

Description of *Panonychus caricae* New Species on Fig-Trees in Greece (Acari: Tetranychidae)¹

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ABSTRACT

The female and male of *Panonychus caricae*, new species, are described and illustrated. This mite was found on leaves of fig-trees in regions of Central Greece.

Introduction

Panonychus caricae new species is described and illustrated herein. This mite was found exclusively on leaves of isolated fig-trees (*Ficus carica* Lin.) in Attiki, Biotia, Evia and Phthiotis districts of Central Greece. All stages of development of the mite were found. The terminology of Pritchard and Baker (1955) and Meyer (1974) is used for the taxonomic description. All measurements are given in μm .

Description

Panonychus caricae n. sp.

Dimensions, colour and shape. Body length of female 330, including rostrum 390; width 288. Body about subspherical in shape. Newly hatched larvae and nymphs pinkish, becoming dark green pinkish when feeding. Color of propodosoma in newly molted females pink reddish. Later, dark areas appear caused by food in digestive tract, and finally the mites become violet or black coloured. Dorsal setae on prominent tubercules, which have the same colour as the rest of the integument except for whitish tips. Body length of male 283, including rostrum 345; width 198. Body oval-shaped. Colour pink-reddish. Eggs red, nearly spherical, somewhat flattened, radially striate

dorsally and with a dorsal stripe.

FEMALE

Dorsum (Fig. 1). Dorsal strong body setae (Fig. 1a) linear-lanceolate, long, distinctly setose, on prominent strong tubercules. Hysterosomal setae more or less in transverse rows. Prosomal setae 55, 163 and 100 in length; notocentral setae 166, 178, 149, 87 and 42 in length; dorsolateral hysterosomal setae 158, 169, 118 and 44 in length; humeral setae 89. Striation of hysterosoma between setae D_1 transverse (Fig. 2) and lobes of dorsum variable in shape, rounded distally. Peritreme ends in a simple bulb (Fig. 3).

Gnathosoma (Fig. 4). Stylophore anteriorly with inconspicuous emarginations. Length and width of palpatarsus subequal. Terminal sensillum slightly longer than broad, 11 and 9 respectively. Dorsal sensillum with length about twice that of terminal sensillum.

Legs (Fig. 5). Counts for the setae and solenidia on legs I-IV are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 8-6-3-1; genua 5-5-3-3; tibia 7(1)-5-5-5; tarsi 12(1) + 2 dupl. -11(1) + 1 dupl. -9(1)-9(1). Tarsus I bears 3 tactile setae and one solenidion proximal to duplex setae.

Venter. Ventrally hysterosomal striae with broad, rounded or oval lobes; propodosomal

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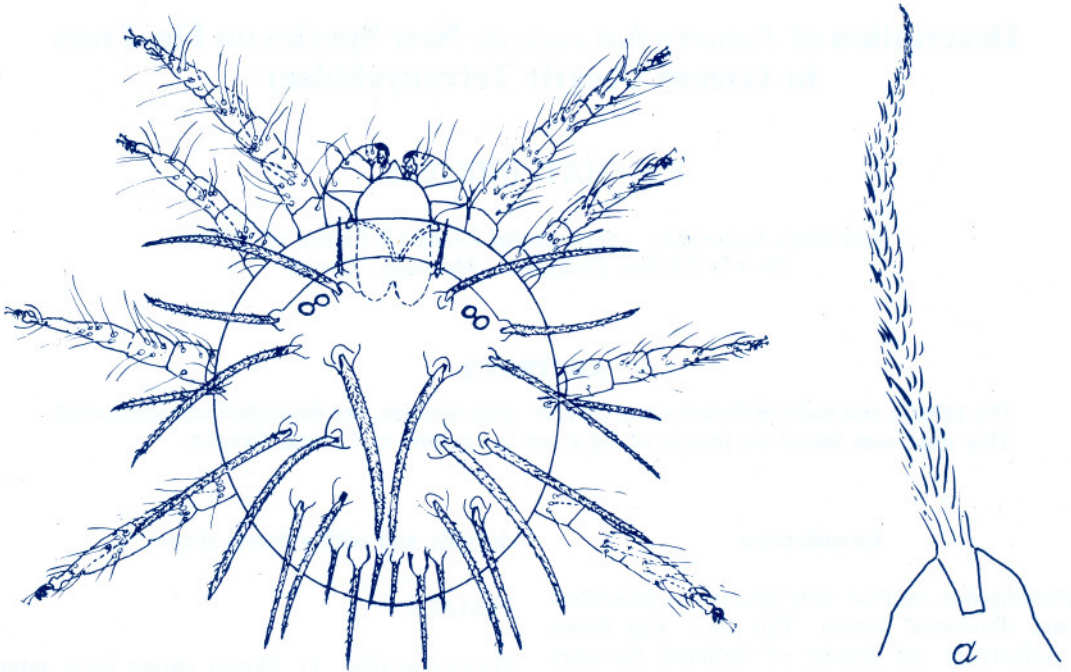


