

## Two new species of *Neohydatothrips* JOHN, 1929 from Spain (Thysanoptera, Thripidae)

FOR

JACINTO BERZOSA.

After the work of BHATTI (1973) on the genus *Sericothrips* HALIDAY, 1836, sensu latu, ZUR STRASSEN (1980) published a study of the West-Palaearctic species of the genera *Sericothrips* HALIDAY, 1836; *Hydatothrips* KARNY, 1913, and *Neohydatothrips* JOHN, 1929. By means of these papers, I reviewed the specimens of *Sericothrips* from Spain which I had included in my Ph. D. thesis. The species which I recorded (BERZOSA, 1982) as *Sericothrips circumfusus* PRIESNER, 1924, revealed most recently to be a new species: *Neohydatothrips zurstrasseni* n. sp.

On the same way, the specimens proceeding from Spanish sables clump of *Juniperus thurifera* L., belong to a new species as well: *Neohydatothrips hispanicus* n. sp.

I acknowledge Dr. ZUR STRASSEN his help and interest in the realization of this paper.

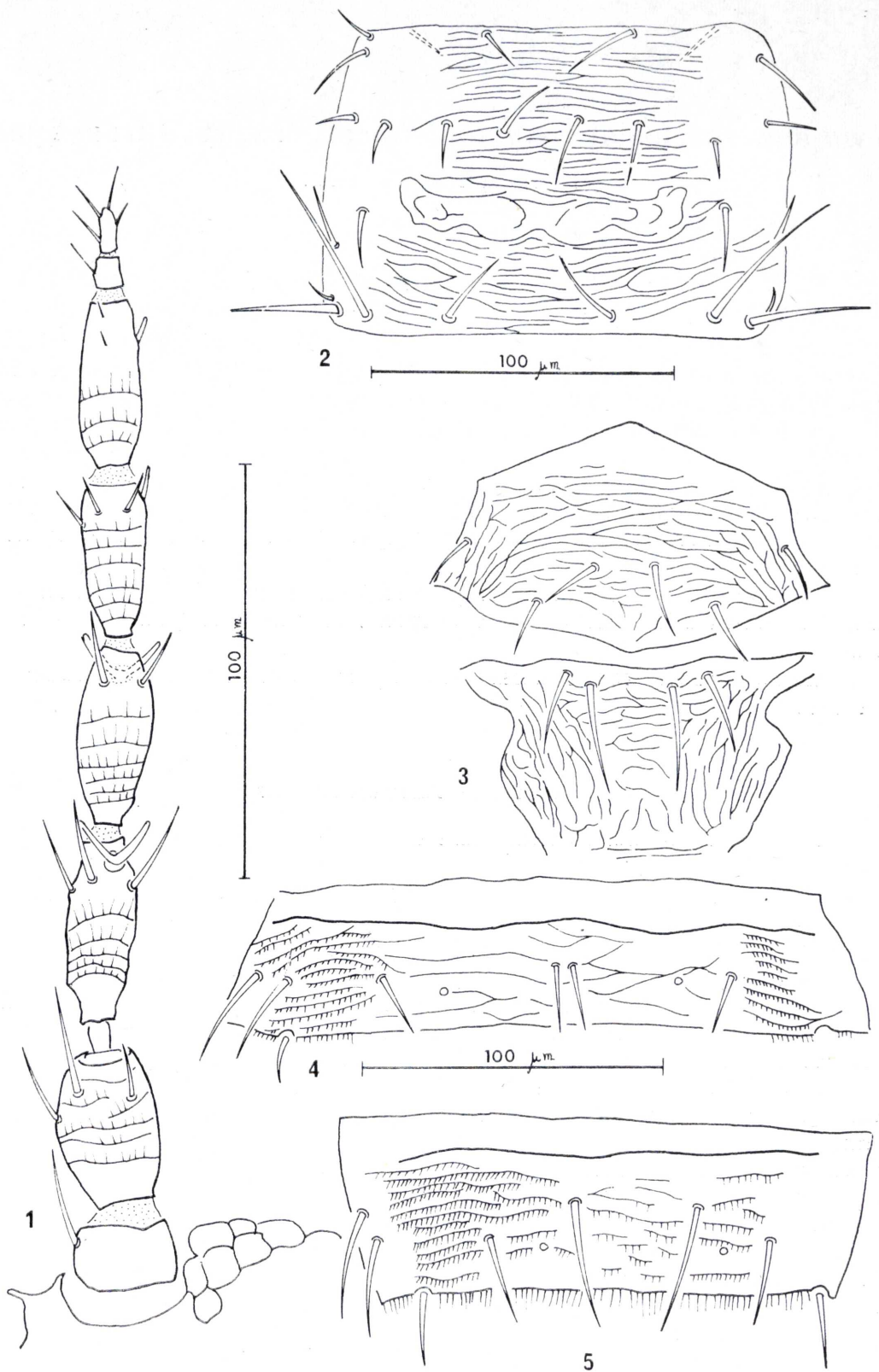
### *Neohydatothrips zurstrasseni* n. sp.

