

CHECKLIST OF SPIDER MITES OF BELARUS (PROSTIGMATA: TETRANYCHIDAE)

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ABSTRACT: The checklist includes 24 species belonging to 10 genera of Tetranychidae from Belarus (Eastern Europe). Fifteen of the 24 species are reported from this region for the first time. New data on the host plants of *Bryobia vasiljevi* Reck, 1953, *Eotetranychus uncatatus* Garman, 1952, *Panonychus ulmi* (Koch, 1836), *Tetranychus przhevalskii* Reck, 1956 and *T. turkestanii* (Ugarov and Nikolskii, 1937) are provided.

KEY WORDS: Eastern Europe, Belarus, spider mites, Tetranychidae, biodiversity, checklist, pests, plant protection

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INTRODUCTION

Data on the spider mite fauna of Belarus (Eastern Europe) are extremely scarce. Some of the earliest reports contain information about three species (Sidliarevich 1965, 1966): *Panonychus ulmi* (Koch, 1836), *Tetranychus urticae* Koch, 1835, *Bryobia rubrioculus* (Scheuten, 1857). In the monograph by Mitrofanov *et al.* (1987), only the first of the aforementioned species is reported from the region. The Catalog of Acari from Belarus contains the reliable records of six species (Chikilevskaya *et al.* 1998).

The vast majority of papers on plant protection and biodiversity, with some exceptions, solely include the data on *Bryobia rubrioculus*, *Panonychus ulmi* and *Tetranychus urticae*—the key pests of vegetables (Dolmatov and Pryshchepa 2010; Pryshchepa and Dolmatov 2015; Radevich 2016), field crops (Maksimovich *et al.* 2017; Maksimovich and Brechko 2020), fruit and berries (Khotko *et al.* 2005; Koltun 2016; Koltun *et al.* 2016, 2017; Yarchakovskaya and Mikhnevich 2016), as well as ornamental plants in urban areas (Gorlenko and Panko 1967; Prokopovich 2008; Sautkin *et al.* 2012; Sautkin 2013, 2021). The harmfulness of *Oligonychus ununguis* (Jacobi, 1905) has been observed on coniferous plants, especially the introduced ones. This manifests itself in the slowing growth, the discoloration of needles and in the subsequent defoliation (Dishuk and Golovchenko 2016; Kovalev 2020; Torchyk 2020). It should be noted that in several cases, a provisory identification took place. This is evident from the sources used to identify the mites and the absence of information about the manufacture of slides.

Presently, the following quantities of spider mite species are known from the regions adjacent to Belarus: Hungary has 46 species of Tetranychidae, Serbia—45, Central European Russia—38, Poland—33 and Latvia—13 (Petrov 1971; Kontschán and Ripka 2017; Kontschán *et al.* 2019a, b; Marić *et al.* 2018; Marčić *et al.* 2020; Kamayev 2023; Migeon and Dorkeld 2025).

MATERIALS AND METHODS

The collections were carried out in 2025 by the authors (unless otherwise specified) in the central part of Belarus (Minsk and the Minskaya Oblast). The specimens (mites or leaves with mites) were preserved in 70% ethanol. The slides were prepared using Hoyer’s medium (Walter and Krantz 2009). The mites were identified by I. Kamayev using the ZEISS Axio Imager 2 phase-contrast microscope and the following literature sources (e.g., Reck 1959; Pritchard and Baker 1955; Wainstein 1960; Livshits and Mitrofanov 1971; Mitrofanov *et al.*, 1987; Baker and Tuttle 1994; Marić *et al.* 2018).

The systematics of Tetranychidae, the host plants and the world distribution of each spider mite species presented herein are based on the “Spider Mites Web” database (Migeon and Dorkeld 2025). The scientific names of plants and their taxonomy were obtained from the Catalogue of Life (Bánki *et al.* 2025).

The materials and slides are stored in the All-Russian Plant Quarantine Centre (VNIKR, Bykovo, Moscovskaya Oblast, Russia) and partly in the collection of the Institute of Plant Protection (Priluki, Minskaya Oblast, Belarus).

The transliteration of the Russian-language sources was performed using the online resource CNSHB¹.

