphiidae	Sticky traps, water traps	n.s	Ballooning, aerial dispersal	Coulson, Hodgkinson & Webb (2003)
<i>Agyneta rurestris</i> (C. L. Koch, 1836)	Linyphiidae	Laboratory observation, field observation, manual collection, water traps, suction trap, SNB traps, sticky traps, aspirator	Day, n.s	Ballooning, aerial dispersal, aeronautic behaviour, tiptoe, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Duffey (1997); Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004); Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016); Thomas & Jepson (1997); Thomas & Jepson (1999); Thomas, Brain & Jepson (2003); Narimanov <i>et al.</i> (2021); Woolley <i>et al.</i> (2016)
<i>Agyneta simplicatarsis</i> (Simon, 1884)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Allocosa marindia</i> Simó, Lise, Pompozzi & Laborda, 2017	Lycosidae	Laboratory observation, field observation,	Day and night	Ballooning, aerial dispersal, aeronautic behaviour, tip-toe, dropping on a dragline	Carlozzi <i>et al.</i> (2018); Postiglioni <i>et al.</i> (2017)
<i>Allocosa senex</i> (Mello-Leitão, 1945)	Lycosidae	Laboratory observation, field observation,	Day and night	Ballooning, aerial dispersal, aeronautic behaviour, tip-toe, dropping on a dragline	Carlozzi <i>et al.</i> (2018); Postiglioni <i>et al.</i> (2017)
<i>Alopecosa barbipes</i> (Sundevall, 1833)	Lycosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Alopecosa pulverulenta</i> (Clerck, 1757)	Lycosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Alopecosa</i> sp.	Lycosidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Anelosimus baeza</i> Agnarsson, 2006	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus domingo</i> Levi, 1963	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus elegans</i> Agnarsson, 2006	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus eximius</i> (Keyserling, 1884)	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus guacamayos</i> Agnarsson, 2006	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus oritoyacu</i> Agnarsson, 2006	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus studiosus</i> (Hentz, 1850)	Theridiidae	Laboratory observation	n.s	Ballooning, bridging	Corcobado <i>et al.</i> (2012)
<i>Anelosimus vittatus</i> (C. L. Koch, 1836)	Theridiidae	Suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Anelosimus</i> sp.	Theridiidae	Laboratory observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, bridging	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Corcobado <i>et al.</i> (2012); Simonneau, Courtial & Pétillon (2016)
<i>Anyphaena accentuata</i> (Walckenaer, 1802)	Anyphaenidae	Hides on trees, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bucher <i>et al.</i> (2010); Simonneau, Courtial & Pétillon (2016)
<i>Anyphaena pacifica</i> (Banks, 1896)	Anyphaenidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Apollophanes margareta</i> Lowrie & Gertsch, 1955	Thomisidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Araeoncus humilis</i> (Blackwall, 1841)	Linyphiidae	Laboratory observation, suction trap	n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Araneus angulatus</i> Clerck 1757	Araneidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Araneus diadematus</i> Clerck, 1757	Araneidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Araneus marmoreus</i> Clerck, 1757	Araneidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Araneus sturmi</i> (Hahn, 1831)	Araneidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Araneus triguttatus</i> (Fabricius, 1775)	Araneidae	Field observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Araniella alpica</i> (L. Koch, 1869)	Araneidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Araneus</i> sp.	Araneidae	Sticky traps, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Hogg & Daane (2010, 2018); Simonneau, Courtial & Pétillon (2016)
<i>Araneus</i> sp., prob. <i>nordmanni</i> (Thorell, 1870)	Araneidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Araniella cucurbitina</i> (Clerck, 1757)	Araneidae	Laboratory observation, field observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, aerial migration	Blandenier <i>et al.</i> (2013); Blandenier, Bruggisser & Bersier (2014); Blandenier (2009); Entling, Stampfli & Ovaskainen (2011); Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Araniella displicata</i> (Hentz, 1847)	Araneidae	Laboratory observation, manual collection	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Crawford & Edwards (1986); Larrivée & Buddle (2011)
<i>Araniella inconspicua</i> (Simon, 1874)	Araneidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Araniella opisthographa</i> (Kulczyński, 1905)	Araneidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Araniella</i> sp.	Araneidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Arctosa leopardus</i> (Sundevall, 1833)	Lycosidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Arctosa perita</i> (Latreille, 1799)	Lycosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Arctosa</i> sp.	Lycosidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Argenna subnigra</i> (O. Pickard-Cambridge, 1861)	Dictynidae	Laboratory observation, suction trap,	n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004); Entling, Stampfli & Ovaskainen (2011)
<i>Argiope argentata</i> (Fabricius, 1775)	Araneidae	n.s.	n.s	Ballooning, tiptoe, dropping on dragline	Nentwig (1987)
<i>Argiope aurantia</i> Lucas, 1833	Araneidae	Field observation	Day	Ballooning, aerial dispersal, airborne, drop on a dragline	Tolbert (1977)
<i>Argiope bruennichi</i> (Scopoli, 1772)	Araneidae	Laboratory observation, field observation, suction trap	Day, n.s	Ballooning, aerial dispersal, dropping on a dragline, tip-toe, aeronautic behaviour, rappelling, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Nishiki (1966); Walter, Bliss & Moritz (2005); Wolz <i>et al.</i> (2020)
<i>Argiope trifasciata</i> (Forsskål, 1775)	Araneidae	Field observation	Day	Ballooning, aerial dispersal, , airborne, drop on a dragline, tip-toe, hang suspended from a dragline	Tolbert (1977)
<i>Argyrodes trigonum</i> (Hentz, 1850)	Theridiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larivée & Buddle (2011)
<i>Asagena phalerata</i> (Panzer, 1801)	Theridiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Atypus affinis</i> Eichwald, 1830	Atypidae	Laboratory observation, field observation	n.s	Ballooning, aerial dispersal, suspended ballooning	Buzatto <i>et al.</i> (2021); Pétillon <i>et al.</i> (2012)
<i>Atypus piceus</i> (Sulzer, 1776)	Atypidae	Field observation	n.s	Suspended ballooning	Buzatto <i>et al.</i> (2021)
<i>Aulonia albimana</i> (Walckenaer, 1805)	Lycosidae	Laboratory observation, suction trap	n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Ballus chalybeius</i> (Walckenaer, 1802)	Pisauridae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Bathypantes approximatus</i> (O. Pickard-Cambridge, 1871)	Linyphiidae	Laboratory observation, manual collection	n.s	Ballooning, aerial dispersal, tiptoe, aeronautic behaviour	Duffey (1997); Entling, Stampfli & Ovaskainen (2011)
