

## *Bryobia cyclamenae* sp. nov. of the Bryobiinae (Acari: Tetranychidae) from Greece

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(With 15 figures)

### Abstract

The females and deutonymphs of *Bryobia cyclamenae* sp. nov., collected from leaves of *Cyclamen graecum* Link, are described and illustrated.

### Introduction

During studies undertaken by the authors on Greek Bryobiinae, several species were found to be new to science (Hatzinikolis & Emmanouel 1990, 1991, 1993 and 1996 in press; Hatzinikolis & Panou 1996, 1997: in press). The present work deals with *Bryobia cyclamenae* sp. nov., collected from leaves of *Cyclamen graecum* Link, a wild plant, in *Abies cephalonica* forest of Parnitha mountain, Co. Attiki, Greece. The leaves of the host showed extensive damage as a result of the mite feeding.

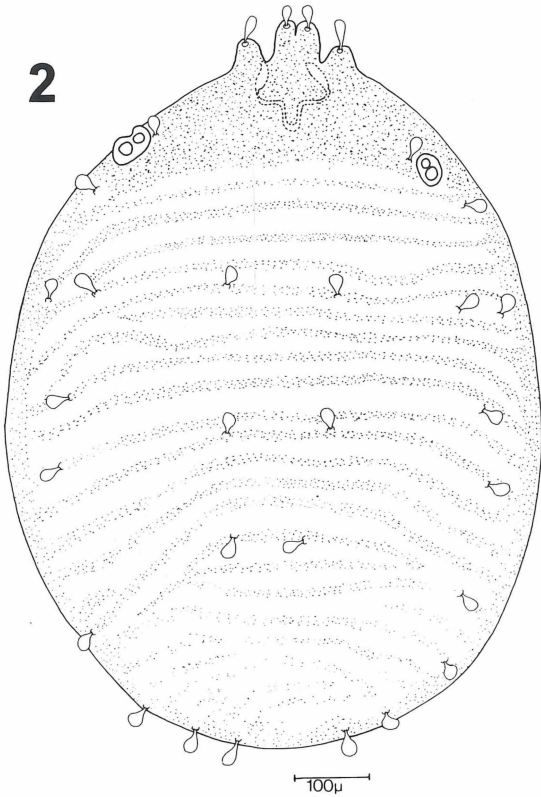
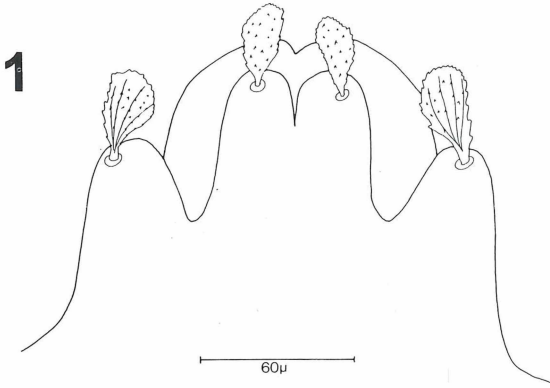
### Material and Methods

Methods of collecting, clearing and mounting are described in Hatzinikolis (1982). For the description of new species the terminology of Grandjean (1939), Oudemans (1928) and Pritchard and Baker (1955) is used. The type material is deposited in the collection of Acarology Laboratory of the Agricultural Research Centre of Athens, Greece and in the Zoological Museum of Hamburg (ZMH), Germany. All measurements are given in micrometers ( $\mu\text{m}$ ).

### Description of the species

*Bryobia cyclamenae* sp. nov.

FEMALE - Dimensions of holotype (measurements in parentheses are variations in paratypes): length of body (including gnathosoma) 1052 (1012-1070), length (excluding gnathosoma) 1000 (990-1015), breadth 709 (680-716). Length of legs: I 1200 (1190-1231); femur 347 (300-359), genu 135 (134-139), tibia 216 (207-218), tarsus 165 (162-171); leg II 545 (540-562); III 589 (587-599); IV 727 (724-745).