SYSTEMATICS

Family **Tetranychidae** **Donnadieu, 1875**

Subfamily **Bryobiinae** **Berlese, 1913**

Tribe **Bryobiini** **Reck, 1952**

Genus ***Bryobia*** **Koch, 1836**

Type species: *Bryobia praetiosa* Koch, 1836

***Bryobia rubrioculus* (Scheuten, 1857)**

B. redikorzevi Reck, 1947, Sidliarevich 1965: 240; Chikilevskaya *et al.* 1998: 101; Khotko *et al.* 2005: 16; Koltun *et al.* 2016: 32; Koltun 2016: 234

Material. Two females, two larvae, Minsk, Lošycki Park, 53.8586° N, 27.5738° E, on *Malus domestica* (Suckow) Borkh. (Rosaceae), 23 June 2025. One female, Minsk, forest park, 53.9327° N, 27.6602° E, on *Corylus avellana* L. (Betulaceae), 12 September 2025.

Host Plants. This species is polyphagous; it has been recorded on more than 100 plant species from 26 families.

Distribution. This species is cosmopolitan.

***Bryobia vasiljevi* Reck, 1953**

Material. Three females, Minsk, Lošycki Park, 53.8583° N, 27.5743° E, on *Thuja occidentalis* L. (Cupressaceae), 23 June 2025.

Host Plants. This species has been recorded from at least 25 plant genera belonging to 12 families.

Distribution. Palearctic, Australasian and Neotropical regions.

Remarks. This spider mite species has been recorded from Belarus for the first time. *T. occidentalis* is a new host plant of *B. vasiljevi*.

Tribe **Hystrihonychini** **Pritchard and Baker, 1955**

Genus ***Tetranychopsis*** **Canestrini, 1889**

Type species: *Tetranychus horridus* Canestrini and Fanzago, 1876

***Tetranychopsis horridus* (Canestrini and Fanzago, 1876)**

Material. Two females, Minsk, Lošycki Park, 53.8555° N, 27.5807° E, on *Corylus avellana*, 23 June 2025.

Host Plants. This species has been reliably recorded from 14 plant species of 8 families, including *Corylus* spp.

Distribution. Holarctic region.

Remarks. It has been recorded from Belarus for the first time.

Subfamily **Tetranychinae** **Berlese, 1913**

Tribe **Eurytetranychini** **Reck, 1950**

Genus ***Eurytetranychus*** **Oudemans, 1931**

Type species: *Tetranychus latus* Oudemans, 1931 not Canestrini and Fanzago, 1876 (= *Neotetranychus buxi* Garman, 1935)

***Eurytetranychus furcisetus* Wainstein 1956**

Material. Two females, Minsk, Lošycki Park, 53.8580° N, 27.5798° E, on *Picea pungens*, 16 August 2025, coll. K. Karyttsa. Four females, Minsk, Victory Park, 53.9136° N, 27.5446° E, on *Picea pungens* Engelm. (Pinaceae), 10 September 2025. Six females, Minsk, Central Botanic Garden, 53.9190° N, 27.6123° E, on *Picea pungens*, 11 September 2025.

Host Plants. Pinaceae, mainly *Picea schrenkiana* and *Picea pungens*.

Distribution. This species is Palearctic.

Remarks. It has been recorded from Belarus for the first time.

Tribe **Tetranychini** **Reck, 1950**

Genus ***Amphitetranynchus*** **Oudemans, 1931**

Type species: *Tetranychus viennensis* Zacher, 1920, by original designation

***Amphitetranynchus viennensis* (Zacher, 1920)**

Tetranychus viennensis, Chikilevskaya *et al.* 1998: 98; Khotko *et al.* 2005: 10

Material. Two females, Minsk, 53.9155° N, 27.5479° E, on *Malus domestica*, 21 June 2025. One female, Minsk, Lošycki Park, 53.8556° N, 27.5764° E, on *Malus domestica*, 23 June 2025. One female, Minskaya Oblast, Priluki, 53.7946° N, 27.4533° E, on *Malus domestica*, 24 June 2025, coll. Y. Chorny.

¹ Retrieved 28 July 2025 from https://www.cnsnb.ru/translit/bsi_translit.shtm.

One female, one male, Minsk, Central Botanic Garden, 53.9164° N, 27.6149° E, on *Malus domestica*, 11 September 2025. Two females, Minsk, forest park, 53.9367° N, 27.6655° E, on *Prunus padus* L. (Rosaceae), 12 September 2025.