<i>Bathypantes gracilis</i> (Blackwall, 1841)	Linyphiidae	Laboratory observation, field observation, window traps, strip traps, manual collection, suction trap, SNB traps, aspirator, sticky traps	Day, n.s	Ballooning, tiptoe, aerial dispersal, airborne, aeronautic behaviour, rappelling, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Duffey (1997); Entling, Stampfli & Ovaskainen (2011); Meijer (1977); Nishiki (1966); Simonneau, Courtial & Pétillon (2016); Thomas, Brain & Jepson (2003); Weyman & Jepson (1994); Woolley <i>et al.</i> (2016)
<i>Bathypantes parvulus</i> (Westring, 1851)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Calommata signata</i> Karsch, 1879	Atypidae	Laboratory observation, field observation	Day	Aerial dispersal, drop on a dragline, suspended ballooning	Buzatto <i>et al.</i> (2021); Kuwada-Kusunose <i>et al.</i> (2016)
<i>Carrhotus xanthogramma</i> (Latreille, 1819)	Salticidae	Field observation, suction trap	n.s	Ballooning, aerial dispersal, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Nishiki (1966)
<i>Centromerita bicolor</i> (Blackwall, 1833)	Linyphiidae	SNB traps, suction trap	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Centromerita concinna</i> (Thorell, 1875)	Linyphiidae	Laboratory observation, SNB traps	n.s	Ballooning, aerial dispersal, rappelling, tiptoe, aeronautic dispersal	Bonte, Deblauwe & Maelfait (2003); Bonte, Lukác & Lens (2008); Bonte <i>et al.</i> (2004); Woolley <i>et al.</i> (2016)
<i>Centromeris dilutus</i> (O. Pickard-Cambridge, 1875)	Linyphiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Cheiracanthium inclusum</i> (Hentz, 1847)	Miturgidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Cheiracanthium mildei</i> L. Koch, 1864	Miturgidae	Sticky traps, suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Hogg & Daane (2010, 2018)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Cheiracanthium</i> sp.	Miturgidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Cinetata gradata</i> (Simon, 1881)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Clubiona brevipes</i> Blackwall, 1841	Clubionidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Clubiona diversa</i> O. Pickard-Cambridge, 1862	Clubionidae	SNB traps, suction trap	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Clubiona lena</i> Bösenberg & Strand, 1906	Clubionidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Clubiona pallidula</i> (Clerck, 1757)	Clubionidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Clubiona phragmitis</i> C. L. Koch, 1843	Clubionidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Clubiona reclusa</i> O. Pickard-Cambridge, 1863	Clubionidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Clubiona stagnatilis</i> Kulczyński, 1897	Clubionidae	Window traps, strip traps	n.s	Airborne, aeronautic, ballooning	Meijer (1977)
<i>Clubiona</i> sp.	Clubionidae	Laboratory observation, field observation, suction trap, sticky traps	Day, n.s	Ballooning, aerial dispersal, tip-toe, tiptoe, suspended ballooning, rafting, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011); Hogg & Daane (2010, 2018); Nishiki (1966); Larrivée & Buddle (2011); Simonneau, Courtial & Pétillon (2016)
<i>Cnephalocotes obscurus</i> (Blackwall 1834)	Linyphiidae	SNB traps, suction trap	Day	Ballooning, aerial dispersal, rappelling, tiptoe	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Coleosoma octomaculatum</i> (Bösenberg & Strand, 1906)	Theridiidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Collinsia inerrans</i> (O. Pickard-Cambridge, 1885)	Linyphiidae	Laboratory observation, field observation, suction trap, SNB traps, manual collection, aspirator, sticky traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, rappelling, aeronautic behaviour	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Duffey (1997); Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016); Thomas, Brain & Jepson (2003); Woolley <i>et al.</i> (2016)
<i>Collinsia ksenia</i> (Crosby & Bishop, 1928)	Linyphiidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Colonus hesperus</i> (Richman & Vetter, 2004)	Salticidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Coriarachne</i> sp.	Thomisidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Crustulina guttata</i> (Wider, 1834)	Theridiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Cupiennius coccineus</i> F. O. Pickard-Cambridge, 1901	Trechaleidae	Laboratory observation	n.s	Ballooning, aerial dispersal, Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)
<i>Cupiennius foliatus</i> F. O. Pickard-Cambridge, 1901	Trechaleidae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Cupiennius getazi</i> Simon, 1891	Trechaleidae	Laboratory observation	n.s	Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)
<i>Cupiennius salei</i> (Keyserling, 1877)	Trechaleidae	Laboratory observation	n.s	Ballooning, aerial dispersal, Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)
<i>Cupiennius foliatus</i> F. O. Pickard-Cambridge, 1901	Trechaleidae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Cupiennius getazi</i> Simon, 1891	Trechaleidae	Laboratory observation	n.s	Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)
<i>Cupiennius salei</i> (Keyserling, 1877)	Trechaleidae	Laboratory observation	n.s	Ballooning, aerial dispersal, Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)
<i>Cyclosa conica</i> (Pallas, 1772)	Araneidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Cupiennius foliatus</i> F. O. Pickard-Cambridge, 1901	Trechaleidae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Cupiennius getazi</i> Simon, 1891	Trechaleidae	Laboratory observation	n.s	Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Cupiennius salei</i> (Keyserling, 1877)	Trechaleidae	Laboratory observation	n.s	Ballooning, aerial dispersal, Drop And Swing Dispersal Behaviour (DASDB)	Barth <i>et al.</i> (1991)
<i>Cyclosa conica</i> (Pallas, 1772)	Araneidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Cyclosa laticauda</i> Bösenberg & Strand, 1906	Araneidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Cyclosa turbinata</i> (Walckenaer, 1841)	Araneidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Cyclosa</i> sp.	Araneidae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Diaea dorsata</i> (Fabricius, 1777)	Thomisidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Diaea</i> spp.	Thomisidae	Sticky traps, suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Hogg & Daane (2010, 2018)
<i>Diaea subdola</i> O. Pickard-Cambridge, 1885	Thomisidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Diapontia uruguayensis</i> Keyserling, 1877	Lycosidae	Field observation	n.s	Ballooning, aerial dispersal, tiptoe	Piacentini <i>et al.</i> (2021)
<i>Dictyna arundinacea</i> (Linnaeus, 1758)	Dictynidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Dictyna pusilla</i> Thorell, 1856	Dictynidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Dictyna uncinata</i> Thorell, 1856	Dictynidae	Laboratory observation, SNB traps	n.s	Ballooning, aerial dispersal, tiptoe, rappelling	Entling, Stampfli & Ovaskainen (2011); Woolley <i>et al.</i> (2016)
<i>Dictyna</i> sp.	Dictynidae	Laboratory observation, sticky traps	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011); Hogg & Daane (2010, 2018)