*Sericothrips circumfusus* PRIESNER; BERZOSA, 1982.

*Diagnosis*.—Body yellow-greyish. Without differentiated pronotal blotch. Antennae bicoloured. Tergites II-VI with a comb on the posterior margin, only, laterally. Tergites VII-VIII laterally with a complete comb of microtrichia on the posterior margin.

*Description*.—♀ (macropterous): Body yellow-greyish. Head and pronotum yellow brown, mesonotum yellow brown except the central area which is very pale, metanotum from yellow to brown. Abdomen pale yellow, tergites II-VII with dark subbasal costa and two small dark areas placed behind it laterally. Legs yellow brown. Wings hyaline or slightly darkened. Antennae bicoloured, segments I and II yellow greyish pale, III the same colour except base and apex brown greyish, IV in basal half yellow greyish, rest brown greyish. V-VIII brown greyish.

Head clearly transverse, length (width): 74-93 (148-163)  $\mu\text{m}$ . Sides of head almost parallel, finely serrated. Cheeks convex. Eyes slightly bulging. Occiput with sculpture of transverse anastomosing lines. Two pairs of anterocellar setae, the outer pair 41-46  $\mu\text{m}$  long, longer than the inner one (30-35  $\mu\text{m}$  long). One pair of interocellar setae, small, placed behind the fore ocellus. Five pairs of postocular setae, placed irregularly, 3 pairs in the inner ocular angle and 2 pairs in the outer one. The innermost pair of the 3 first pairs is the longest 37-41  $\mu\text{m}$ . Mouth cone 154-163  $\mu\text{m}$  long, reaching the mesosternum.



Figs. 1-5.—*Neohydatothrips zurstrasseni* n. sp., paratype: 1) right antennae; 2) pronotum; 3) meso and metanotum; 4) tergite III; 5) tergite VII.



Antennae (Fig. 1) short, total length 254-269  $\mu\text{m}$ . Length (Width) in  $\mu\text{m}$  of antennal segments, I 18.5 (26), II 37-39 (26-30), III 52-55.5 (18.5), IV 42.5-44.5 (18.5), V 37-41 (16.5-18.5), VI 42.5-44.5 (15-17), VII 7.5-9.5 (7.5), VIII 13-15 (5.5). Segment I cylindrical, wider than long; II barrel shaped; III with diverging sides towards apex which is narrowed; IV narrowed at both ends; V narrow at base and with parallel sides; VI getting narrow from base to apex; VII truncated conical; VIII getting narrow towards apex. Segments III and IV with forked sense cones, V and VI with simple and short cones. Segments with rings of microtrichia.

Pronotum (Fig. 2) transverse, 97-113 (162-170)  $\mu\text{m}$  in length (width). Fore margin a little concave in its center. Sides convex. Disc with delicate sculpture of transverse anastomosing lines. One pair of setae at the fore angles. Two pairs of setae at the fore margin and 1 submarginal pair more laterally. Five pairs of discal setae 26-28  $\mu\text{m}$  long, 4 pairs of which are arranged in a transverse central line. Two pairs of long setae at the posterior angles of pronotum, the outer pair 48  $\mu\text{m}$  long, the inner pair 55.5-59  $\mu\text{m}$  long. Posterior margin with 1 pair of submarginal setae 30-33  $\mu\text{m}$  long. Laterally with 2 pairs of posteroangular setae.