Figs 1-2. *Bryobia cyclamena* sp. nov., female: 1. propodosomal lobes, 2. dorsum.

**Gnathosoma** - Stylophore medioidistally (Fig. 1), 131 long and 92 wide, notched anteriorly; peritreme anastomosing, ends in a 53 long and 14 wide enlargement (Fig. 3); palpal claw bidental (Fig. 4); palptarsus short and thick, 19 long and 9 wide, not longer than palpal claw, with 3 normal setae, a solenidion 18 long and 3 eupathidia 20, 11, 14 in length.

**Dorsum** (Fig. 2) - Without anterior angulations; propodosomal lobes strongly developed, broadly mammelform, with a very narrow incision between anterior lobes and wide ones between anterior and posterior lobes; first ( $v_1$ ) and second ( $v_2$ ) pair of propodosomal setae (Figs 5, 6) spatulate-serrate, 27 long and 13 wide and 38 long and 16 wide respectively; rest of dorsal setae spatulate-serrate in low tubercles, 29-33 long and 21-24 wide (Fig. 7); dorsal integument anteriorly granulate; rest of idiosoma finely granulated only with transverse striae, becoming progressively curved to irregular towards the end of the body (Fig. 2).

**Legs** - Leg setae formula and solenidia (in parentheses) as follows: coxae 2-1-1-1, trochanters 1-1-1-1, femora 23-11-5-5, genua 8-6-5-5, tibiae 18(1)-9-9-9, tarsi 20(4)+2 dupl.-15(1) or 16(1)+1 dupl.-14(1)-14(1); associated tactile setae on legs III (Fig. 8) and IV (Fig. 9) about 3/5 of the solenidia, 31 with 52 and 29 with 56 respectively; true claws unciniate, with one pair of tenent hairs and empodia pad-like narrowed distally (Figs 8, 9, 10, 11); empodium I about 1/4 the length of true claws with one pair of tenent hairs (Fig. 11); empodia II, III, IV about 6/7, 5/8, 6/7 the length of true claws and each provided with 7, 8 and 10 pairs of tenent hairs respectively (Figs 8, 9, 10).

**MALE, LARVA and PROTONYMPH** - Unknown.

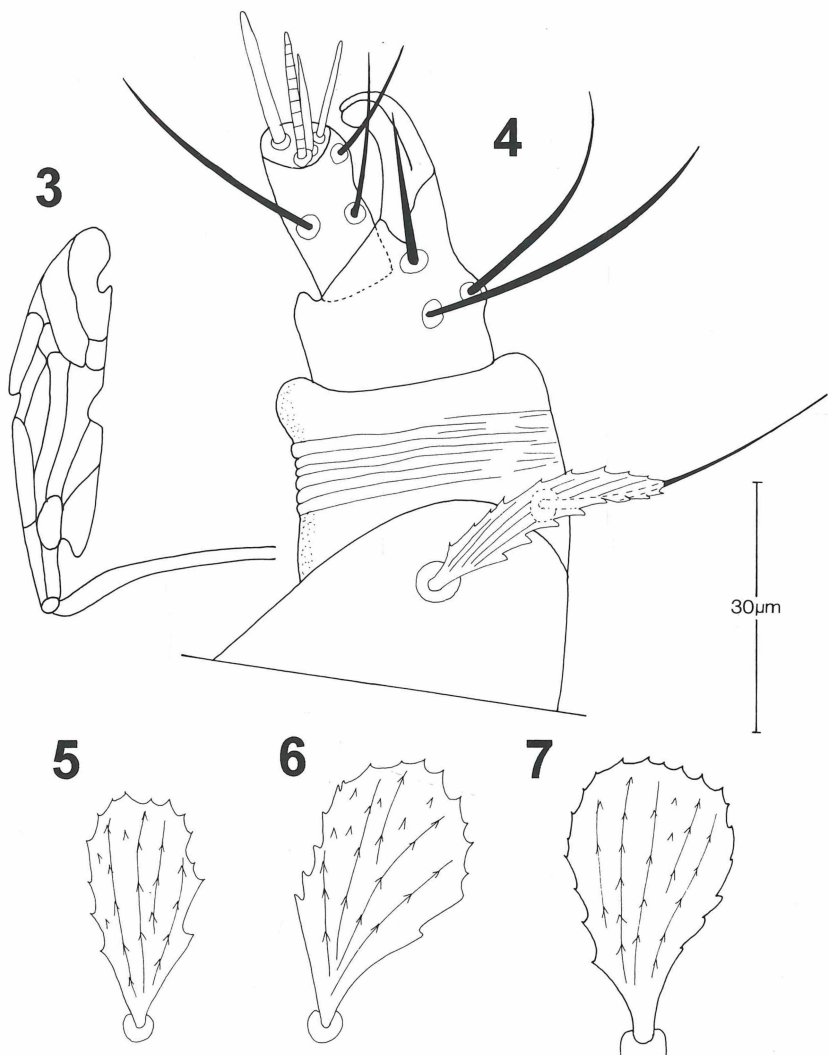
**DEUTONYMPH** - Dimensions: length of body (including gnathosoma) 524, length (excluding gnathosoma) 441, breadth 425. Length of legs (from tarsus to femur): I 321 (femur 121, genu 42, tibia 68, tarsus 147); II 165; III 219; IV 209.