Dictynidae sp.	Dictynidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Dicymbium nigrum</i> (Blackwall, 1834)	Linyphiidae	Laboratory observation, SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe, aeronautic dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Lukác & Lens (2008); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Diplocephalus picinus</i> (Blackwall, 1841)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe, aeronautic dispersal	Bonte, Lukác & Lens (2008)
<i>Diplocephalus protuberans</i> (O. Pickard-Cambridge, 1875)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe, sailing	Hayashi <i>et al.</i> (2015)
<i>Diplostyla concolor</i> (Wider, 1834)	Linyphiidae	Suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Dolomedes fimbriatus</i> (Clerck, 1757)	Pisauridae	Laboratory observation	n.s	Ballooning, tiptoe, rappelling, sailing	Monsimet <i>et al.</i> (2022)
<i>Dolomedes plantarius</i> (Clerck, 1757)	Pisauridae	Laboratory observation	n.s	Ballooning, tiptoe, rappelling, sailing	Monsimet <i>et al.</i> (2022)
<i>Dolomedes sulfureus</i> L. Koch, 1878	Pisauridae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Dolomedes triton</i> (Walckenaer, 1837)	Pisauridae	Laboratory observation	n.s	Ballooning, tiptoeing, tiptoe-ballooning, drop- ballooning, spanning	Frost, Graham & Spence (2013)
<i>Ebo</i> sp.	Philodromidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Ebrechtella tricuspidata</i> (Fabricius, 1775)	Thomisidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Emblyna sublata</i> (Hentz, 1850)	Dictynidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Enoplognatha caricis</i> (Fickert, 1876)	Theridiidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Enoplognatha mordax</i> (Thorell, 1875)	Theridiidae	Window traps, strip traps	n.s	Ballooning, airborne, aeronautic	Meijer (1977)
<i>Enoplognatha mordax</i> (Thorell, 1875)	Theridiidae	Window traps, strip traps	n.s	Ballooning, airborne, aeronautic	Meijer (1977)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Enoplognatha ovata</i> (Clerck 1757)	Theridiidae	Manual collection, SNB traps	n.s	Ballooning, aerial dispersal, aeronautic behaviour, rappelling	Duffey (1997); Woolley <i>et al.</i> (2016)
<i>Enoplognatha</i> sp., prob. <i>marmorata</i> (Hentz, 1850)	Theridiidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Enoplognatha</i> sp.	Theridiidae	Field observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, aerial migration	Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Entelecara congenera</i> (O. Pickard-Cambridge, 1879)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Episinus</i> sp.	Theridiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Erigone alettris</i> Crosby & Bishop, 1928	Linyphiidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Erigone arctica</i> (White, 1852)	Linyphiidae	Laboratory observation, window traps, strip traps	n.s	Ballooning, aerial dispersal, airborne, tiptoe, aeronautic dispersal, rappelling	Bonte (2009); Bonte, Lukác & Lens (2008); Meijer (1977)
<i>Erigone arctica palaeartica</i> Brændegaard, 1934	Linyphiidae	Sticky traps, water traps	n.s	Ballooning, aerial dispersal	Coulson, Hodkinson & Webb (2003)
<i>Erigone atra</i> Blackwall, 1833	Linyphiidae	Laboratory observation, field observation, window traps, strip traps, manual collection, sticky traps, water traps, aspirator, suction trap, SNB trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, tip-toe, dropping, rappelling, aeronautic dispersal, sailing, airborne, aeronautic behaviour, dropping and dragline spinning	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Clerq, Zwervaeagher & Lens (2009); Bonte, Deblauwe & Maelfait (2003); Bonte, Lukác & Lens (2008); Bonte, De Meester & Matthysen (2011); Bonte, Verduyn & Braeckman (2016); Bonte <i>et al.</i> (2004); Duffey (1997); De Keer, Maelfait (1988); Entling, Stampfli & Ovaskainen (2011); Goodacre <i>et al.</i> (2009); Hayashi <i>et al.</i> (2015); Meester & Bonte (2010); Meijer (1977); Simonneau, Courtial & Pétillon (2016); Thomas & Jepson (1997); Thomas, Brain & Jepson (2003); Weyman (1995); Weyman, Jepson & Sunderland (1995); Weyman, Sunderland & Fenlon (1994); Woolley (2016); Woolley <i>et al.</i> (2016)
<i>Erigone dentipalpis</i> (Wider, 1834)	Linyphiidae	Laboratory observation, field observation, sticky traps, SNB traps, water traps, aspirator, window traps, suction trap, strip trap, manual collection	Day, n.s	Ballooning, aerial dispersal, tiptoe, tip-toe, dropping, rappelling, dropping and dragline spinning, airborne, aeronautic behaviour, aeronautic dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte (2009); Bonte, Lukác & Lens (2008); Bonte, Verduyn & Braeckman (2016); Entling, Stampfli & Ovaskainen (2011); Meijer (1977); De Keer, Maelfait (1988); Duffey (1997); Mestre & Bonte (2012); Narimanov <i>et al.</i> (2021); Simonneau, Courtial & Pétillon (2016); Thomas, Brain & Jepson (2003); Thomas & Jepson (1997); Thomas & Jepson (1999); Weyman (1995); Weyman, Sunderland & Fenlon (1994); Weyman, Jepson, Sunderland (1995); Woolley <i>et al.</i> (2016)
<i>Erigone dentosa</i> O. Pickard-Cambridge, 1894	Linyphiidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Erigone longipalpis</i> (Sundevall, 1830)	Linyphiidae	Window traps, strip traps	n.s	Ballooning, airborne, aeronautic	Meijer (1977)
<i>Erigone prominens</i> Bösenberg & Strand, 1906	Linyphiidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Erigone promiscua</i> (O. Pickard-Cambridge 1873)	Linyphiidae	Laboratory observation, SNB traps	n.s	Ballooning, aerial dispersal, tiptoe, rappelling, aeronautic dispersal	Bonte (2009); Woolley <i>et al.</i> (2016)
<i>Erigone psychrophila</i> Thorell, 1871	Linyphiidae	Sticky traps, water traps	n.s	Ballooning, aerial dispersal	Coulson, Hodkinson & Webb (2003)
<i>Erigone</i> spp.	Linyphiidae	Laboratory observation, suction trap, sticky traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, dropping on a silk dragline	Hogg & Daane (2010, 2018); Morley & Robert (2018); Simonneau, Courtial & Pétillon (2016)
<i>Eriophora fuliginea</i> (C. L. Koch, 1838)	Araneidae	n.s.	n.s	Dropping on dragline	Nentwig (1987)
<i>Eris militaris</i> (Hentz, 1845)	Salticidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivé & Buddle (2011)
<i>Ero cambridgei</i> Kulczyński, 1911	Mimetidae	SNB traps, suction trap	Day	Ballooning, aerial dispersal, tiptoe, rappelling	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Euophrys</i> sp.	Salticidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Euryopis</i> sp.	Theridiidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Filistata insidiatrix</i> (Forsskål, 1775)	Filistatidae	n.s.	n.s.	Ballooning, tiptoe, dropping on dragline	Nentwig (1987)
<i>Frontinella pyramitela</i> (Walckenaer, 1841)	Linyphiidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, aerial dispersion, drop on a dragline	Suter (1991)
<i>Geolycosa patellonigra</i> Wallace, 1942	Lycosidae	Laboratory observation	n.s.	Ballooning, tip-toe	Miller (1984)
<i>Geolycosa turricola</i> (Treat, 1880)	Lycosidae	Laboratory observation	n.s.	Ballooning, tip-toe	Miller (1984)
