FIRST SUPPLEMENT TO THE CHECKLIST OF MESOSTIGMATIC MITES OF THE NETHERLANDS (ACARI: MESOSTIGMATA)

Henk Siepel

Sampling biotopes which are usually ignored yielded 23 species of Mesostigmata to be added to the checklist of the Netherlands. These biotopes are washed ashore debris and algae along the coast, banks of small seepage brooks, soil and litter of mineral-rich forests, ant nests, decaying mushrooms, alder forest and moist grasslands. Also two species know as commensals or parasites are added.

INTRODUCTION

Siepel et al. (2018) list 458 species of mesostigmatic mites for the Netherlands. In this first addendum, 23 new species are reported. Some of these have been found in recently completed projects (Siepel et al. 2019, Guo & Siepel 2020), however, most were found in taking samples from under-investigated biotopes for these mites in the Netherlands, such as the seashore, banks of brooklets and ponds and decaying mushrooms. Also a number of species was found in traps placed in ant nests (Van Wielink et al. 2020). Mesostigmata are a very species-rich group of mites, which can be found literally everywhere: in house, parasitic or phoretic on mammals, birds, reptiles and insects and in virtually every biotope you can imagine outside and inside. Identification can be done with the works of Evans & Till (1979) to the genus level of all Mesostigmata and Karg (1989, 1993) for respectively Uropodina and Gamasina, together forming the suborder Monoginaspida. The few species from the suborders Sejida and Triginaspida need specialized keys, which holds also for groups within the Uropodina and Gamasina that have been revised recently. See for details Siepel et al. (2018). Most Mesostigmata are parasites or predators, however, also predators sometimes partially feed on fungal or vegetable sources (Hughes 1976, Nawar et al. 1993, Zemek & Prenerova 1997, Wari et al. 2016). Compared to oribatid mites relatively little is known about distribution and habitat characteristics. For the species listed here as new to the Netherlands, as all available information is given, including own observations.

Siepel & Van de Bund (1988) provide a protocol for effectively collecting and storing mites. In recent years mites have been collected in several projects. Samples from peculiar habitats were taken in small plastic bags and put on a sieve above a funnel with a collecting jar with alcohol (70 %) as conservation fluid. Air-drying for a week (or longer when samples were very wet) resulted in abundant material. Specimens were then put on microscope slides in 20 % lactid acid to clear. Specimens for collection material were transferred to slides with Hoyers fluid (Singer 1967). All specimens reported below are stored in the author's collection and collected by the author, unless stated otherwise.

NEW SPECIES

Dinychus septentrionalis (fig. 1)

Gelderland Apeldoorn, 52°15'32.6"N 5°55'38.8"E, 24.v.2020, 1 ex. **Noord-Brabant** Kaaistoep, Tilburg, 51°32'28.4"N 5°00'38.2"E, 10.iv.2014, 1 ex. R. Felix.

In Wiesel *D. septentrionalis* has been found in litter at the bank of a brooklet, in the Kaaistoep in a pipe trap in the nest of *Formica pratensis* Retzius, 1783. Karg (1989) reports the species from litter of deciduous forests and phoretic on flies.

Figure 1-23. Photos of the new species of mesostigmatic mites. All photos Henk Siepel, except figure 21 by Herman Cremers.
Figuur 1-23. Foto's van de nieuwe roofmijten. All foto's Henk Siepel, behalve figuur 21 door Herman Cremers.

1. *Dinychus septentrionalis*.

2. *Oplitis conspicua*.

3. *Trichouropoda polyctenaphila*.

4. *Trichouropoda querceti*.

5. *Cilliba athiasae*.

6. *Paragamasus alpestris*.

7. *Parasitellus ignotus*.

8. *Pergamasus arcuatus*.

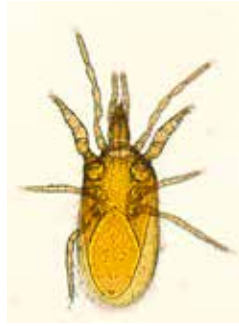
9. *Pergamasus digitulus*.