FIG. 1. *Panonychus caricae*, n. sp., holotype, female, dorsal aspect; (a) idiosomal seta.

striae with few wide lobes.

Genital flap (Fig. 6). With curved striae and area anterior to flap with longitudinal striae.

MALE

Dorsum (Fig. 7). Chaetotaxy and setae of male resembles that of female. Dorsal setae strong, on prominent tubercles. Prosomal setae

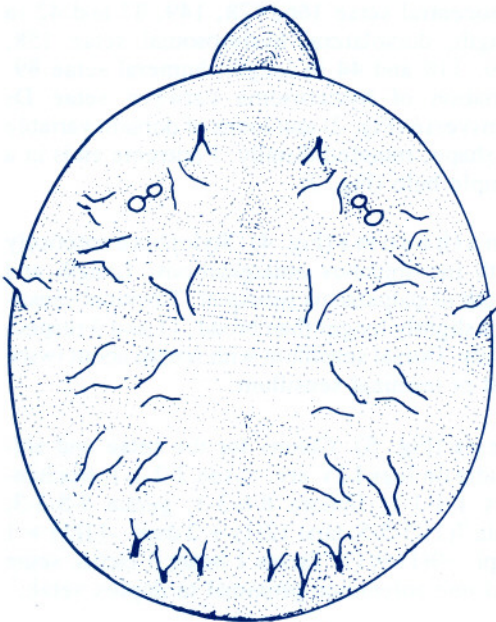


FIG. 2. *Panonychus caricae*, n. sp., holotype, female, dorsal striae.

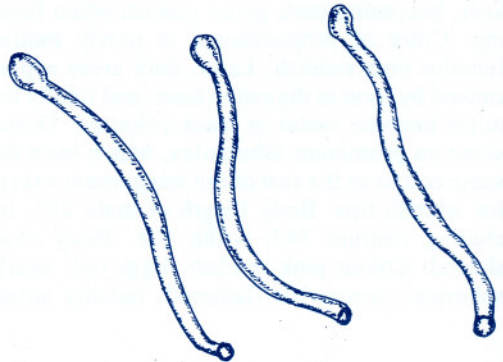


FIG. 3. *Panonychus caricae*, n. sp., female, peritremes.

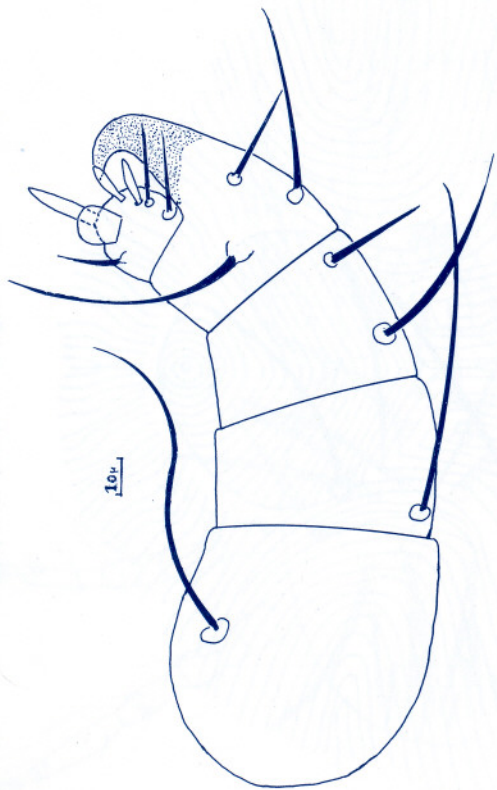


FIG. 4. *Panonychus caricae*, n. sp., holotype, female, palpus.