<i>Gibbaranea</i> sp.	Araneidae	Suction trap	n.s.	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Gnaphosa kompirensis</i> Bösenberg & Strand, 1906	Gnaphosidae	Field observation	n.s.	Aerial migration	Nishiki (1966)
<i>Gnathonarium dentatum</i> (Wider, 1834)	Linyphiidae	Laboratory observation, suction trap	Day, n.s.	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016)
<i>Gnathonarium gibberum</i> Oi, 1960	Linyphiidae	Field observation	n.s.	Aerial migration	Nishiki (1966)
<i>Gongylidiellum vivum</i> (O. Pickard-Cambridge 1875)	Linyphiidae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Gongylidium rufipes</i> (Linnaeus, 1758)	Linyphiidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, tiptoe, sailing	Hayashi <i>et al.</i> (2015)
<i>Habronattus</i> sp.	Salticidae	Sticky traps	n.s.	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Habronattus</i> sp., prob. <i>americanus</i> (Keyserling, 1885)	Salticidae	Manual collection	n.s.	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Halorates spitsbergensis</i> (Thorell, 1871)	Linyphiidae	Sticky traps, water traps	n.s.	Ballooning, aerial dispersal	Coulson, Hodkinson & Webb (2003)
<i>Haplodrassus signifer</i> (C. L. Koch, 1839)	Gnaphosidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Heliophanus</i> sp.	Salticidae	Suction trap	Day, n.s.	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Hentzia mitrata</i> (Hentz, 1846)	Salticidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Hibana incurva</i> (Chamberlin, 1919)	Anyphaenidae	Sticky traps	n.s.	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Hilaira glacialis</i> (Thorell, 1871)	Linyphiidae	Sticky traps, water traps	n.s.	Ballooning, aerial dispersal	Coulson, Hodkinson & Webb (2003)
<i>Hybocoptus corrugis</i> (O. Pickard-Cambridge, 1875)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Hylyphantes graminicola</i> (Sundevall, 1830)	Linyphiidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, tiptoe, sailing	Hayashi <i>et al.</i> (2015)
<i>Hypomma bituberculatum</i> (Wider 1834)	Linyphiidae	Laboratory observation, window traps and strip traps, SNB traps	n.s.	Ballooning, aerial dispersal, tiptoe, airborne, aeronautic, rappelling	Meijer (1977); Entling, Stampfli & Ovaskainen (2011); Woolley <i>et al.</i> (2016)
<i>Hypomma cornutum</i> (Blackwall, 1833)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Hypsosinga albobittata</i> (Westring, 1851)	Araneidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Hypsosinga theridiformis</i> (Bösenberg & Strand, 1906)	Araneidae	Field observation	n.s.	Aerial migration	Nishiki (1966)
<i>Hyptiotes paradoxus</i> (C. L. Koch, 1834)	Uloboridae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Keijia tincta</i> (Walckenaer, 1802)	Theridiidae	Suction trap	n.s.	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Kochiura aulica</i> (C.L. Koch 1838)	Theridiidae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Larinioides cornutus</i> (Clerck, 1757)	Araneidae	Field observation, SNB traps, suction trap, hides on trees	Day, n.s.	Ballooning, aerial dispersal, rappelling, tiptoe, aerial migration	Bucher <i>et al.</i> (2010); Nishiki (1966); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Larinioides</i> sp.	Araneidae	Suction trap	Day, n.s.	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Lathys humilis</i> (Blackwall, 1855)	Dictynidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Lathys sexpustulata</i> (Simon, 1878)	Dictynidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Lathys</i> sp.	Dictynidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Latrodectus geometricus</i> C. L. Koch, 1841	Theridiidae	Laboratory observation	Day and night	Ballooning, rappelling, tiptoe	Mowery <i>et al.</i> (2022)
<i>Latrodectus hesperus</i> Chamberlin & Ivie, 1935	Theridiidae	Laboratory observation	Day	Ballooning	Johnson <i>et al.</i> (2015)
<i>Lepthyphantes minutus</i> (Blackwall, 1833)	Linyphiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Lepthyphantes nodifer</i> Simon, 1884	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Lepthyphantes tenuis</i> (Blackwall, 1852)	Linyphiidae	Field observation, window traps, strip traps, manual collection, sticky traps, water traps, rotary insect net, suction traps, deposition traps, aspirator	Day, n.s	Ballooning, aerial dispersal, airborne, aeronautic behaviour, aeronautic	Duffey (1997); Meijer (1977); Thomas, Brain & Jepson (2003); Thomas & Jepson (1997); Thomas & Jepson (1999); Topping & Sunderland (1998)
<i>Lepthyphantes zimmermanni</i> (Bertkau, 1890)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe, sailing	Hayashi <i>et al.</i> (2015)
<i>Lepthyphantes</i> sp.	Linyphiidae	Manual collection, suction trap	Day, n.s	Aerial dispersal, aeronautic behaviour, tiptoe	Duffey (1997); Simonneau, Courtial & Pétillon (2016)
<i>Linyphia hortensis</i> Sundevall, 1830	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Linyphia impigra</i> (O. Pickard-Cambridge, 1871)	Linyphiidae	Manual collection	n.s	Aerial dispersal, aeronautic behaviour	Duffey (1997)
<i>Linyphiidae</i> sp.	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Lycosa</i> sp.	Lycosidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Mallos</i> sp.	Dictynidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Mangora acalypha</i> (Walckenaer, 1802)	Araneidae	Laboratory observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016)
<i>Maso sundevalli</i> (Westring, 1851)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Mecynogea lemniscata</i> (Walckenaer, 1841)	Araneidae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Megalepthyphantes nebulosus</i> (Sundevall, 1830)	Linyphiidae	Manual collection	n.s	Aerial dispersal, aeronautic behaviour	Duffey (1997)
<i>Mermessus trilobatus</i> (Emerton, 1882)	Linyphiidae	Laboratory observation, suction trap	n.s	Ballooning, aerial dispersal, tiptoe, rappelling, rafting, take off	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011); Narimanov <i>et al.</i> (2021); Narimanov, Bonte & Entling (2022)
<i>Metaphidippus manni</i> (G. W. Peckham & E. G. Peckham, 1901)	Salticidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Metaphidippus</i> sp.	Salticidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Metellina mengei</i> (Blackwall, 1869)	Tetragnathidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Metellina segmentata</i> (Clerck, 1757)	Tetragnathidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Metellina</i> sp.	Tetragnathidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Metleucauge yunohamensis</i> (Bösenberg & Strand, 1906)	Tetragnathidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Metopobatrachus prominulus</i> (O. Pickard- Cambridge, 1873)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Micaria pulicaria</i> (Sundevall, 1831)	Gnaphosidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Micaria subopaca</i> Westring, 1861	Gnaphosidae	Suction trap	n.s.	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Micaria</i> sp.	Gnaphosidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Micrargus herbigradus</i> (Blackwall, 1854))	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Micrargus subaequalis</i> (Westring, 1851)	Linyphiidae	Suction trap, SNB traps	Day, n.s.	