Host Plants. *Amphitetranychus viennensis* is polyphagous; this species is often recorded on the Rosaceae plant species.

Distribution. Palearctic and Oriental regions.

Genus *Eotetranychus* Oudemans, 1931

Type species: *Trombidium tiliarium* Hermann, 1804, by original designation (but erroneously referred to as *Acarus telarius* Linnaeus, 1758)

Eotetranychus aceri Reck, 1948

Schizotetranychus aceri, Prokopovich 2008: 389

Material. Five females, four males, Minsk, Forest Park, 53.9367° N, 27.6655° E, on *Acer platanoides* L. (Sapindaceae), 12 September 2025.

Host Plants. This species prefers *Acer*, *Prunus* and *Pyrus* species.

Distribution. Palearctic region.

Eotetranychus populi (Koch, 1838)

Material. Two females, two males, Minsk, Central Botanic Garden, 53.9134° N, 27.6075° E, on *Populus simonii* Carrière (Salicaceae).

Host Plants. This species is polyphagous, preferring *Populus* and *Salix* species.

Distribution. Holarctic region.

Remarks. It has been recorded from Belarus for the first time.

Eotetranychus pruni (Oudemans, 1931)

Schizotetranychus pruni, Chikilevskaya et al. 1998: 100

Material. Five females, three males, Minsk, Central Botanic Garden, 53.9164° N, 27.6149° E, on *Corylus avellana*, 11 September 2025.

Host Plants. This species has been recorded from more than 40 plant species belonging to 10 families.

Distribution. Holarctic and Oriental regions.

Eotetranychus thujae (McGregor, 1950)

Material. Fourteen females, two males, Minsk, Lošycki Park, 53.8583° N, 27.5743° E, on *Thuja occidentalis*, 23 June 2025. Five females, Minsk,

Central Botanic Garden, 53.9148° N, 27.6070° E, on *Thuja occidentalis*, 11 September 2025.

Host Plants. Cupressaceae.

Distribution. Holarctic region.

Remarks. *Eo. thujae* has been recorded from Belarus for the first time.

Eotetranychus tiliarium (Hermann, 1804)

Schizotetranychus tiliarium, Chikilevskaya et al. 1998: 99

Material. Eight females, four males, Minskaya Oblast, Priluki, 53.7915° N, 27.4514° E, on *Tilia* spp. (Malvaceae) and *Corylus* sp. (Betulaceae), 20 June 2025.

Host Plants. This species has been recorded from more than 30 plant species belonging to 10 families.

Distribution. Holarctic region.

Eotetranychus uncatus Garman, 1952

Material. Two females, one male, Minsk, Central Botanic Garden, 53.9164° N, 27.6150° E, on *Malus prunifolia* (Willd.) Borkh. (Rosaceae), 26 June 2025.

Host Plants. This species is polyphagous, recorded from 37 plant species belonging to 10 families, including *Malus* from Rosaceae.

Distribution. Holarctic, Oriental and Neotropical regions.

Remarks. This spider mite species has been recorded from Belarus for the first time. *M. prunifolia* is a new host plant of *E. uncatus*.

Genus *Neotetranychus* Trägårdh, 1915

Type species: *Neotetranychus rubi* Trägårdh, 1915

Neotetranychus rubi Trägårdh, 1915

Material. Three females, Minskaya Oblast, suburbs of Volchkovich, 53.8210° N, 27.3719° E, on *Rubus idaeus* L. (Rosaceae), 19 June 2025. Two females, Minsk, Forest Park, 53.9345° N, 27.6659° E, on *Rubus idaeus*, 12 September 2025.

Host Plants. *Rubus* species.

Distribution. Palearctic region.

Remarks. It has been recorded from Belarus for the first time.

Genus *Oligonychus* Berlese, 1886

Type species: *Heteronychus brevipodus* Targioni Tozzetti, 1878

***Oligonychus karamatus* (Ehara, 1956)**

Material. Thirteen females, one male, Minsk, Victory Park, 53.9287° N, 27.5350° E, on *Larix* sp. (Pinaceae), 21 June 2025.

Host Plants. Mostly species of the *Larix* genus.

Distribution. Palearctic region.

Remarks. It has been recorded from Belarus for the first time.