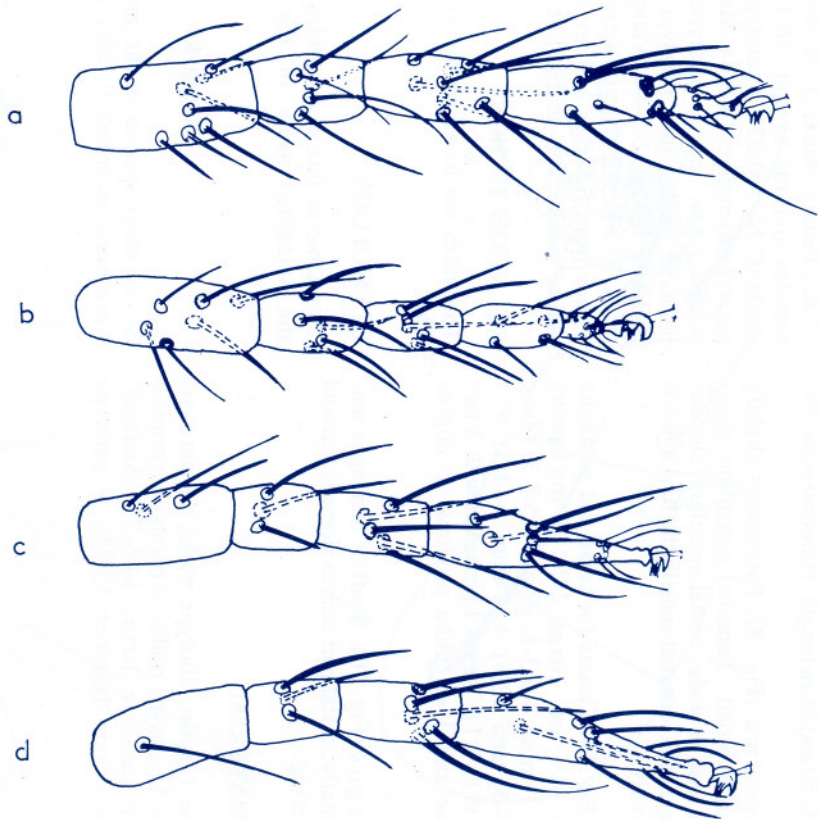


FIG. 5. *Panonychus caricae*, n. sp., holotype, female, legs: (a) leg I, (b) leg II, (c) leg III, (d) leg IV.

65, 144 and 82 in length; notocentral setae 130, 156, 71, 51 and 26 in length; dorsolateral setae 130, 135, 59 and 26 in length. Humeral setae 89.

Gnathosoma (Fig. 8). Palpatarsus slightly longer than broad. Terminal sensillum about twice as long as wide; dorsal sensillum slender and longer than terminal sensillum, 10.4 and 6.6 respectively.

Legs (Fig. 9). Counts for setae and solenidia on legs I-IV are: coxae 2-2-1-1; trochanters 1-1-1-1; femora 8-6-3-1; genua 5-5-3-3; tibiae 7(4)-5-5-5; tarsi 12(3) + 2 dupl. -11(1) + 1 dupl. -9(1)-9(1). Tarsus I provided with 3 tactile setae and 3 solenidia proximal to duplex setae.

Aedeagus (Fig. 10). Shaft of aedeagus narrows distally, distal part curves dorsad, sigmoid and tapering.

TYPE MATERIAL

Holotype female, allotype male, 11 paratype females, 5 paratype males, 2 paratype nymphae and one paratype larva, 14-6-75, Atalandi, Phthiotis (Code Number 15/75); 9 paratype

females and 3 paratype males, 24-10-82, Karystos, Evia (C.N. 82/82); one female, 15-11-82, Peania, Attiki (C.N. 99/82); 3 paratype females and one nymph, 16-11-82, Maroussi, Attiki (C.N. 100/82); 9 paratype females and 5 paratype nymphae, 19-6-84, Marcopoulo, Attiki (C.N. 1/84) and 4 paratype females, one paratype male, one paratype nymph and 2 paratype larvae, 6-8-84, Vathy, Avlida-Biotia (C.N. 23/84). All material were collected by the author from fig-trees and are deposited in the author's collection on 28 slide mounts.

RELATION TO HOST

The mites are found on the ventral side of the leaf.

ETYMOLOGY

The name of this new species is derived from the scientific name of the fig-tree (*Ficus carica*).