**Gnathosoma** - Stylophore, peritreme, palps and palpal claw resembles those of the adult female but are not so well developed and the incision between the anterior lobes is not narrow (Fig. 12).

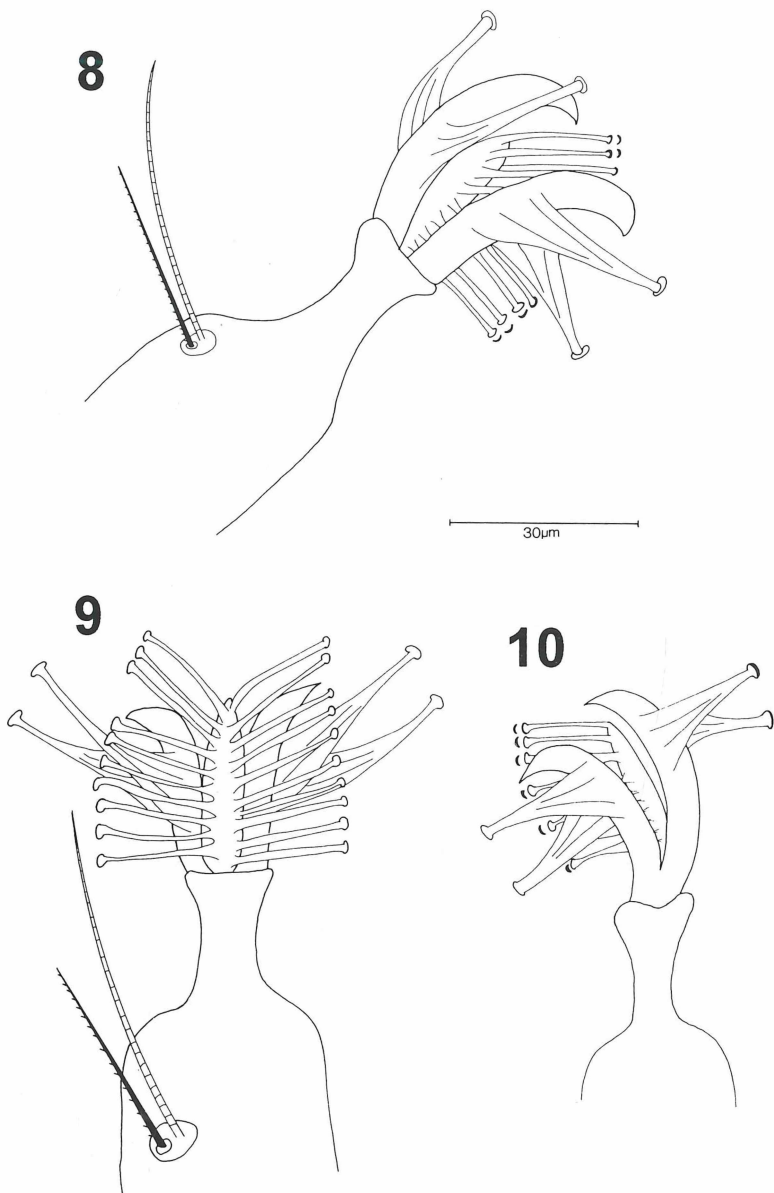
**Dorsum** (Fig. 12) - Propodosomal lobes not so well developed. Propodosomal setae  $v_1$  and  $v_2$ , slender, spatulate, serrate and curved, 14,4 x 5 and 33,5 x 5,2 respectively (Fig. 13, 14); rest of dorsal setae set on tubercles, slender, spatulate, serrate, 35-37 long and 8-9 wide (Fig. 15), except the third ( $sc_1$ ), fourth propodosomal ( $sc_2$ ) and humeral ( $c_3$ ) which are 30 x 32 long and 7 x 8 wide; integument of propodosoma densely granulate anterolaterally and smooth centrally; hysterosoma sparsely granulate with an area consisting with more or less round striae.