Pterothorax (Fig. 3) almost square shaped, 137-153 (139-158)  $\mu\text{m}$  in length (width). Mesonotum (Fig. 3) with sculpture of lines laterally anastomosing, with 3 pairs of setae; pair S1 26-30  $\mu\text{m}$  long, centrally; pair S2 26-30  $\mu\text{m}$  long, submarginally near posterior margin, S3 placed laterally. Mesofurca with spinula. Metanotum (Fig. 3) laterally with sculpture of longitudinal lines; with 2 pairs of setae at fore margin, S1 37-41  $\mu\text{m}$  and S2 26-28  $\mu\text{m}$  long. Metafurca without spinula.

Legs fully covered with microtrichia. Hind tibia 170-185  $\mu\text{m}$  long, with 1 pair of little ventral spurs in the apex. Fore wing 701-731  $\mu\text{m}$  long, middle 45  $\mu\text{m}$  wide, costa with 22-25 setae, upper with 14-16, lower vein with 1-3 distal setae. Scale with 4 setae.

Abdomen (distended) 634-694  $\mu\text{m}$  in length, maximum width 253-269  $\mu\text{m}$  across segments III-IV. Tergites II-IV (Fig. 4) with the bases the setae S1 closely approached. Tergites II-VIII with the pair S3 in the posterior margin. Sternites covered with microtrichia. Tergites II-V (Fig. 4) only laterally until S2 with microtrichia. Tergites VI-VIII (Fig. 5) with microtrichia all over the surface, being less dense in the central area. Tergites IX and X without microtrichia. Tergites II-VI (Fig. 4) laterally on its hind margin with comb of little and delicate microtrichia, not reaching the level of S2. Tergites VII and VIII (Fig. 5) on its hind margin with complete comb of long and delicate microtrichia.

Abdominal segment IX 60-70  $\mu\text{m}$  in length, width at base 130-163  $\mu\text{m}$ , at apex 61-96  $\mu\text{m}$ ; with 4 pairs of long submarginal setae, S1 52-59  $\mu\text{m}$ , S2 41-44  $\mu\text{m}$ , S3 52-59  $\mu\text{m}$  long, and 2 pairs of discal setae, towards the sides, the inner pair 37-40  $\mu\text{m}$  long. Abdominal segment X 48-55.5  $\mu\text{m}$  long, width across base 74-85  $\mu\text{m}$ , apex 41-63  $\mu\text{m}$ ; with 2 pairs of long submarginal setae near hind margin; S1 70-78  $\mu\text{m}$  and S2 70-78  $\mu\text{m}$  long. Ovipositor 200-224  $\mu\text{m}$  long. Total length (not distended) 954-1070  $\mu\text{m}$ .

Male unknown.

*Material studied.*—21 specimens.

*Holotype.*—♀, Spain, Guadarrama Mountain, La Pedriza (Madrid prov.), 1000 m., 16-VI-1976, J. BERZOSA leg., collected in litter of *Cistus ladanifer* L.

*Paratypes.*—17 ♀ (Cathedra of Entomology), 2 ♀ (BMNH), and 1 ♀ (SMF), together with the holotype.

The holotype and seventeen paratypes are stored in the collection of Cathedra of Entomology from the Faculty of Biology, Complutense University, Madrid. Two paratypes are deposited in the British Museum Natural History (BMNH) and one paratype in the Senckenberg Museum at Frankfurt (SMF).

This species is dedicated to Dr. R. zur STRASSEN, in appreciation for the help I always have had from him.

*Discussion.*—*N. zurstrasseni* n. sp. is near to those species, *N. abnormis* (KARNY, 1910) and *N. tadzhicus* (PELIKÁN, 1964), which have not microtrichia in the central area of the tergites II-IV between S2 setae (ZUR STRASSEN, 1980); but in the new species, the setae on the hind margin of pronotum do not reach 60  $\mu$ m length.

*N. zurstrasseni* n. sp. differs from *abnormis* in the colour of the body which is yellow-greyish; antennal segment IV is 2.2-2.4 and VI 2.5-3.0 times as long as wide; pronotum has delicate sculpture of anastomosing lines, no differentiated central area and 2 pairs of long setae at hind angles; sculpture and length and position of the setae of the meso and metanotum; tergite VII with a complete comb of long and delicate microtrichia on its hind margin.