Remarks

Seven other species of the genus *Panonychus* have been recorded: *P. ulmi* (Koch 1836), *P.*

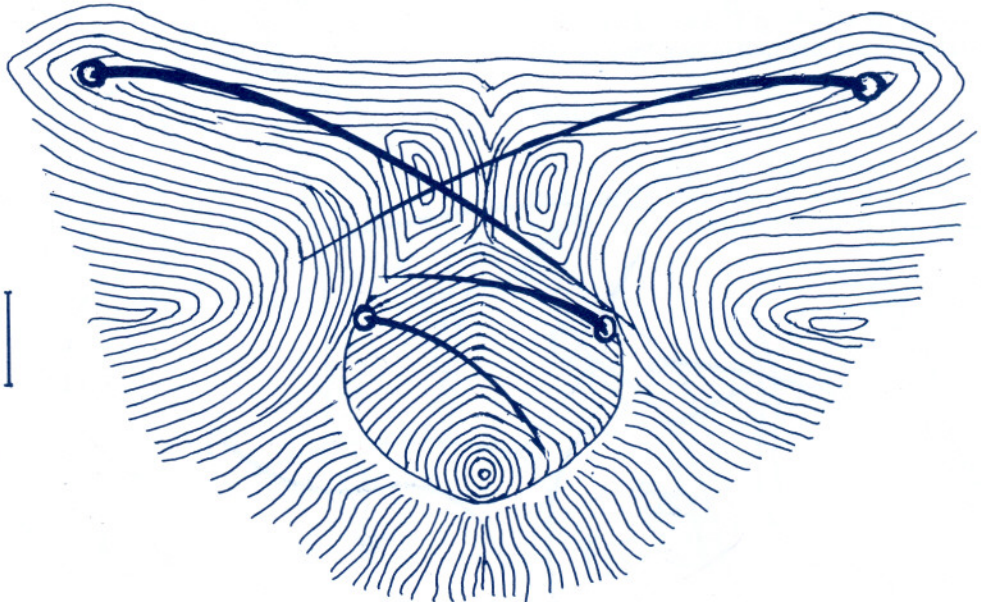


FIG. 6. *Panonychus caricae*, n. sp., holotype, female, genital flap.

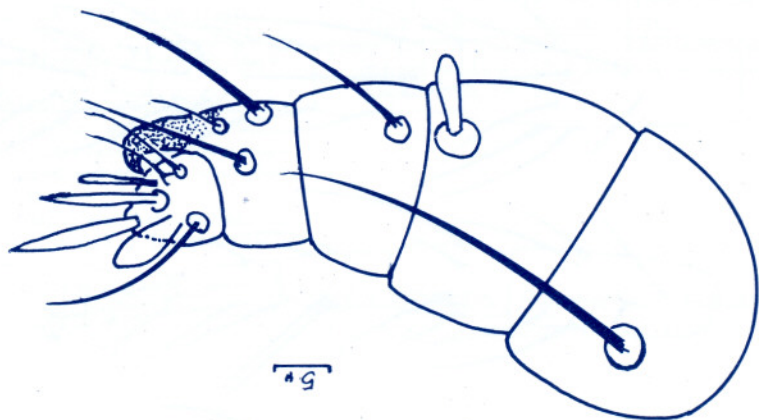


FIG. 8. *Panonychus caricae*, n. sp., male, palpus.