10. *Pergamasus minorleitnerae*.

11. *Dendrolaelaps balazyi*.

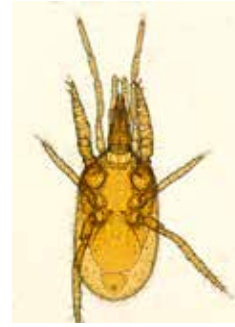
12. *Hydrogamasus littoralis*.

13. *Thinoseius spinosus*.



14. *Olopachys suecicus*.

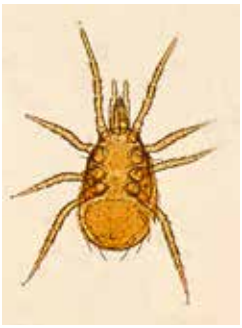
15. *Pachydellus hades*.



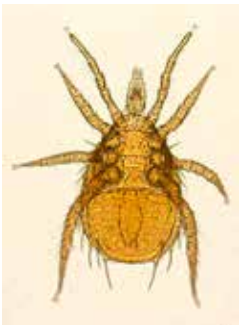
16. *Pachylaelaps littoralis*.

17. *Arctoseius insularis*.

18. *Cheiroseius salicorniae*.



19. *Lasioseius mirabilis*.



20. *Lasioseius muricatus*.

21. *Dermanyssus quintus*.

22. *Gymnolaelaps laevis*.

23. *Laelaspis humerata*.

Kontschán & Salmane (2005) found it to be fungivorous on *Trichaptum abietinum* and reported it from Latvia, Kontschán (2006) reports the species from Maramures in Romania, while Wisniewski (1993) lists the species from Sweden and Makarova (2011) from the taiga near Komi (Russia). The Holartic distribution is completed by the occurrence in China (Jilin province) by Bei et al. (2010) and Canada by Athias-Binche et al. (1989). The latter report the species especially from rotten wood, under bark and mosses. Huhta et al. (2012b) report this species as a specialist in coarse woody debris in Finland. Makarova (2004) gives a preference for some polypore fungi (*Fomitopsis pinicola*, *Gloeophyllum sepiarium*. and *Trametes hirsuta*.

Oplitis conspicua (fig. 2)

Gelderland Mosselse veld, Otterlo, 52°04'36.3"N 5°44'01.2"E, 15.IV.2020, 1 ex.

Both the genus and species are new to the Netherlands. The Dutch specimen was found in a grassland soil sample (0-5 cm). The site is a former agricultural field where until 1989 various crops were grown, including asparagus. After 1989 it was abandoned and the grass cover was grazed with a low number of New Forest ponies and Sayaguesa cattle. The soil is sandy without any trace of loam. According to Karg (1989) *Oplitis conspicua* can frequently be found in grassland soils, even in very wet ones. *Oplitis conspicua* is a Paleartic species, which is found in e.g. Hungary (Wiśniewski 1996), Slovakia (Mašán 2001) and Poland (Napierała & Błoszyk 2013), where it was found in soil and in ant hills. In Korea the species has been found in forest litter and rotten trunks of *Pinus densiflora* (Kontschán et al. 2012). Błoszyk et al. (2004) consider this species to be thelytokously reproducing as they found only females.

Trichouropoda polyctenaphila (fig. 3)

Noord-Brabant Kaaistoep, Tilburg, 51°32'28.4"N 5°00'38.2"E, 27.II.2014, 6 ex., R. Felix.

The Dutch specimens were found in a pipe trap in the nest of *Formica pratensis* Retzius, 1783. Karg (1989) reports *T. polyctenaphila* as a central European species found in nests of the ant *Formica polyctena* Forster, 1850. Wisniewski (1993) lists the species from Bulgary and Kontschán (2003) from an ant's nest (no species mentioned) in Jósvafő (Hungary). Huhta et al. (2010) mention *T. polyctenaphila* from nests of *F. polyctena* in Finland. *Trichouropoda polyctenaphila* is found in nests of the larger wood ants *Formica* sensu stricto rather exclusively, while some other *Trichouropoda* species can also be found in related biotopes such as dead wood or trunks.