The differences of the new species against *tadzhicus* are the colour of the body (in *tadzhicus* white); antennal segments IV and VI 2.2-2.4 and 2.5-3.0 as long as wide respectively (in *tadzhicus* 3.0-3.3 and 3.0-3.4, respectively); pronotum without differentiated central area and 2 pairs of long setae on the hind angles (in *tadzhicus* with a central area differentiated and with 1 pair of long setae, respectively); sculpture and length and position of the setae of meso and metanotum and tergite VII with a complete comb of microtrichia on its hind margin (in *tadzhicus* with a medially interrupted comb in the distance equivalent between the pair S2).

PRIESNER (1964) describes *Sericothrips arenarius* and *S. masrensis* from Egypt, which were not treated by BHATTI in his review of *Sericothrips* sensu latu. ZUR STRASSEN (1980) indicates that the position of *masrensis* in *Sericothrips* is not very clear and may probably form a new genus. *S. arenarius* has in the antennal segment VI, a long sense cone which reaches the apex of the antennae. *S. masrensis* has a dark body, pronotum with its central area butterfly-like shape and without long setae on its hind angles, these characters distinguish such species from the new one.

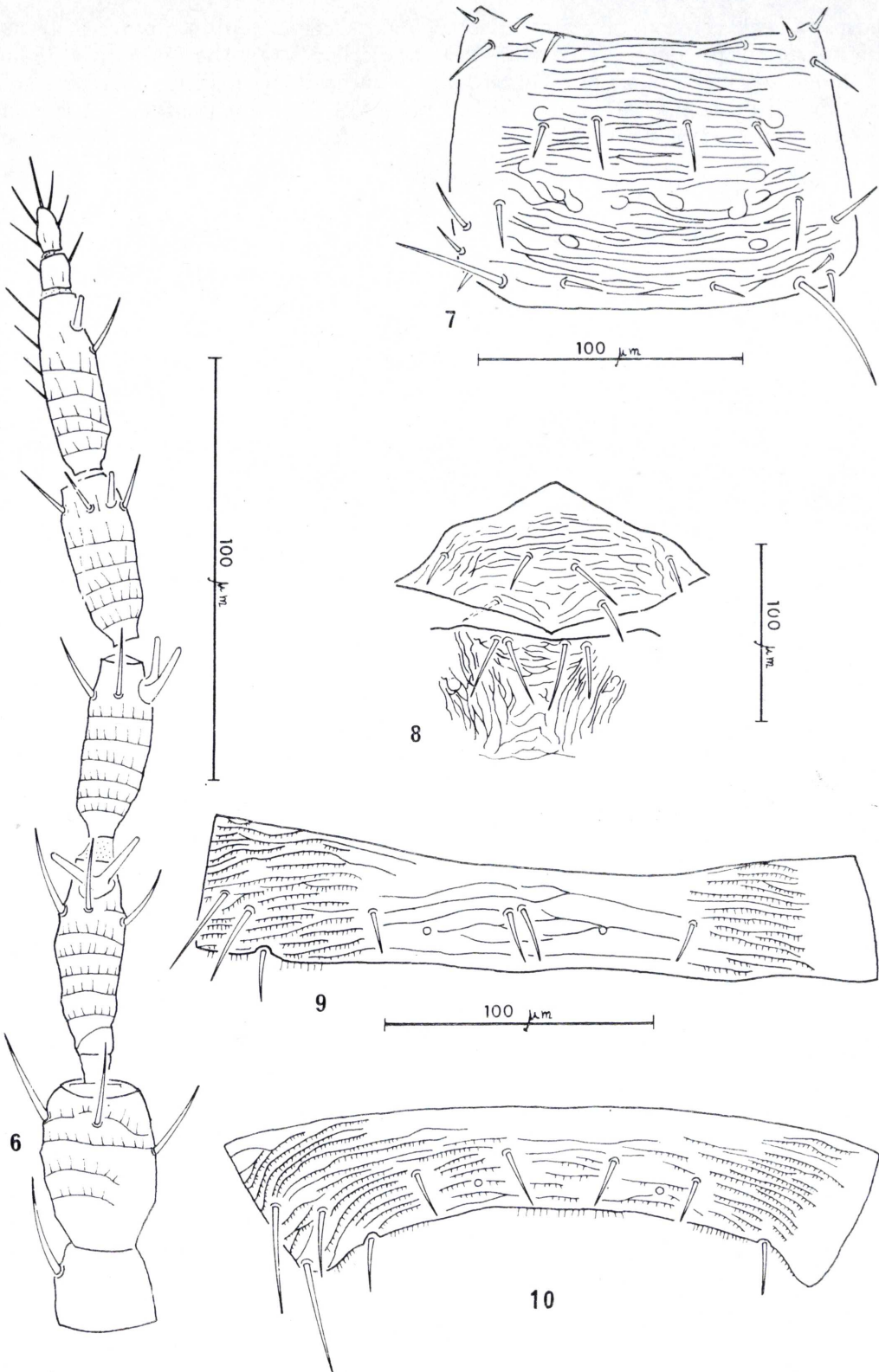
### *Neohydatothrips hispanicus* n. sp.