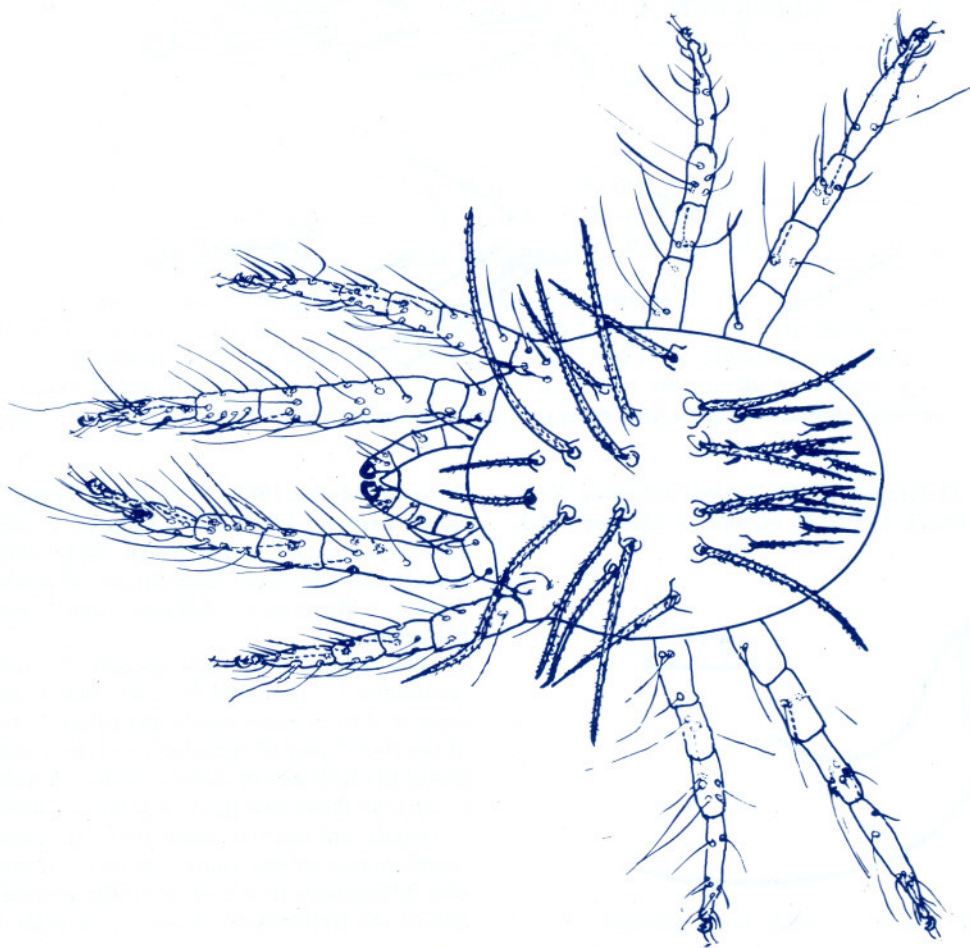


FIG. 7. *Panonychus caricae*, n. sp., male, dorsal aspect.

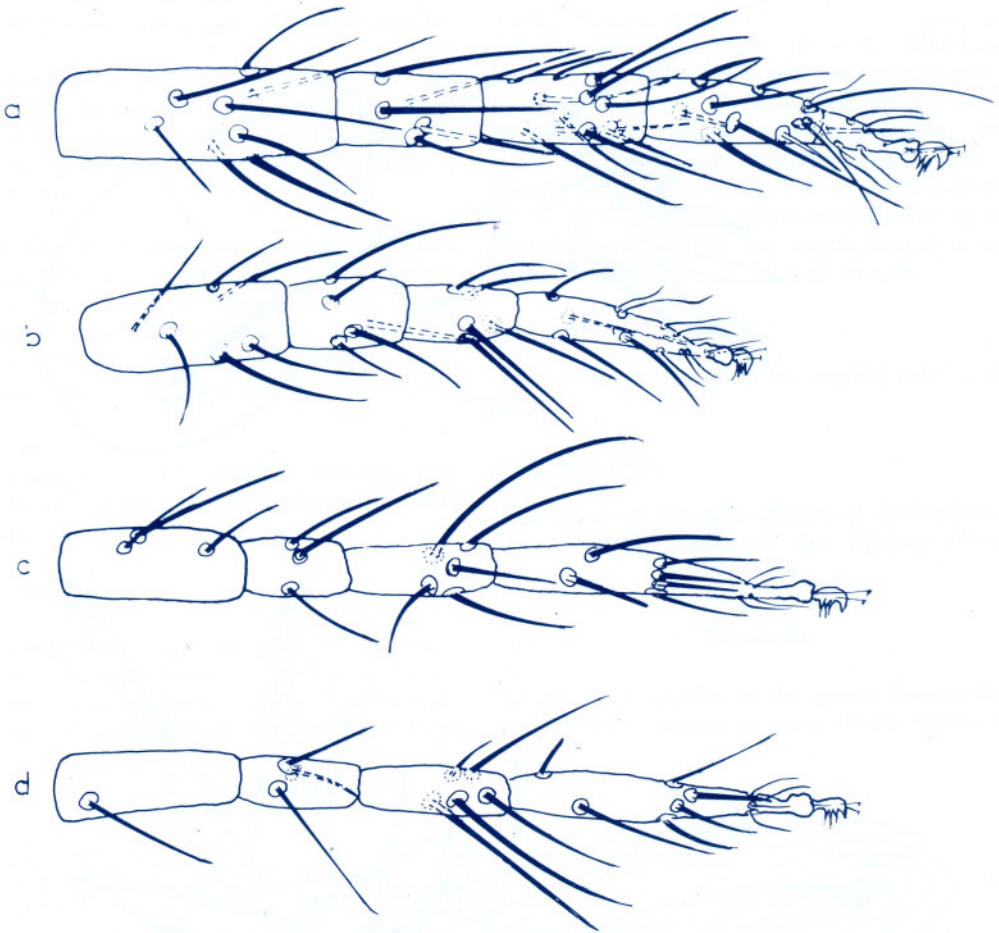


FIG. 9. *Panonychus caricae*, n. sp., male, legs: (a) leg I, (b) leg II, (c) leg III, (d) leg IV.