**Legs** - Leg setae formula and solenidia (in parentheses) as follows: coxae 2-1-1-1, trochanters 1-1-1-1, femora 3-3-2-2, genua 4-3-2-2, tibiae 5(1)-5-5-5, tarsi 10+2 dupl.-8+1 dupl.-8-6; true claws slender, unciniate, bearing a pair of tenent hairs; empodium I pad-like, one-fourth the length of true claws, with one pair of tenent hairs; empodium II pad-like, one-third the length of true claws and with 2 pairs of tenent hairs; empodium III and IV pad-like, narrowed distally about half the length of true claws and with 4 pairs of tenent hairs; femur I with one long seta.

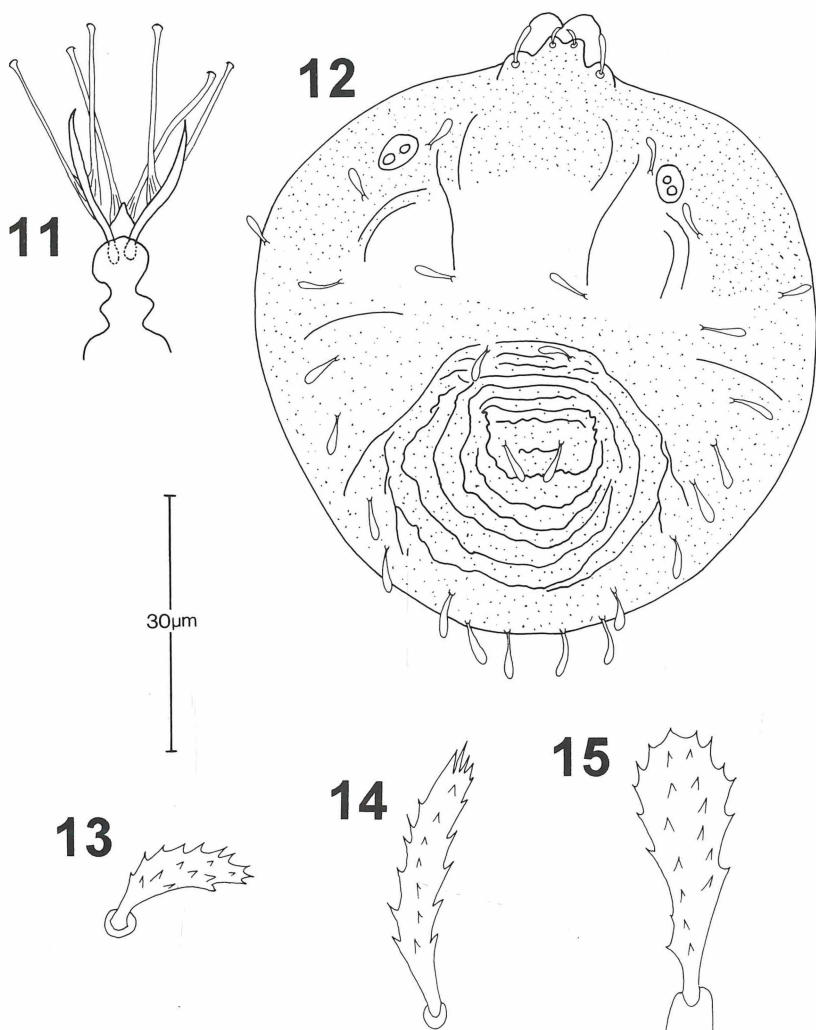
**TYPE MATERIAL** - Holotype female, 10 female paratypes and one deutonymph paratype, 15 April 1195, Parnitha mountain, Co. Attiki, Greece (Code No 14/95). The material was collected by Dr. Emmanouel, Prof. of Agricultural University of Athens, from *Cyclamen graecum* Link.