Trichouropoda querceti (fig. 4)

Zuid-Holland Ackerdijkse plassen, Delfgauw, 51°58'24.1"N 4°24'49.6"E, 7.IV.2018, 2 ex.

The Dutch specimens were found in a soil sample (0-5 cm) in an alder brook. It is a central European species according and found in rotten tree trunks and in soil (Karg 1989). Wiśniewski (1996) and Kontschán (2003) list the species for Hungary from litter. Gwiazdowicz (2002) mention the species from the Pieniny Mountains (south of Krakow) in Poland, inhabiting nests of *Formica polyctena*.

Cilliba athiasae (fig. 5)

Limburg St. Jansberg, Milsbeek, 51°44'19.4"N 5°56'46.1"E, 14.I.2018, 1 ex.

The Dutch specimens were found in moss along a small seepage stream. The forest on the St. Jansberg is deciduous with *Quercus robur*, *Fagus sylvatica* and some *Prunus avium* in the tree layer. At the edges of the hills some seepage streams can be found. Skorupski & Luxton (1998) list the species from Wye Valley in Wales from wet litter. According to Karg (1989) it occurs in the humus and litter layer of forests and meadows. The species occurs throughout Europe and northern Africa: a beech wood in the Göttinger forest in Germany (Maraun et al. 2001), a *Picea abies* stand in the Rosalien mountains, east Austria (Čoja & Bruckner 2003), in the Pienin mountains in Poland (Błaszak et al. 2000) Spain and Algeria (Wiśniewski 1993).

Paragamasus alpestris (fig. 6)

Groningen Westerbroek, 53°11'11.5"N 6°40'12.3"E, 18.V.2018, 1 ex.

The Dutch specimen was collected in a soil sample (litter and 0-5 cm) in a moist forest with *Quercus robur* on mineral soil. Karg (1993) lists the species as rare in decomposing litter, in humus and moss and plant remains at a brook. According to Skorupski & Luxton (1988) the species is widespread in England in decaying vegetation and moss in grassland and heathland. Slomian et al. (2005) found it also in tree holes and rotten wood in Norway and in Belgium it has also been found in caves (Skubała et al. 2013). In Europe it has been additionally recorded from Romania (Manu & Onete, 2015), Poland (Gabry et al. 2008) and Ireland (Arroyo et al. 2010).

Parasitellus ignotus (fig. 7)

Gelderland Slot Loevestein, Poederoijen, 51°49'03.1"N 5°01'13.6"E, 19.VIII.2018, 1 ex.

In the Netherlands one adult specimen was found in a soil sample along bike path to ferry. *Parasitellus ignotus* is a phoretic on bumblebees (Karg 1993). The species is found in nests of bumblebees, where it spends its entire life cycle. Deutonymphs perch on flowers and attach to the bumblebees

for transport to other locations (Schwarz & Huck 1997). In Poland these mites are also found in colonies of bumblebees kept in green houses for pollination. Originally, the supplied nests are free from these mites, it is assumed that the nests are infected from outside over time (Rożej et al. 2012). *Parasitellus ignotus* seems to have a preference for *Bombus terrestris* Linnaeus, 1758 (Schwarz et al. 1996), which is common and makes its nest in soil on various locations, preferably with a sunny exposure. In Europe it is a common species ranging from Finland and Slovakia (Fenďa & Lucás 2014), in the east to England in the west (Skorupski & Luxton 1988).

Pergamasus arcuatus (fig. 8)

Limburg Bunderbos, Elsloo, 50°56'34.3"N 5°45'17.1"E, 12.IV.2018, 1 ex.

The Dutch specimen was found in a soil sample in a seepage area. Dielmann (1991) described this species from the litter of a beech forest in the northern Black forest in Germany. Other references could not be found in literature.

Pergamasus digitulus (fig. 9)

Gelderland Arkemheen, 30.III.2016, 2 ex.