citri (McGregor 1916), *P. hadzhibejliae* Reck 1947 (Reck 1959), *P. elongatus* Manson 1963,

P. caglei Mellot 1968, *P. globosus* Tseng 1974 and *P. akitanus* Ehara 1978. In Greece, only *P. ulmi* is present on apple, peach, pear, almond, walnut and other trees from Epirus, Macedonia, Thrace, Magnissia, Arkadia and recently Phthiotis.

The female of the new species, *P. caricae*, resembles *P. ulmi* and *P. citri*, but it can be separated from those two by the relative lengths of the fourth pair of dorsolaterals (outer sacrals) and of the fifth pair of dorsocentrals (clunals). In *P. caricae* these two pairs of setae are subequal in length and each is about half the length of fourth dorsocentrals (inner sacrals). There are also differences in the striae of the genital flap and of the hysterosoma between of setae D₁.

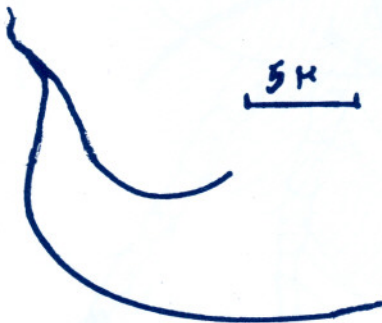


FIG. 10. *Panonychus caricae*, n. sp., aedeagus.

References

- Ehara, S. 1978. A new genus, a new subgenus of Spider Mites from Northern Japan (Acarina: Tetranychidae). J. Fac. Educ. Tottori Univ. 28: 87-93.
- Koch, C.L. 1836. Deutsche Grustacea, Myriopoda, Arachnida, Fasc. 1:11.
- McGregor, E.A. 1916. The citrus mite named and described for the first time. Ann. Ent. Soc. Am. 9: 284-290.
- Manson, D.C.M. 1963. Mites of the families Tetranychidae and Tenuipalpidae associated with citrus in South East Asia. Acarologia 5: 351-364.
- Mellott, J.L. 1968. *Panonychus caglei*, new species, the raspberry red mite (Acarina: Tetranychidae). Acarologia 12: 230-234.
- Meyer, M.K.P. 1974. A revision of the Tetranychidae of Africa (Acari). Ent. Mem. No. 36 Dept. Agric. Techn. Serv. Repub. S. Afr.: 1-291.
- Pritchard, A.E. and E.W. Baker. 1955. A revision of the spider mite family Tetranychidae. Pacif. Coast Ent. Soc. Mem. Ser. 2: 1-472.
- Reck, G.F. 1959. A revision of Tetranychidae. Soobsh. Akad. Nauk Gruz. S.S. R.: 45-48.
- Tseng, Y. 1974. Systematics and distribution of phytophagous and predatory mites on grape in Taiwan. J. Agr. Assoc. China, 88: 56-73.

KEY WORDS: *Panonychus*, Tetranychidae, Fig-tree, *Panonychus caricae* Hatz.

Περιγραφή του Νέου Είδους *Panonychus caricae* της Συκιάς στην Ελλάδα (Acari: Tetranychidae)

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ΠΕΡΙΛΗΨΗ

Έχει περιγραφεί και σχεδιαστεί το θηλυκό και το αρσενικό του νέου είδους *Panonychus caricae*. Το νέο είδος βρέθηκε πάνω σε μεμονωμένα δένδρα συκιάς στην Κεντρική Ελλάδα (Αττική, Βοιωτία, Εύβοια, Φθιώτιδα). Στη χώρα μας, ένα μόνο είδος του γένους *Panonychus* είχε μέχρι τώρα σημειωθεί, το *Panonychus ulmi*, το οποίο παρουσιάζει μεγάλη οικονομική σημασία στα οπωροφόρα (αχλαδιά, δαμασκηνιά, κορομηλιά, μηλιά, ροδακινιά).