Figs 3-7. *Bryobia cyclamenae* sp. nov., female: 3. distal part of peritreme, 4. palp, 5. first propodosomal seta ( $v_1$ ), 6. second propodosomal seta ( $v_2$ ), 7. dorsal body seta.



Figs 8-10. *Bryobia cyclamেনae* sp. nov., female: 8. extremity of tarsus III with duplex seta and apotele, 9. extremity of tarsus IV with duplex seta and apotele, 10. extremity of tarsus II and apotele.



Figs 11-15. *Bryobia cyclamena* sp. nov, female: 11. extremity of tarsus I and apotele; deutonymph: 12. dorsum, 13. first propodosomal seta ( $v_1$ ), 14. second propodosomal seta ( $v_2$ ), 15. dorsal body seta.

Three paratypes (females) are housed in Hamburg (ZMH: Reg. No. A18/96).

**ETYMOLOGY** - The name of this new species is derived from the scientific name of the host-plant.

### Remarks

*Bryobia cyclamenae* sp. n. is characterized by the propodosomal lobes which are all mammelform (teat-like) with very narrow incision between the anterior lobes, combined with the anteriorly notched stylophore, the dorsal setae of the female which are set on small tubercles and the chaetotaxy of genera I-IV: 8-6-5-5. Dorsal setae of the deutonymph are slender, spatulate, serrate and set on tubercles; chaetotaxy of genera I-IV: 4-3-2-2.

The new species resembles *Bryobia pseudorubrioculus* Smiley & Baker, 1995, in having mammelform (teat-like) propodosomal lobes. Besides the different leg chaetotaxy, the main differences are given below.

<i>Bryobia pseudorubrioculus</i> Smiley & Baker	<i>Bryobia cyclamenae</i> sp. nov.
1. Caudal pore dorsal	1. Caudal pore ventral
2. Wide incision between anterior propodosomal lobes	2. Very narrow incision between anterior propodosomal lobes
3. Tarsus IV with duplex seta separated	3. Tarsus IV with duplex seta adjacent
4. Length of idiosoma 644	4. Length of idiosoma 1000 (990-1015)

### Zusammenfassung

Eine neue Milben-Art aus der Subfamilie Bryobiinae (Tetranychidae), *Bryobia cyclamenae* sp. n. von den Blättern von *Cyclamen graecum* Link vom Berg Parnitha (Kreis Attiki: Griechenland), wird beschrieben.

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