

THE APPEARANCE OF SPIDER MITES (TETRANYCHIDAE) IN PARKS OF POZNAŃ

1 Dobosz R., 1 Skorupska A., 2 Błaszak Cz.

1 Instytut Ochrony Roślin, 60-318 Poznań, Mieczurina 20.

2 Uniwersytet im. A. Mickiewicza, Zakład Morfologii Zwierząt
85-091 Poznań, Szamarzewskiego 89.

ABSTRACT

During the years 1993 and 1994 thirteen species of spider mites (Tetranychidae) were recorded from parks in Poznań. One of the species mentioned is new for Poland. New host plants have been found for: *Eotetranychus uncatus* (Garman), *Eotetranychus carpini* (Oudemans), *Panonychus ulmi* (Koch) and *Tetranychus viennensis* (Zacher).

INTRODUCTION

The research on the spider mites (*Tetranychidae*) has been carried out since the 19th century. The first specimens were found and described at that time as *E. tiliarum* in 1804 by Hermann and *T. urticae* in 1836 by Koch.

Most of them are serious pests for plants, therefore they are an object of study for gardeners and foresters.

The research on spider mites living on plants was carried out and their biological processes were also studied.

The purpose of the present work was to describe the occurrence of *Tetranychidae* on leaves of trees and shrubs in chosen parks in Poznań.

MATERIAL AND METHODS

The samples were taken once a year from parks in Poznań, in August 1993 and 1994. A single sample consisted of affected leave (20-30) picked off up to a height of 2m and placed in polythene bags. The sealed bags were then taken to the laboratory and placed in a refrigerator. The mites were collected using a magnifying glass. In the case of conifes they were shaken out of the branches onto a paper underneath. The material was preserved in Oudemans fluid, on slides. The specimens were identified according to the keys by Boczek and Kropczyńska (1964).

RESULTS

Thirteen specimens belonging to six orders were found in twelve parks in Poznań. The new species to Polish fauna, *Eotetranychus fagi*, was described. (Table 1). New host plants for spider mites have been

found: *Aesculus hippocastanum* L., and *Alnus incana* Moench for *E. uncatus*, *Alnus incana* for *E. carpini*, and *P. ulmi*, and *Sorbus intermedia* Pers. for *T. viennensis*.

Tab.1 Tetranychidae species found in green areas of Poznań in 1993 and 1994

Nazwa gatunku Species	1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Picea omorica</i> Purk								+					
<i>P. abies</i> Link.								+					
<i>P. glauca</i> Voss								+					
<i>Thuja plicata</i> Donn							+						
<i>Th. occidentalis</i> L.								+					
<i>Th. orientalis</i> L.								+					
<i>Abies grandis</i> Lindl.								+					
<i>Chamaecyparis lawsonian</i> Parl.								+					
<i>Juniperus chinensis</i> L.								+					
<i>J. squamata</i> Buch-Ham.								+					
<i>Larix eurolepis</i> Henry.							+						
<i>L. decidua</i> Mill.							+						
<i>Tilia cordata</i> Mill.				+									
<i>T. platyphyllos</i> Scop.				+									
<i>Aesculus hippocastanum</i> L.				+									
<i>Quercus petrea</i> Liebl.					+								
<i>Q. robur</i> L.					+			+					
<i>Robinia pseudoacacia</i> L.			+							+		+	
<i>Carpinus betulus</i> L.		+											
<i>Ulmus campestris</i> L.										+			
<i>Salix fragilis</i> L.										+	+		
<i>S. daphnoides</i> Vill.		+	+								+		
<i>Betula maximoviczi</i> Regel.					+						+		
<i>Populus alba</i> L.			+										
<i>Acer platanoides</i> L.		+			+								
<i>A. negundo</i> L.					+								
<i>Alnus incana</i> Moench.	+			+				+					
<i>Sorbus intermedia</i> Pers.													
<i>Crateagus oxyacantha</i> L.													+
<i>Fagus silvatica</i> L.							+						
<i>Buxus sempervirens</i> L.													+

1-*Eotetranychus carpini*, 2-*E. populi*, 3-*E. tiliarum*, 4-*E. uncatus*, 5-*E. fagi*, 6-*Oligonychus larici*, 7-*O. pritchardi*, 8-*O. ununguis*, 9-*Panonychus ulmi*, 10-*Schizotetranychus schizopus*, 11-*Tetranychus urticae*, 12-*T. viennensis*, 13-*Eurytetranychus buxi*.

DISCUSSION

The Tetranychidae is an important group for plant protection. The studies carried out on spider mites referred to damages caused in gardening, fruit growing and forestry, as well as their control. The research on mites living on plants in Poland were undertaken by Boczek and Kropczyńska (1964), who recorded and described nineteen species of Tetranychidae, along with the representation of *Tenuipalpidae*, *Hemisarcoptidae* and *Phytoseiidae*. *O. larici* (Boczek 1966), *O. pritchardi* (Kropczyńska-Linkiewicz 1984), *Tetranychopsis horridus* (Skorupska 1993) and *Eurytetranychus buxi* (Labanowski 1993) were reported later. Nine of the species described by Boczek and Kropczyńska (1964) were confirmed during this study, together with *O. larici*, *O. pritchardi* as well as *E. fagi* found for the first time in Poland. Only the spider mites living on park trees and shrubs were included into this paper. During the present study fruit-trees and herbaceous plants were also taken into consideration. *T. urticae*, considered as a polyphagous species (Boczek 1980), was found on five plants. *E. uncatus* was infesting leaves of seven host plants and can also be classified as a polyphagous pest.

In accordance with literature data, *O. umunguis* was found only on coniferous trees: *Picea*, *Thuja*, *Abies*, *Juniperus*, whereas *O. larici* only on *Larix*. During a comparative analysis, new host plants have been reported for: *E. uncatus*, *E. carpini*, *P. ulni* and *T. viennensis*.

CONCLUSIONS

1. Thirteen species of the *Tetranychidae* family were found during the present study.
2. The most often reported *T. urticae* was found on five hosts, while *E. uncatus* occurred on seven host plants. They both are considered as polyphagous pests.
3. Four spider mite species were found on new host plants.
4. *E. fagi* was reported in Poland for the first time.

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DOBOSZ, SKORUPSKA, BLASZAK

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