*Diagnosis.*—Body pale yellow, almost hyaline. Without a differentiated pronotal blotch. Tergites II-VI with comb in its posterior margin, only laterally. Tergite VII with a medially widely interrupted comb on its posterior margin, in the distance equivalent between S1 and S2. Tergite VIII with a complete comb.

*Description.*—♀ (macropterous): Body very pale, whitish yellow, almost hyaline. Meso and metanotum slightly darkened laterally. Abdomen whitish yellow, tergites II-VII with subbasal costa not dark, behind the costa laterally two small slightly darkened areas. Legs of the colour as the body. Wings hyaline. Antennae pale, antennal segments I and II hyaline, III hyaline, except the apex which is very pale brown, IV hyaline with the apex very pale brown, V hyaline in basal half, very pale brown in distal half, VI-VIII very pale brown.

Head wider than long, length (width) 68 (122)  $\mu$ m. Sides of head narrowed





Figs. 6-10.—*Neohydatothrips hispanicus* n. sp.: 6) paratype: right antennae; 7-10) holotype: 7) pronotum; 8) meso and metanotum; 9) tergite III; 10) tergite VII.

at base. Cheek convex. Eyes a little bulging. Occiput with sculpture of transverse anastomosing lines. Two pairs of antero-cellar setae, the outer pair 35  $\mu\text{m}$  long, longer than the inner one 26  $\mu\text{m}$  long. One pair of small interocellar setae. Five pairs of postocular setae, of which 3 pairs are placed at the inner ocular angle, 2 pairs in the outer one; the innermost pair of the 3 first pairs is the longest, 33  $\mu\text{m}$  in length. Mouth cone reaching the mesosternum, 152  $\mu\text{m}$  in length.

Antennae (Fig. 6) total length 254-268  $\mu\text{m}$ . Length (width) in  $\mu\text{m}$  of antennal segments, I 15-17 (22), II 39 (26), III 54-56 (17), IV 41-44 (17), V 39-41 (17), VI 42-44 (15), VII 9 (7), VIII 13 (5.5). Antennal segment I cylindrical, wider than long; II barrel shaped; III with diverging sides towards apex which is clearly narrowed; IV narrowed at both ends, sides almost parallel; V narrowed at base, with parallel sides, slightly narrowed at apex, but less than in IV; VI getting narrow from base to apex; VII narrowed at apex than at base; VIII getting narrow towards to apex. Segments III and IV with forked sense cones, V and VI with simple cones. Segments with rings of microtrichia.

Pronotum (Fig. 7) transverse, 102 (141)  $\mu\text{m}$  in length (width). Fore margin medially somewhat concave. Sides convex. Disc with delicate sculpture of transverse anastomosing lines. One pair of setae at the fore angles. Two pairs of anteromarginal setae and 1 pair of submarginal rather laterally. Three pairs of discal setae 20  $\mu\text{m}$  long, 2 pairs of these forming a transverse line. Posterior angles of pronotum with 1 pair of long setae 48-52  $\mu\text{m}$  long. Posterior margin with 1 pair of submarginal setae 28  $\mu\text{m}$  long. Lateral margins with 3 pairs of setae in the basal third.