The Dutch specimens were found in a litter sample at the foot of a former sea dike.
A species found in a variety of habitats. Müller et al. (1993) found *P. digitulus* commonly in their compost experiments near Ulm in Germany. Salamon et al. (2006) report the species as abundant in the Solling forest, a deciduous forest near Göttingen. Karg (1998) gives a density of 460 individuals m2 predating on root-feeding mites and springtails in agricultural soils in the vicinity of Halle, Potsdam and Erfurt.

Pergamasus minorleitnerae (fig. 10)

Gelderland De Bruuk,Groesbeek, hedgerow, 51°45'41.7"N 5°58'15.6"E, 19.I.2018, 7 ex. Willink Weuste, Winterswijk, 51°57'59.4"N 6°47'29.2"E, 31.VII.2017, 6 ex. Hackfort, Vorden, 52°06'09.7"N 6°15'56.0"E, 30.X.2019, 12 ex. De Steeg, Middachten, 52°01'29.3"N 6°04'36.9"E, 10.V.2020, 1 ex. **Overijssel** Balkbrug, Ommenschans, 52°35'17.2"N 6°23'32.7"E, 17.II.2019, moist forest litter, 1 ex. **Limburg** Grote Bos, Slenaken, 5.X.2015, in moss under *Fraxinus excelsior*, 14 ex.

The Dutch specimens were mostly found in soil samples, all on locations with a mineral-rich soil and a moist forest stand. In comparison to the previous species there are considerably less records in the literature about *P. minorleitnerae*. It has been found in a spring corridor north of the Mäuerlscharte to Griesberg, 2280 meters above sea level. The species was found in rich spring moss clubs on the adjacent rocks and in *Cyperacea* vegetation on the wet area on the spring floor (Schmölzer 1993).

Dendrolaelaps balazyi (fig. 11)

Gelderland Lierderholt, Beekbergen, 52°08'49.3"N 5°57'00.2"E, 11.II.2018, 1 ex.

The Dutch specimen were found in in decaying *Fomes fomentarius* on *Betula pendula*.
The species is known from larval galleries of longhorn beetles in fir in central Europe (Karg 1993).

Hydrogamasus littoralis (fig. 12)

Zeeland Sas van Goes, 51°32'40.1"N 3°55'32.6"E, 29.IV.2019, 1 ex.

The Dutch specimen is found in in green algae between *Spartina anglica*. This is the northernmost location in continental Europe. Karg (1993) gives brief information on only this species in the

genus. In general for the genus is stated: the species live in seaweed on the seashore. In the north it is found on the French Atlantic coast, south on the Mediterranean coast. *Hydrogamasus littoralis* is reported from the south and southwest coasts of England, often together with *H. giardi* (Berlese & Trouessart, 1889) on the isles of Scilly (Pugh 1988), south coast of Devon (Colman 1940), Wales (Roth & Brown 1976) and the east coast of Ireland (Halbert 1920). Occasionally the species is also found inland on cereal fields near the coast (El Banhawy et al. 1993). A key to discriminate both *Hydrogamasus* species is provided by Karg (1971).

Thinoseius spinosus (fig. 13)

Zeeland Sas van Goes, 51°32'40.1"N 3°55'32.6"E, 29.IV.2019 1 ex.

The Dutch specimen was found in green algae between *Spartina anglica*, *Thinoseius spinosus* is only found in flood marks on the beach at the Atlantic Ocean and adjacent seas (Karg 1993, Salmane 1996, 1999, Błaszak et al. 2004). It is found as north as Spitsbergen and Greenland, where deutonymphs were recorded as phoretics on *Protophormia terraenovae* (Robineau-Desvoidy, 1830) (Diptera, Calliphoridae) (Gwiazdowicz & Coulson 2010) and *Fucellia ariciiformis* (Holmgren, 1872) (Anthomyiidae, Diptera) (Makarova & Böcher 2009). Evans (1954) gives a revision of the genus *Thinoseius*. The characters of both sexes of *T. spinosus* are summarized: peritreme not extending beyond coxa 1, setae s2 and s5 present and dorsal setae needle-shaped. Contrary to Karg (1993), Evans (1961) presents a third European species *T. acuminatus* Evans, 1961, to be distinguished by the broad and suddenly pointed (acuminate) dorsal setae in the females. As Karg (1993) restricted his key to middle Europe, he obviously did not include all species of western Europe. Deutonymphs can be identified with the key given by Gwiazdowicz & Coulson (2010).