Ballooning, aerial dispersal, tiptoe, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Microctenonyx subitaneus</i> (O. Pickard-Cambridge, 1875)	Linyphiidae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Microhexura idahoana</i> Chamberlin & Ivie, 1945	Microhexuridae	Manual collection	n.s.	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Microlinyphia pusilla</i> (Sundevall 1830)	Linyphiidae	SNB traps, suction trap	Day, n.s.	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bucher <i>et al.</i> (2010); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Microlinyphia</i> sp.	Linyphiidae	Suction trap	Day, n.s.	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Microneta viaria</i> (Blackwall, 1841)	Linyphiidae	Laboratory observation, suction trap	n.s.	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Mimetus hesperus</i> Chamberlin, 1923	Mimetidae	Sticky traps	n.s.	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Minicia marginella</i> (Wider, 1834)	Linyphiidae	Laboratory observation	n.s.	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Mioxena blanda</i> (Simon, 1884)	Linyphiidae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Misumena vatia</i> (Clerck, 1757)	Thomisidae	Field observation, manual collection, suction trap	Day, n.s.	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Crawford & Edwards (1986); Morse (1993)
<i>Misumenops</i> sp.	Thomisidae	Sticky traps	n.s.	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Moebelia penicillata</i> (Westring, 1851)	Linyphiidae	Suction trap	n.s.	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Monocephalus castaneipes</i> (Simon, 1884)	Linyphiidae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Monocephalus fuscipes</i> (Blackwall, 1836)	Linyphiidae	SNB traps	n.s.	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Nematogmus stylitus</i> (Bösenberg & Strand, 1906)	Linyphiidae	Field observation	n.s.	Aerial migration	Nishiki (1966)
<i>Neecteniza toba</i> Goloboff, 1987	Idiopidae	Laboratory observation	n.s.	Ballooning, dropping	Rossi <i>et al.</i> (2021)
<i>Neottiura bimaculata</i> (Linnaeus, 1767)	Theridiidae	Laboratory observation, suction trap	n.s.	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Nephila pilipes</i> (Fabricius, 1793)	Nephilidae	Laboratory observation	Day	Ballooning, tiptoe, bridging, aeronautic behaviour, rafting, dropping and dangling on its dragline	Lee & Kuntner (2015)
<i>Neriene albolimbata</i> (Karsch, 1879)	Linyphiidae	Field observation	n.s.	Aerial migration	Nishiki (1966)
<i>Neriene clathrata</i> (Sundevall 1830)	Linyphiidae	SNB traps, suction trap	Day	Ballooning, aerial dispersal, rappelling, tiptoe	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Neriene radiata</i> (Walckenaer, 1841)	Linyphiidae	Field observation, laboratory observation	n.s.	Aerial migration, ballooning, aerial dispersal, aerial dispersion, drop on a dragline	Nishiki (1966); Suter (1991)
<i>Neriene</i> sp.	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Nesticodes rufipes</i> (Lucas, 1846)	Theridiidae	n.s.	n.s.	Ballooning, dropping on dragline	Nentwig (1987)
<i>Nesticus cellulanus</i> (Clerck, 1757)	Nesticidae	Manual collection	n.s.	Aerial dispersal, aeronautic behaviour	Duffey (1997)
<i>Nigma puella</i> (Simon, 1870)	Dictynidae	SNB traps, suction trap	Day	Ballooning, aerial dispersal, rappelling, tiptoe	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Nigma walckenaeri</i> (Roewer, 1951)	Dictynidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Nigma</i> sp.	Dictynidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Nuctenea umbratica</i> (Clerck 1757)	Araneidae	SNB traps, hides on trees, suction trap	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe,	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bucher <i>et al.</i> (2010); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Obscuriphantes obscurus</i> (Blackwall, 1841)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Oedothorax apicatus</i> (Blackwall, 1850)	Linyphiidae	Field observation, laboratory observation, window traps, strip traps, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, tip-toe, airborne, aeronautic, dropping on a dragline	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bell <i>et al.</i> (2005a); Entling, Stampfli & Ovaskainen (2011); Meijer (1977); Simonneau, Courtial & Pétillon (2016); Řezáč & Řezáčová (2018)
<i>Oedothorax fuscus</i> (Blackwall 1834)	Linyphiidae	Laboratory observation, manual collection, SNB traps, suction trap, window traps, strip traps	Day, n.s	Ballooning, aerial dispersal, aeronautic behaviour, airborne, aeronautic, tiptoe, aeronautic dispersal, rappelling, dropping on a dragline, drop, rig, haul, climb	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bell <i>et al.</i> (2005a); Bonte, Lukác & Lens (2008); Duffey (1997); Entling, Stampfli & Ovaskainen (2011); Meijer (1977); Simonneau, Courtial & Pétillon (2016); Woolley (2016); Woolley <i>et al.</i> (2016)
<i>Oedothorax retusus</i> (Westring 1851)	Linyphiidae	Laboratory observation, window traps, strip traps, suction trap, SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, airborne, aeronautic, rappelling, dropping on a dragline	Bell <i>et al.</i> (2005a); Entling, Stampfli & Ovaskainen (2011); Meijer (1977); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Oedothorax</i> spp.	Linyphiidae	Field observation, aspirator and stick traps, water traps	Day, n.s	Ballooning, aerial dispersal, aeronautic behaviour	Thomas, Brain & Jepson (2003); Thomas & Jepson (1997); Thomas & Jepson (1999)
<i>Ostearius melanopygius</i> (O. Pickard-Cambridge, 1880)	Linyphiidae	Suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Oxyopes salticus</i> Hentz, 1845	Oxyopidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Oxyopes scalaris</i> Hentz, 1845	Oxyopidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Oxyopes</i> sp.	Oxyopidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Ozyptila sanctuaria</i> (O. Pickard-Cambridge, 1871)	Thomisidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Ozyptila simplex</i> (O. P. Cambridge, 1862)	Thomisidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Ozyptila</i> sp.	Thomisidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Pachygnatha clercki</i> Sundevall, 1823	Tetragnathidae	Field observation, window traps and strip traps, SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, airborne, aeronautic, rappelling, tiptoe, aerial migration	Meijer (1977); Nishiki (1966); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Pachygnatha degeeri</i> Sundevall, 1830	Tetragnathidae	Laboratory observation, field observation, manual collection, suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, aeronautic behaviour, tiptoe, dropping on a dragline, rappelling, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bell <i>et al.</i> (2005a); Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004); Duffey (1997); Entling, Stampfli & Ovaskainen (2011); Nishiki (1966); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Pachygnatha listeri</i> Sundevall, 1830	Tetragnathidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Pachygnatha quadrimaculata</i> (Bösenberg & Strand, 1906)	Tetragnathidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Pachygnatha</i> sp.	Tetragnathidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Paidiscura pallens</i> (Blackwall 1834)	Theridiidae	SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Palliduphantes arenicola</i> (Denis, 1964)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Palliduphantes ericaeus</i> (Blackwall 1853)	Linyphiidae	SNB traps, suction trap	Day	Ballooning, aerial dispersal, rappelling, tiptoe	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Palliduphantes pallidus</i> (O. Pickard-Cambridge, 1871)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Panamomops sulcifrons</i> (Wider, 1834)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Parapelecopsis nemoralis</i> (O. P. Cambridge, 1884)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Parasteatoda lunata</i> (Clerck, 1757)	Theridiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Parasteatoda simulans</i> (Thorell, 1875)	Theridiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Pardosa agrestis</i> (Westring, 1861)	Lycosidae	Laboratory observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Pardosa amentata</i> (Clerck, 1757)	Lycosidae	Laboratory observation, field observation	n.s	Aerial dispersal, aeronautic behaviour, tiptoe, aerial migration	Nishiki (1966); Richter (1970)
<i>Pardosa astrigera</i> L. Koch, 1878	Lycosidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Pardosa bifasciata</i> (C. L. Koch, 1834)	Lycosidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Pardosa lugubris</i> (Walckenaer, 1802)	Lycosidae	Laboratory observation	n.s	Aerial dispersal, aeronautic behaviour, tiptoe	Richter (1970)
<i>Pardosa monticola</i> (Clerck 1757)	Lycosidae	Field observation, laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe, tip-toe, aeronautical behaviour	Bonte, Deblauwe & Maelfait (2003); Bonte & Maelfait (2001); Bonte <i>et al.</i> (2003); Bonte <i>et al.</i> (2004); Bonte <i>et al.</i> (2006)
<i>Pardosa nigriceps</i> (Thorell, 1856)	Lycosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Pardosa palustris</i> (Linnaeus, 1758)	Lycosidae	Laboratory observation	n.s	Aerial dispersal, aeronautic behaviour, tiptoe	Richter (1970)
<i>Pardosa prativaga</i> (L. Koch, 1870)	Lycosidae	Laboratory observation	n.s	Aerial dispersal, aeronautic behaviour, tiptoe	Richter (1970)
<i>Pardosa proxima</i> (C. L. Koch, 1847)	Lycosidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Pardosa pullata</i> (Clerck, 1757)	Lycosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Pardosa purbeckensis</i> F. O. Pickard-Cambridge, 1895	Lycosidae	Laboratory observation, window traps, strip traps, sticky traps, pitfall traps	n.s	Ballooning, aerial dispersal, airborne, aeronautic, tiptoe, tip-toe, rappelling	Bonte, Bossuyt & Lens (2007); Meijer (1977); Puzin, Bonte & Pétillon (2018); Richter (1970)
<i>Pardosa</i> sp.	Lycosidae	Field observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Pardosa</i> sp., <i>mackenziana</i> group (Keyserling, 1877)	Lycosidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Pelecopsis parallela</i> (Wider 1834)	Linyphiidae	Laboratory observation, SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Pelegrina aeneola</i> (Curtis, 1892)	Salticidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Pelegrina proterva</i> (Walckenaer, 1837)	Salticidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larivée & Buddle (2011)
<i>Phiale guttata</i> (C. L. Koch, 1846)	Salticidae	n.s.	n.s	Ballooning, tiptoe, dropping on dragline	Nentwig (1987)
<i>Phidippus</i> sp.	Salticidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Philodromus alascensis</i> (Keyserling, 1884)	Thomisidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Philodromus albidus</i> Kulczyński 1911	Philodromidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Philodromus aureolus</i> (Clerck, 1757)	Philodromidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Philodromus buxi</i> Simon, 1884	Philodromidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Philodromus cespitum</i> (Walckenaer, 1802)	Philodromidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Philodromus collinus</i> C. L. Koch, 1835	Philodromidae	Suction trap, SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Philodromus dispar</i> Walckenaer, 1826	Philodromidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Philodromus margaritatus</i> (Clerck, 1757)	Philodromidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Philodromus praedatus</i> O. Pickard-Cambridge, 1871	Philodromidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Philodromus rufus</i> Walckenaer, 1826	Philodromidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Philodromus rufus pacificus</i> Banks, 1898	Thomisidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Philodromus rufus vibrans</i> Dondale, 1964	Philodromidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Philodromus spectabilis</i> Keyserling, 1880	Thomisidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Philodromus</i> sp.	Philodromidae	Laboratory observation, field observation, sticky traps, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, tip-toe, suspended ballooning, rafting, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Hogg & Daane (2010, 2018); Larrivée & Buddle (2011); Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Phlegra fasciata</i> (Hahn, 1826)	Salticidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Pholcus</i> sp.	Pholcidae	Laboratory observation	n.s	Ballooning, aerial dispersal, aerial dispersion, drop on a dragline	Suter (1991)
<i>Phrurolithus</i> sp.	Corinnidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Phylloneta impressa</i> (L. Koch, 1881)	Theridiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Phylloneta sisypbia</i> (Clerck 1757)	Theridiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Pirata piraticus</i> (Clerck, 1757)	Lycosidae	Laboratory observation, field observation	Day, n.s	Ballooning, aerial dispersal, tiptoe, aerial migration	Entling, Stampfli & Ovaskainen (2011); Nishiki (1966)
<i>Pisaura mirabilis</i> (Clerck 1757)	Pisauridae	Suction trap, SNB traps	Day	Ballooning, aerial dispersal, rappelling, tiptoe	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Pityohyphantes costatus</i> (Hentz, 1850)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Pityohyphantes rubrofasciatus</i> (Keyserling, 1886)	Linyphiidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Pityohyphantes</i> sp.	Linyphiidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Platnickina tincta</i> (Walckenaer, 1802)	Theridiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Pocadicnemis juncea</i> Locket & Millidge, 1953	Linyphiidae	Laboratory observation, suction trap	Day	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016)