Pterothorax (Fig. 8) 133 (126-129)  $\mu\text{m}$  in length (width). Mesonotum (Fig. 8) with sculpture of lines anastomosing laterally, with 3 pairs of setae; S1 at middle 26  $\mu\text{m}$  long; S2 18-20  $\mu\text{m}$  long, submarginally near posterior margin, and S3 placed laterally. Mesofurca with spinula. Metanotum (Fig. 8) laterally with sculpture of longitudinal lines; with 2 pairs of setae on the fore margin, S1 35-37  $\mu\text{m}$  and S2 24-28 long. Metafurca without spinula.

Legs with microtrichia. Hind tibia 181-189  $\mu\text{m}$  long, with 1 pair of short ventral spur in the apex. Fore wing 650  $\mu\text{m}$  long, width in the middle 45  $\mu\text{m}$ , costa with 22-23 setae, upper vein with 14-15, lower vein with 2 distal setae. Scale with 4 setae.

Abdomen (distended) 627-656  $\mu\text{m}$  long, maximum width 254-259  $\mu\text{m}$  across segments III-IV. Tergites II-VIII with the pair S3 always marginally. Tergites II-IV (Fig. 9) with the bases of the seta S1 closely approximated. Sternites fully covered with microtrichia. Tergites II-V (Fig. 9) without microtrichia in the central area, between the setae of pair S2. Tergites VI-VIII (Fig. 10) with scattered microtrichia in the central area. Tergites IX-X without microtrichia. Tergites II-VI (Fig. 9) laterally on its posterior margin with a comb of delicate and short microtrichia, not reaching the level of S2. Tergite VII (Fig. 10) on the posterior margin with a comb of short microtrichia interrupted twice at about the intervals of the setae of both S1 and S2 on each side. Tergite VIII with a complete comb of microtrichia.

Abdominal segment IX 70 long, width across base 130  $\mu\text{m}$ , across apex 85  $\mu\text{m}$ ; with 4 pairs of long submarginal setae, S1 48  $\mu\text{m}$ , S2 37  $\mu\text{m}$ , S3 46-48  $\mu\text{m}$  long, and 2 pairs of discal setae, towards the sides, the inner pair 26-30  $\mu\text{m}$  long. Abdominal segment X 48  $\mu\text{m}$  long, width across base 79.5  $\mu\text{m}$ , at apex 55.5  $\mu\text{m}$  long; with 2 pairs of long submarginal setae; setae S1 60-61  $\mu\text{m}$ , S2 61-63  $\mu\text{m}$  long. Ovipositor 209  $\mu\text{m}$  long. Total length (not distended) 1000-1046  $\mu\text{m}$ .



Male unknown.

*Material studied.*—2 specimens.

*Holotype.*—♀, Spain, Albarracin Mountain, Torres de Albarracin (prov. Tereuel), 1400 m, 20-VIII-1981, J. MAROTO leg., collected over plants of *Cistus laurifolius* L., in a clump of sables of *Juniperus thurifera* L.

*Paratype.*—1 ♀, together with the holotype.

The holotype and the paratype are deposited in the collection of the Cathedra of Entomology from the Faculty of Biology, Complutense University, Madrid.

*Discussion.*—*N. hispanicus* n. sp. belongs to the same group of species as *zurstrasseni* n. sp. characterised by setae on the hind angle of pronotum, neither exceed 60 µm in length.

The new species differs from *abnormis* (KARNY, 1910) in the colour of the body which is yellow hyaline; antennal segment IV is 3.2-3.3 and VI 2.8-3.0 is by times as long as wide; pronotum without differentiated central area, and with delicate sculpture of anastomosing lines; sculpture and length and position of the setae of meso and metanotum; tergite VII with a comb of microtrichia on the hind margin, interrupted twice at about the level of the interval between the seta S1 and S2 on each side.

*N. hispanicus* n. sp. is distinguished from *tadzhicus* (PELIKÁN, 1964) by the shape and structure of antennal segment VI; by the lacking of the differentiated pronotal blotch; by the different sculpture and setae of meso and metanotum, and by the structure of the comb of the abdominal tergite VII.

About the species *S. arenarius* PRIESNER, 1964, and *S. masrensis* PRIESNER, 1964, present the same differences that the anterior new species.