***Oligonychus lagodechii*
Livshits and Mitrofanov, 1969**

Material. Nine females, two males, Minsk, Central Botanic Garden, 53.9158° N, 27.6130° E, on *Thuja occidentalis*, 26 June and 11 September 2025. Three females, Minskaya Oblast, Priluki, 53.7910° N, 27.4504° E, on *Thuja occidentalis* L. (Cupressaceae), 19 June 2025.

Host Plants. This species has been recorded on plants of Cupressaceae family.

Distribution. Palearctic region.

Remarks. It has been recorded from Belarus for the first time.

***Oligonychus piceae* (Reck, 1953)**

Material. Twenty females, three males, Minsk, Central Botanic Garden, 53.9183° N, 27.6110° E, on *Pinus sylvestris* L. (Pinaceae), 26 June 2025. Four females, Minskaya Oblast, suburbs of Volch-kovich, 53.8203° N, 27.3705° E, on *Pinus sylvestris*, 19 June 2025. Six females, Minsk, forest park, 53.9345° N, 27.6659° E, on *Pinus sylvestris*, 12 September 2025.

Host Plants. This species has mainly been recorded on *Pinus* and *Picea* species (Pinaceae).

Distribution. Palearctic region.

Remarks. It has been recorded from Belarus for the first time.

***Oligonychus ununguis* (Jacobi, 1905)**

Oligonychus ununguis, Dishuk and Golovchenko 2016: 63; Kovalev 2020: 63; Torchyk 2020: 215

Material. Twenty females, three males, Minsk, Lošycki Park, 53.8583° N, 27.5743° E, on *Picea pungens* Engelm., *Abies* sp. (Pinaceae), *Juniperus* sp., *Platycladus orientalis* (Cupressaceae), 23 June 2025. Twelve females, five males, Minsk, Central Botanic Garden, 53.9151° N, 27.6055° E, on *Thujopsis dolabrata* (L.f.) Siebold and Zucc. (Cupressaceae) and *Picea glauca* (Moench) Voss (Pinaceae), 25 June 2025. Six females, Minsk, Victory

Park, 53.9284° N, 27.5341° E, on *Picea pungens*, 21 June 2025. Four females, Minskaya Oblast, Priluki, 53.7910° N, 27.4504° E, on *Juniperus sabina*, 19 June 2025.

Host Plants. This species is polyphagous; it has been recorded on more than 100 plant species from 12 families.

Distribution. This species is cosmopolitan.

Genus *Panonychus* Yokoyama, 1929

Type species: *Panonychus mori* Yokoyama, 1929=*Tetranychus citri* McGregor, 1916

***Panonychus citri* (McGregor, 1916)**

Material. Eleven females, three males, Minsk, stock greenhouse of the Central Botanic Garden, 53.9148° N, 27.6078° E, on *Citrus × microcarpa* Bunge, *Citrus × aurantium* L. and *Citrus × limon* (L.) Osbeck (Rutaceae), 24 June 2025.

Host Plants. This species is polyphagous: it has been recorded from more than 110 plant species belonging to 41 families, including Rutaceae.

Distribution. This species is cosmopolitan. It is known from greenhouses in European Russia (Mitrofanov *et al.* 1987).

Remarks. It has been recorded from Belarus for the first time.

***Panonychus ulmi* (Koch, 1836)**

Metatetranychus ulmi, Sidliarevich 1965: 240; Koltun 2016: 234

Panonychus ulmi, Mitrofanov *et al.* 1987: 85; Chikilevskaya *et al.* 1998: 100; Khotko *et al.* 2005: 14; Sautkin 2013: 304; Koltun *et al.* 2016: 32

Material. Five females, three males, Minsk, Lošycki Park, 53.8574° N, 27.5756° E, on *Rosa* sp. (Rosaceae), 23 June 2025. One female, two males, Minsk, Central Botanic Garden, 53.9164° N, 27.6150° E, on *Malus prunifolia* (Willd.) Borkh. (Rosaceae), 26 June 2025.

Host Plants. This species is polyphagous; it has been recorded on more than 160 plant species from 41 families.

Distribution. This species is cosmopolitan.

Remarks. *Malus prunifolia* is a new host plant of *P. ulmi*.