<i>Pocadicnemis pumila</i> (Blackwall, 1841)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Poecilochroa montana</i> Emerton, 1909*	Gnaphosidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Porrhoclubiona leucaspis</i> (Simon, 1932)	Clubionidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Porrhomma microphthalmus</i> (O.-Pickard-Cambridge, 1871)	Linyphiidae	Laboratory observation, window traps, strip traps, suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, aeronautic dispersal, airborne, aeronautic, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Lukác & Lens (2008); Meijer (1977); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Porrhomma oblitum</i> (O. Pickard-Cambridge, 1871)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Porrhomma pygmaeum</i> (Blackwall, 1834)	Linyphiidae	Suction trap, SNB traps	Day	Ballooning, aerial dispersal, rappelling, tiptoe	Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Porrhomma</i> sp.	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Praestigia duffeyi</i> Millidge, 1954	Linyphiidae	Window traps, strip traps	n.s	Ballooning, airborne, aeronautic	Meijer (1977)
<i>Prinerigone vagans</i> (Audouin, 1826)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Psammitis sabulosa</i> (Hahn, 1832)	Thomisidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Pseudeuophrys lanigera</i> (Simon, 1871)	Salticidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Pseudicius encarpatus</i> (Walckenaer, 1802)	Salticidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Pseudomaro aenigmaticus</i> Denis, 1966	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Robertus arundineti</i> (O. Pickard-Cambridge 1871)	Theridiidae	Suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Robertus lividus</i> (Blackwall, 1836)	Theridiidae	Laboratory observation, suction trap	n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011)
<i>Robertus neglectus</i> (O. Pickard-Cambridge 1871)	Theridiidae	SNB traps, suction trap	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Robertus</i> spp.	Theridiidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Salticus scenicus</i> (Clerck, 1757)	Salticidae	Suction trap, sticky traps	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Hogg & Daane (2010, 2018); Simonneau, Courtial & Pétillon (2016)
<i>Salticus zebraneus</i> (C. L. Koch, 1837)	Salticidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Salticus</i> spp.	Salticidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Sassacus vitis</i> (Cockerell, 1894)	Salticidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Savignia frontata</i> Blackwall, 1833	Linyphiidae	Field observation, sticky traps, suction trap, SNB traps, aspirator	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Thomas, Brain & Jepson (2003); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Schizocosa malitiosa</i> (Tullgren, 1905)	Lycosidae	Laboratory observation, field observation	Day and night	Ballooning, aerial dispersal, aerial dispersion, tip-toe, dropping on a dragline, drop on a dragline, aeronautic behaviour, bridging	Carlozzi <i>et al.</i> (2018); Kacevas <i>et al.</i> (2024); Postiglioni <i>et al.</i> (2017)
<i>Segestria</i> sp.	Segestridae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Selenops</i> sp.	Selenopidae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Silometopus elegans</i> (O. Pickard-Cambridge, 1872)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Silometopus reussi</i> (Thorell, 1871)	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Singa</i> sp.	Araneidae	Laboratory observation, field observation	n.s	Ballooning, tiptoe, aerial dispersal, aerial migration	Entling, Stampfli & Ovaskainen (2011); Nishiki (1966)
<i>Sphodros</i> (probably <i>S. atlanticus</i> Gertsch & Platnick, 1980)	Atypidae	Field observation	n.s	Suspended ballooning	Buzatto <i>et al.</i> (2021); Coyle (1983)
<i>Sphodros fitchi</i> Gertsch & Platnick, 1980	Atypidae	Field observation	n.s	Suspended ballooning	Buzatto <i>et al.</i> (2021); Cutler and Guarisco (1995)
<i>Sphodros rufipes</i> (Latreille, 1829)	Atypidae	Field observation	n.s	Suspended ballooning	Buzatto <i>et al.</i> (2021)
<i>Steatoda</i> sp.	Theridiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Stegodyphus dumicola</i> Pocock 1898	Eresidae	Field observation	Day	Ballooning, tiptoeing, tiptoe, bridging, rappelling/bridging, aerial dispersal, dropping on dragline	Lubin & Suter (2013); Schneider <i>et al.</i> (2001)
<i>Stegodyphus sarasinorum</i> Karsch, 1892	Eresidae	Field observation	Night	Aerial navigation, bridging	Jacson & Joseph (1973)
<i>Styloctetor compar</i> (Westring, 1861)	Linyphiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Styloctetor romanus</i> (O. P. Cambridge 1873)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Synageles venator</i> (Lucas, 1836)	Salticidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Synema globosum</i> (Fabricius, 1775)	Thomisidae	Suction trap, field observation	n.s	Ballooning, aerial dispersal, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Nishiki (1966)
<i>Talavera aequipes</i> (O. Pickard-Cambridge, 1871)	Salticidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Talavera aperta</i> (Miller, 1971)	Salticidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Taranucnus setosus</i> (O. Pickard-Cambridge 1863)	Linyphiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Tenuiphantes flavipes</i> (Blackwall 1854)	Linyphiidae	SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Tenuiphantes mengei</i> (Kulczyński, 1887)	Linyphiidae	Suction trap, SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Tenuiphantes tenuis</i> (Blackwall 1852)	Linyphiidae	Laboratory observation, suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004); Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Tenuiphantes zimmermanni</i> (Bertkau 1890)	Linyphiidae	SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Tetragnatha caudicula</i> (Karsch, 1879)	Tetragnathidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Tetragnatha caudicula</i> (Karsch, 1879)	Tetragnathidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Tetragnatha extensa</i> Hentz, 1850	Tetragnathidae	Laboratory observation, sticky traps, manual collection	n.s	Ballooning, aerial dispersal, tiptoe, sailing	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Crawford & Edwards (1986); Entling, Stampfli & Ovaskainen (2011); Hayashi <i>et al.</i> (2015); Hogg & Daane (2010, 2018)
<i>Tetragnatha montana</i> Simon, 1874	Tetragnathidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Tetragnatha obtusa</i> C. L. Koch, 1837	Tetragnathidae	Suction trap, SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Tetragnatha pinicola</i> L. Koch, 1870	Tetragnathidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Tetragnatha versicolor</i> Walckenaer, 1841	Tetragnathidae	Laboratory observation, sticky traps, manual collection	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Crawford & Edwards (1986); Hogg & Daane (2010, 2018); Larrivée & Buddle (2011)
<i>Tetragnatha</i> spp.	Tetragnathidae	Laboratory observation, field observation, manual collection, suction trap	Day, n.s	Aerial dispersal, aeronautic behaviour, ballooning, tiptoe, tip-toe, suspended ballooning, rafting, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Entling, Stampfli & Ovaskainen (2011); Duffey (1997); Larrivée & Buddle (2011); Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Thaumasia argenteonotata</i> (Simon, 1898)	Pisauridae	n.s.	n.s	Ballooning, dropping on dragline	Nentwig (1987)