At last, *N. hispanicus* n. sp. and *zurstrasseni* n. sp. can be distinguished by characteristic coloration of the body and the antennal segments IV and VI; by the number and location of the setae of pronotum; by the sculpture and setae of meso and metanotum, and by the structure of the comb of the abdominal tergite VII.

### Summary.

In this paper two new species are described which belong to genus *Neohydatothrips* JOHN, 1929, recognized as a valid genus by BHATTI (1973).

### Resumen.

BHATTI (1973) realiza una revisión del género *Sericothrips* HALIDAY, 1836, *sensu lato*, donde reconoce, entre otros cambios realizados, como género válido a *Neohydatothrips* JOHN, 1929; que, hasta entonces, había sido tratado como sinonimia del género *Sericothrips*.

ZUR STRASSEN (1980) publica un estudio sobre las especies del oeste paleártico, de los géneros *Sericothrips* HALIDAY, 1836; *Hydatothrips* KARNY, 1913, y *Neohydatothrips* JOHN, 1929; realizando algunas modificaciones respecto al trabajo de BHATTI. Con estos antecedentes, revisé el material de *Sericothrips* que había incluido en mi tesis doctoral, y tras consultar con el Dr. R. ZUR STRASSEN, la especie que yo había citado, BERZOSA (1982), como *S. circumfusus* PRIESNER, 1924, y que ZUR STRASSEN (1980) sinonimiza con *N. abnormis* (KARNY, 1910), resultó ser una nueva especie perteneciente al género *Neohydatothrips*: *N. zurstrasseni* n. sp.

Del mismo modo, ejemplares procedentes de sabinares de *Juniperus thurifera* L., constituyen, también, una nueva especie perteneciente al mismo género, *Neohydatothrips hispanicus* n. sp. La descripción de las dos nuevas especies es el objeto de este trabajo.

**Bibliography.**

- BERZOSA, J., 1982.—Tisanópteros de la sierra de Guadarrama. II. *Thripidae* STEPHENS, 1829 (1.<sup>a</sup> parte) (*Ins., Thysanoptera*).—*Graellsia*, **37** (1981): 65-76. Madrid.
- BHATTI, J. S., 1973.—A preliminary revision of *Sericothrips* HALIDAY, sensu lat., and related genera, with a revised concept of the tribe *Sericothripini* (*Thysanoptera: Thripidae*).—*Oriental Ins.*, **7** (3): 403-449.
- HALIDAY, A. H., 1836.—An epitome of the British genera, in the order *Thysanoptera*, with indications of a few of the species.—*Ent. Mag.*, **3** (5): 439-541.
- JOHN, O., 1929.—A new species of *Thysanoptera* from Brazil, representing a new genus.—*Bull. Ann. Soc. ent., Belgique*, **69**: 33-36.
- KARNY, H., 1910.—Neue Thysanopteren der Wiener Gegend.—*Mitt. Naturw. Ver. Univ. Wien*, **8** (2): 41-57.
- KARNY, H., 1913.—*Thysanoptera*.—*Wiss. Ergeb. Deutsch. Zentral-Africa-Exped. 1907-1908 Zool.*, **4** (10): 281-282.
- PELIKÁN, J., 1964.—Five new *Thysanoptera* from Soviet Central Asia.—*Cas. Cesk. Spol. ent.*, **61** (3): 224-237.
- PRIESNER, H., 1924.—Neue Thysanopteren.—*S.-B. math.-naturw. Kl. Akad. Wiss. Wien*, (1) **133** (10): 527-542.
- PRIESNER, H., 1964.—A monograph of the *Thysanoptera* of the Egyptian Deserts.—*Publ. Inst. Desert Egypte*, (1960) **13**: 1-549.
- ZUR STRASSEN, R., 1980.—Die west-palaarktischen Fransenflüger-Arten von *Sericothrips* HALIDAY, 1836; *Hydatothrips* KARNY, 1913, und *Neohydatothrips* JOHN, 1929 (*Thysanoptera, Thripidae*).—*Polskie Pismo ent.*, **50**: 195-213.

*Dirección del autor:*

Dr. JACINTO BERZOSA.  
Cátedra de Entomología.  
Facultad de Biología.  
Ciudad Universitaria.  
Madrid-3.