Genus *Schizotetranychus* Trägårdh, 1915

Type species: *Tetranychus schizopus* Zacher, 1913

***Schizotetranychus jachontovi*
Reck, 1953**

Material. Nine females, one male, Minsk, Central Botanic Garden, 53.9169° N, 27.6134° E, on *Quercus robur* L. (Fagaceae), 24–26 June 2025.

Host Plants. *Quercus* spp.

Distribution. Palearctic region.

Remarks. It has been recorded from Belarus for the first time.

***Schizotetranychus schizopus*
(Zacher, 1913)**

Material. Six females, five males, Minsk, 53.9263° N, 27.4240° E, on *Salix* sp. (Salicaceae), 20 June 2025. Three females, Minskaya Oblast, Priluki, 53.7910° N, 27.4504° E, on *Salix* sp., 19 June 2025.

Host Plants. This species feeds mainly on *Salix* and *Populus*.

Distribution. Holarctic region.

Remarks. It has been recorded from Belarus for the first time.

Genus ***Tetranychus* Dufour, 1832**

Type species: *Tetranychus lintearius* Dufour, 1832

***Tetranychus przhevalskii* Reck, 1956**

Material. One female, one male, Minsk, Central Botanic Garden, 53.9194° N, 27.6121° E, on *Panicum virgatum* L. (Poaceae), 11 September 2025.

Host Plants. This species feeds mainly on Poaceae.

Distribution. Palearctic region.

Remarks. This spider mite species has been recorded from Belarus for the first time. Also, *T. przhevalskii* has been recorded on *Panicum virgatum* for the first time.

***Tetranychus sawzdargi*
Mitrofanov, 1980**

Material. Seven females, four males, Minsk, 53.9190° N, 27.5433° E, on *Rosa canina* L. (Rosaceae), 21 June and 10 September 2025. Three females, four males, Minsk, forest park, 53.9367° N, 27.6655° E, on *Rosa canina*, 12 September 2025.

Host Plants. Grossulariaceae: *Ribes nigrum*; Malvaceae: *Hibiscus* sp.; Salicaceae: *Populus suaveolens*; Rosaceae: *Rosa* spp., *Rubus idaeus*, *Fragaria* spp.

Distribution. This species is known from Russia (the European part and the Far East), as well as from Kyrgyzstan (Mitrofanov *et al.* 1980, 1987; Strunkova, 1988).

Remarks. It has been recorded from Belarus for the first time.

***Tetranychus turkestanii*
(Ugarov and Nikolskii, 1937)**

Material. One female, one male, Minsk, Central Botanic Garden, 53.9170° N, 27.6167° E, on *Lonicera caprifolium* L. (Caprifoliaceae), 25 June 2025.

Host Plants. This species is polyphagous; it has been recorded on more than 300 plant species from 72 families.

Distribution. This species is cosmopolitan.

Remarks. This spider mite species has been recorded from Belarus for the first time. *Lonicera caprifolium* is a new host plant of *T. turkestanii*.

***Tetranychus urticae* Koch, 1835**

Tetranychus cinnabarinus (Boisduval, 1867), Dolmatov and Pryshchepa 2010: 110; Pryshchepa and Dolmatov 2015: 31

Tetranychus urticae, Sidliarevich 1965: 240; Gorlenko and Panko 1967: 69; Chikilevskaya *et al.* 1998: 99; Khotko *et al.* 2005: 12; Dolmatov and Pryshchepa 2010: 110; Sautkin *et al.* 2012: 207; Pryshchepa and Dolmatov 2015: 31; Koltun 2016: 234; Radevich 2016: 246; Maksimovich *et al.* 2017: 30; Maksimovich and Brechko 2020: 180.

Material. Seventeen females, six males, Minsk, stock greenhouse of the Central Botanic Garden, 53.9148° N, 27.6078° E, on *Rosa* sp. (Rosaceae), *Hibiscus rosa-sinensis* L. (Malvaceae) and *Acalypha wilkesiana* Müll.Arg. (Euphorbiaceae), 24 June 2025. Eight females, five males, Minsk, Forest Park, 53.9367° N, 27.6655° E, on *Fraxinus americana* L. (Oleaceae), 12 September 2025.

Host Plants. This species is polyphagous; it has been recorded on more than 1200 plant species from 132 families.

Distribution. This species is cosmopolitan.

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