Olopachys suecicus (fig. 14)

Limburg Bunderbos, Elsloo, 50°56'41.8"N 5°45'22.7"E, 12.IV.2018, 6 ex.

The Dutch specimens have been collected in moss on soil in a hillside forest. According to Karg (1993) the species is sparsely represented in mostly moist deciduous forest in Europe. More precisely, it is found in rotting leaves and moss in mineral rich soils on calcareous material or with clay (Manu et al. 2013). Călugăr (2013) found that the species is tolerant to pollution with cement dust in a beech forest, which is in accordance with the preference for mineral rich soils. Ambros (1995) found *O. suecicus* in the fur of *Apodemus flavicollis* (Melchior, 1834) (Rodentia, Muridae), while Haitlinger (1983) found it in the nests of bank vole *Myodes glareolus* (Schreber, 1790) (Rodentia, Cricetidae) and Fenďa (2010) found it in birds' nests. Hajizadeh & Hosseini (2020) provide a new key to the *Olopachys* species of the world.

Pachydellus hades (fig. 15)

Gelderland De Bruuk, Groesbeek, 51°45'41.7"N 5°58'15.6"E, 19.I.2018, 1 ex. De Steeg, Middachten, 52°01'29.5"N 6°04'38.6"E, 10.V.2020, 1 ex.

The Dutch specimens have been found in a soil sample (0-5 cm) in a hedgerow (De Bruuk) and in moss in a spring forest (De Steeg). *Pachydellus* has been erected by Mašán to accomodate a number of closely related species, of which *P. furcifer* (Oudemans, 1903) and *P. vexillifer* (Willmann, 1956) occur in the Netherlands (resp. numbers 224 and 239 in the checklist: Siepel et al. 2018). *Pachydellus hades* has been described from Australia and was thought to be endemic. In the review of Mašán (2007), however, it turned out to be a quite common species in Europe, that mostly has been misidentified, e.g. as *Pachylaelaps ineptus* Hirschmann & Kraus, 1965 by Karg (1993). In Australia it might have been introduced by

human activities. Former records of *P. ineptus* and *P. furcifer* should be re-examined. *Pachydellus hades* occurs in a variety of biotopes such as leaf litter, raw humus, soil and wood detritus and moss (Halliday & Mašán 2008).

Pachylaelaps littoralis (fig. 16)

Gelderland Hackfort, Vorden, 52°06'09.7"N 6°15'56.0"E, 30.x.2019, 1 ex.

The Dutch specimens were obtained from a soil sample from a woodlot. The species can be found in the litter layer of forests, in nests of rodents and ants and is found phoretic on beetles of the genus *Geotrupes* (Karg 1993). According to Salmane (2001) it occurs in inland meadows. The species is quite common in Europe, but occurs also as far as the Altai mountains near Mongolia (Marchenko 2012).

Arctoseius insularis (fig. 17)

Gelderland Haarweg, Tonden, 52°07'42.3"N 6°06'40.5"E, 16.x.2019, 5 ex.

The Dutch specimens were found in a soil sample (0-5 cm) from grassland. Karg (1993) reports the species in meadow soils, in moss and rotting plant remains. It occurs also on the seashore, where it was mentioned among the mites in the nest of a sea eagle *Haliaeetus albicilla* (Linnaeus, 1758) in Poland (Gwiazdowicz et al. 2006). Although rarely mentioned *A. insularis* is frequently found in rural Finland (Huhta et al. 2012a). *Arctoseius insularis* occurs in both agricultural and forest soils. In forests it has usually been reported in litter, moss, rotting wood and in the nests of birds (Kalúz & Fend'a 2005, Gwiazdowicz 2007). In a successional series of forests *A. insularis* was most common in the mid-fallows (6-8 years) in Austria (Wisuwa et al. 2012). In Poland, Urbanowski et al. (2018) found a preference for stands with *Pinus silvestris* (compared to *Betula pendula*).