<i>Theridion boesenbergi</i> Strand, 1904	Theridiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Theridion dilutum</i> Levi, 1957	Theridiidae	Sticky traps	n.s.	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Theridion lawrencei</i> Gertsch & Archer, 1942	Theridiidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Theridion melanurum</i> Hahn, 1831	Theridiidae	Suction trap, sticky traps	Day	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011); Hogg & Daane (2010, 2018)
<i>Theridion murarium</i> Emerton, 1882	Theridiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tip-toe, suspended ballooning, rafting	Larrivée & Buddle (2011)
<i>Theridion mystaceum</i> C. L. Koch, 1870	Theridiidae	Suction trap, SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Woolley <i>et al.</i> (2016)
<i>Theridion pinastri</i> L. Koch, 1872	Theridiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Theridion varians</i> Hahn, 1833	Theridiidae	SNB traps	n.s	Ballooning, aerial dispersal, rappelling	Woolley <i>et al.</i> (2016)
<i>Theridion</i> spp.	Theridiidae	Laboratory observation, sticky traps, suction trap, manual collection	Day, n.s	Ballooning, aerial dispersal, tip-toe, tiptoe, suspended ballooning, rafting	Crawford & Edwards (1986); Entling, Stampfli & Ovaskainen (2011); Hogg & Daane (2010, 2018); Larrivée & Buddle (2011); Simonneau, Courtial & Pétillon (2016)
<i>Tibellus</i> sp.	Philodromidae	Laboratory observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011); Simonneau, Courtial & Pétillon (2016)
<i>Tiso vagans</i> (Blackwall, 1834)	Linyphiidae	Laboratory observation, suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe, aeronautic dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Deblauwe & Maelfait (2003); Bonte, Lukác & Lens (2008); Bonte <i>et al.</i> (2004); Simonneau, Courtial & Pétillon (2016)
<i>Tmarus</i> sp.	Thomisidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Trachelas pacificus</i> Chamberlin & Ivie, 1935	Corinnidae	Sticky traps	n.s	Ballooning, aerial dispersal	Hogg & Daane (2010, 2018)
<i>Trematocephalus cristatus</i> (Wider, 1834)	Linyphiidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Trichoncus saxicola</i> (O. Pickard-Cambridge, 1861)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	Araneidae	n.s.	n.s	Dropping on dragline	Nentwig (1987)
<i>Trichopterna cito</i> (O. Pickard-Cambridge, 1873)	Linyphiidae	Laboratory observation, Suction trap	n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004);

Species	Family	Methodology	Diurnal/ nocturnal dispersal	Terminology used	Source
<i>Tropicosa modesta</i> (Holmberg, 1876)	Lycosidae	Field observation	n.s	Ballooning, aerial dispersal, tiptoe	Piacentini <i>et al.</i> (2021)
<i>Troxochrus nasutus</i> (Schenkel, 1925)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Typhochrestus digitatus</i> (O. Pickard-Cambridge, 1873)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Uloborus glomosus</i> (Walckenaer, 1841)	Uloboridae	Laboratory observation	n.s	Ballooning, aerial dispersal, aerial dispersion, drop on a dragline	Suter (1991)
<i>Uloborus</i> sp.	Uloboridae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Ummeliata</i>	Linyphiidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>erigonoides</i> (Oi, 1960)					
<i>Ummeliata insecticeps</i> (Bösenberg & Strand, 1906)	Linyphiidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Ummidia</i> sp.	Halonoprocidae	Field observation	n.s	Suspended ballooning	Buzatto <i>et al.</i> (2021); Coyle (1985); Eberhard (2006)
<i>Walckenaeria acuminata</i> Blackwall, 1833	Linyphiidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Walckenaeria antica</i> (Wider, 1834)	Linyphiidae	Suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Walckenaeria monoceros</i> (Wider, 1834)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Walckenaeria nudipalpis</i> (Westring, 1851)	Linyphiidae	Suction trap	n.s	Ballooning, aerial dispersal	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013)
<i>Walckenaeria stylifrons</i> (O. Pickard-Cambridge, 1875)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Walckenaeria vigilax</i> (Blackwall, 1853)	Linyphiidae	Suction trap, SNB traps	Day, n.s	Ballooning, aerial dispersal, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)
<i>Walckenaeria antica</i> (Wider, 1834)	Linyphiidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Xerolycosa nemoralis</i> (Westring, 1861)	Lycosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Entling, Stampfli & Ovaskainen (2011)
<i>Xysticus atrimaculatus</i> Bösenberg & Strand, 1906	Thomisidae	Field observation	n.s	Aerial migration	Nishiki (1966)
<i>Xysticus audax</i> (Schrank, 1803)	Thomisidae	Field observation, laboratory observation, suction trap	Day, n.s	Ballooning, aerial dispersal, aerial dispersion, tiptoe, rafting, drop and climb	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Cho <i>et al.</i> (2018)
<i>Xysticus cristatus</i> (Clerck 1757)	Thomisidae	Field observation, laboratory observation, SNB traps	Day	Ballooning, aerial dispersal, aerial dispersion, tiptoe, rafting, drop and climb, rappelling	Cho <i>et al.</i> (2018); Woolley <i>et al.</i> (2016)
<i>Xysticus kochi</i> Thorell, 1872	Thomisidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Xysticus locuples</i> Keyserling, 1880	Thomisidae	Manual collection	n.s	Ballooning, aerial dispersal	Crawford & Edwards (1986)
<i>Xysticus</i> spp.	Thomisidae	Laboratory observation, field observation, manual collection, suction trap, sticky traps	Day, n.s	Ballooning, aerial dispersal, tiptoe, tip-toe, suspended ballooning, rafting, sailing, aerial migration	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Crawford & Edwards (1986); Hayashi <i>et al.</i> (2015); Hogg & Daane (2010, 2018); Larrivé & Buddle (2011); Nishiki (1966); Simonneau, Courtial & Pétillon (2016)
<i>Zelotes electus</i> (C. L. Koch 1839)	Gnaphosidae	Laboratory observation	n.s	Ballooning, aerial dispersal, tiptoe	Bonte, Deblauwe & Maelfait (2003); Bonte <i>et al.</i> (2004)
<i>Zelotes</i> sp.	Gnaphosidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Zilla diodia</i> (Walckenaer, 1802)	Araneidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Zora</i> sp.	Zoridae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Zygiella atrica</i> (C. L. Koch, 1845)	Araneidae	Suction trap	Day	Ballooning, aerial dispersal, tiptoe	Simonneau, Courtial & Pétillon (2016)
<i>Zygiella</i> spp.	Araneidae	Suction trap	Day, n.s	Ballooning, aerial dispersal, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Simonneau, Courtial & Pétillon (2016)
<i>Zygiella x-notata</i> (Clerck 1757)	Araneidae	Manual collection, SNB traps, suction trap	Day, n.s	Ballooning, aerial dispersal, aeronautic behaviour, rappelling, tiptoe	Blandenier (2009); Blandenier, Bruggisser & Bersier (2014); Blandenier <i>et al.</i> (2013); Duffey (1997); Simonneau, Courtial & Pétillon (2016); Woolley <i>et al.</i> (2016)

* It is unclear if this species remains valid, as it was transferred to the genus *Sergiolus* in 1981. It may correspond to *Sergiolus minutus* (Banks, 1898) or *Sergiolus montanus* (Emerton, 1890).