Cheiroseius salicorniae (fig. 18)

Zeeland Zusterzand, Waarden, 51°24'33.5"N, 4°05'22.9"E, 4.v.2018, 4 ex. Rilland, 51°26'18.1"N 4°13'21.7"E, 3.v.2019, 3 ex. Nieuwvliet, Verdronken zwarte polder, 51°23'09.9"N 3°26'26.5"E, 19.vi.2021, 2 ex.

The Dutch specimens were obtained from a soil sample under vegetation of *Salicornea europaea* in a salt marsh (Zusterzand and Nieuwvliet) and in washed-up seaweed and a soil sample under a vegetation of *Spartina* (Rilland). The species occurs in in moist, salty meadow soil (Karg 1993). These soils are usually found at the coasts of Europe, including the Danube estuary to the Black Sea (Kalúz 1997). Some records are from inland soils (Fenďa & Ciceková 2005), where the species was found in soil samples of wet soil from the bank of the creek inside the 80-100 year old oak-hornbeam forest (*Querco-Carpinetum melicetosum uniflorae*), at an altitude of 340 m in Slovakia (NNE of Bratislava).

Lasioseius mirabilis (fig. 19)

Gelderland Nijenbeek polder, Gietelo, 52°11'00.6"N 6°10'14.2"E, 25.xi.2018, 2 ex.

The Dutch specimens were found in moss in dried-up pond. The species seems to prefer rather moist environments. Karg (1993) gives a rather general habitat description for this species: on the soil surface among low vegetation. *Lasioseius mirabilis* was also found in nests of the great reed warbler *Acrocephalus arundinaceus* Linnaeus, 1758 (Krištofík et al. 2001), mostly in very small numbers. The species has also been recorded once in the nest of the harvest mouse *Micromys minutus* (Pallas, 1771) in western Poland (Krawczyk et al. 2015), also an inhabitant of marshland.

Lasioseius muricatus (fig. 20)

Flevoland Hollandse Hout, Lelystad, 22.IV.2020, 80 ex.

The Dutch specimens are found in logs of *Betula pendula* of the Loglife experiment (Cornelissen et al. 2012). It is rare in broad-leaved forest, rarely in rotten plant remains (potato tops, rubbish heaps), in compost, in moss, rotten tree logs and polypore fungi. It prefers wet, sometimes dripping wet and moderately moist substrate (Karg 1993). According to Karg (1993) it is restricted to Central Europe. The species has been found in Hungary (Kontschán 2007), Poland (Gwiazdowicz & Łakomy 2002), Latvia (Salmane 2001, 2005), Slovakia (Fenďa & Ciceková 2005), Finland (Huhta 2016) and Norway (Slomian et al. 2005), but also in Eastern Europe in Komi (Makarova 2004) and Tatarstan (Russia) (Leontiev 2015). It is also found in Sachalin and the Kril Islands in the Far East of Siberia (Violovich 1961). There are reports of phoresy on the bumble bee *Bombus hortorum* (Linnaeus, 1761) (Homan 1933, Violovich 1961).

Dermanyssus quintus (fig. 21)

Gelderland Buren, 15.X.2020, col. Cremers.

The Dutch specimen was found on *Dryobates minor* (Linnaeus, 1758), a new host to its host range. Keys to the species of the genus *Dermanyssus* are provided by Evans & Till (1962) and Moss (1978). *Dermanyssus quintus* is a parasite on woodpeckers (Piciformes, Picidae) both in Europe and North America. Known hosts in Europe are *Dendrocopus major* (Linnaeus, 1758), *D. leucotos* (Bechstein, 1812), *Picoides tridactylus* (Linnaeus, 1758), *Picus viridis* Linnaeus, 1758 and in North America *Dryobates pubescens* (Linnaeus, 1766) and *Leuconotopicus villosus* (Linnaeus, 1766) (Moss et al. 1970, Moss 1978). Roy et al. (2009) provide a complete overview of species delimitation to their hosts for all species of the genus and Roy & Chauve (2010) give the validity of all names.

Gymnolaelaps laevis (fig. 22)

Noord-Brabant Kaaistoep, Tilburg, 51°32'28.4"N 5°00'38.2"E, 13.III.2014, 5 ex., R. Felix.

The Dutch specimens were found under a tile near a nest of *Formica pratensis*. According to Karg (1993), this species lives in the nest of ants, either feeding on their brood or on various other animals living in these nests. Karg (1993) mention only Europe, but Keum et al. (2017) found the species recently in Korea. Kazemi & Rajaei (2013) report it from Iran and Moraza & Peña (2005) from the Canary Islands, extending the area to the whole of the Palearctic.

Laelaspis humerata (fig. 23)

Gelderland Harderwijk, 52°18'53.6"N 5°40'01.5"E, 19.X.2017, 3 ex.

The Dutch specimen was found in a soil sample (0-5 cm) of a control plot of a liming experiment (Siepel et al. 2019). *Laelaspis humerata* lives in the nests of ants. It is known from in Germany and Latvia (Salmane 2001), where it is found in inland meadows and nests of wild birds.

CONCLUSION

Faraji & Hoekstra (2021) mentioned ten new species of Phytoseiidae to the Netherlands. Two species are synonymized and have to be discarded from the checklist: *Amblyseius isuki* (318) (records transferred to 322 *Amblyseius obtusus*) and *Kampimodromus elongatus* (330) (records transferred to 329 *Kampimodromus aberrans*). The ten new species from Faraji & Hoekstra (2021) are (checklist numbers in brackets): *Kampimodromus florinensis* Papadoulis, Emmanouel & Kapaxidi, 2009 (330a), *K. langei* Wainstein & Arutunjan, 1973 (331a), *Metaseiulus pomi* (Parrott, Hodgkiss &

Schoene, 1906) (331b), *M. smithi* (Schuster, 1957) (331c) (the genus *Metaseiulus* is new to the Netherlands), *Neoseiulus insularis* (Athias-Henriot, 1978) (342a), *Proprioseiopsis gallus* Karg, 1989 (352a), *P. sharovi* (Wainstein, 1975) (354a), *Typhlodromus kerkirae* Swirski & Ragusa, 1976 (363a), *T. suecicus* (Sellnick, 1958) (369a) and *Typhloseiulus peculiaris* (Kolodochka, 1980) (370a). Faraji & Hoekstra (2021) suggested three changes of names: *Amblyseius masseei* (319) to *Aristodromips masseei*, *Typhlodromips longulus* (357) to *Arrenoseius longulus* and *Typhlodromips similis* (358) to *Transeius wainsteini* (as *T. similis* is considered as a nomen dubium).

With the new 23 species and the additions and corrections from Faraji & Hoekstra (2021), the total number of Mesostigmata in the Netherlands is now 489 species. More can be expected when other underrepresented biotopes will be investigated.

DINYCHIDAE

Dinychus Kramer, 1882

12a septentrionalis (Trägårdh, 1943)
Phyllodinychus septentrionalis

TRACHYUROPIDAE

Oplitis Berlese, 1884
Chelonuropoda Sellnick, 1954
Cyllibula Berlese, 1917
Labyrinthuropoda Trägårdh, 1952
Urodiscella Berlese, 1905
Uroplitella Berlese, 1905
Wagenaaria Bloszyk & Athias-Binche, 1986

16a conspicua (Berlese, 1903)
Uroplitella conspicua

TREMATURIDAE

Trichouropoda Berlese, 1916

26a polyctenaphila Wisniewski & Hirschmann, 1986

26b querceti Hirschmann, 1972

UROPODIDAE

Cilliba Von Heyden, 1826

38a athiasae (Hirschmann & Zirngiebl-Nicol, 1969)
Uropoda athiasae

PARASITIDAE

Paragamasus Hull, 1918

82a alpestris (Berlese, 1904)
Gamasus alpestris

Parasitellus Willmann, 1939

95a ignotus (Vitzthum, 1930)
Parasitus ignotus

Pergamasus Berlese, 1904

117a arcuatus Dielmann, 1991

122a digitulus Karg, 1963
Pergamasus cambriensis Bhattacharyya, 1963

127a minorleitnerae Athias-Henriot, 1967

DIGAMASELLIDAE

Dendrolaelaps Halbert, 1915

158a balazyi Hirschmann & Wisniewski, 1982

OLOGAMASIDAE

Hydrogamasus Berlese, 1892

189a littoralis (G. & R. Canestrini, 1881)
Gamasus littoralis

EVIPHIDIDAE

Thinoseius Halbert, 1920

197a spinosus Willmann, 1939

PACHYLAELAPIDAE

Olopachys Berlese, 1910
Olopachylaella Mašán, 2007

221a suecicus Sellnick, 1950

Pachydellus Mašan, 2007

221b hades Halliday, 2001
Pachylaelaps ineptus sensu Karg (1993) nec Hirschmann & Kraus, 1965

Pachylaelaps Berlese, 1886

230a littoralis Halbert, 1915

ASCIDAE
Arctoseius Thor, 1930
259a insularis (Willmann, 1952)
Ereynetes insularis

Cheiroseius Berlese, 1916
289a salicorniae Willmann, 1949

Lasioseius Berlese, 1916
296a mirabilis Christian & Karg, 1992
296b muricatus (C.L. Koch, 1839)
Seius muricatus non Berlese, 1887
Aceoseius muricatus sensu Karg 1993

PHYTOSEIIDAE (all records from Faraji & Hoekstra 2021)
Kampimodromus Nesbitt, 1951
330a florinensis Papadoulis, Emmanouel & Kapaxidi, 2009
331a langei Wainstein & Arutunjan, 1973

Metaseiulus Muma, 1961
Amblydromus Muma, 1961
Clavidromina Muma, 1961
Cursoriseius Tutle & Muma, 1973
Eratodromus Wainstein, 1962
Evansoseius Wainstein, 1962
Leonodromus Muma, 1963
Menaseius Muma, 1963
Paraseiulella Muma, 1961
331b pomi (Parrott, Hodgkiss & Schoene, 1906)
Seius pomi
331c smithi (Schuster, 1957)
Typhlodromus smithi

Neoseiulus Hughes, 1948
342a insularis (Athias-Henriot, 1978)
Dictyonotus insularis
Neoseiulus riparius Kolodochka, 1991

Proprioseiopsis Muma, 1961
352a gallus Karg, 1989
354a sharovi (Wainstein, 1975)
Amblyseius sharovi

Typhlodromus Scheuten, 1857
363a kerkirae Swirski & Ragusa, 1976
369a suecicus (Sellnick, 1958)
Neoseiulus suecicus
Typhlodromus gilvus Wainstein, 1975

Typhloseiulus Chant & McMurtry, 1994
Echinoseius Ribaga, 1904
370a peculiaris (Kolodochka, 1980)
Seiulus peculiaris

DERMANYSSIDAE
Dermanyssus Dugès, 1834
373a quintus Vitzthum, 1921

LAELAPIDAE
Gymnolaelaps Berlese, 1916
399a laevis (Michael, 1891)
Laelaps laevis
Laelaspis Berlese, 1903
416a humerata (Berlese, 19040)
Laelaps humerata

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SAMENVATTING

Eerste aanvulling op de soortenlijst van de mesostigmate mijten van Nederland (Acari: Mesostigmata)

Met het bemonsteren van doorgaans onderbelichte biotopen zijn 23 soorten roofmijten (Acari, Mesostigmata) aan de lijst van de Nederlandse fauna toegevoegd. Deze roofmijten zijn gevonden aan de kust in aanspoelsel en algen, in de strooisellaag van vooral de mineraalrijkere bossen, aan de randen van kleine stroompjes, in vochtig grasland, in elzenbroekbos, in mierennesten, op een kleine bonte specht, op hommels en in vruchtlichamen van zwammen. Het totaal mesostigmate mijten is nu 489.

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