Graellsia, 55: 3-7 (1999)

A NEW SPECIES OF THE GENUS *HALOLAELAPS* BERLESE & TROUESSART, 1889 (ACARI, GAMASIDA, HALOLAELAPIDAE) FROM THE SPANISH MEDITERRANEAN COAST

C. Blaszak (*) & R. Ehrnsberger (**)

ABSTRACT

The new species *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. of Halolaelapidae mites (Acari, Gamasida) is described and determination keys to the males and females of the subgenus *Saprogamasellus* are given.

Key words: *Halolaelaps hispanicus* sp. nov., Halolaelapidae, Mediterranean coast, Spain.

RESUMEN

Nueva especie del género *Halolaelaps* Berlese & Trouessart, 1889 (Acari, Gamasida, Halolaelapidae) de la costa mediterránea española

Se describe una nueva especie de ácaro de la familia Halolaelapidae, *Halolaelaps (Saprogamasellus) hispanicus* sp. nov., y se proporcionan claves de identificación de machos y hembras del subgénero *Saprogamasellus*.

Palabras clave: *Halolaelaps hispanicus* sp. nov., Halolaelapidae, Mediterráneo, España.

Until today the following *Halolaelaps* (*Saprogamasellus*)-species are known from the Mediterranean coast: *H.* (*S.*) *albertii* Blaszak & Ehrnsberger, 1993; *H.* (*S.*) *caesariensis* Athias-Henriot, 1961 and *H.* (*S.*) *similis* Blaszak & Ehrnsberger, 1993. From the North Sea are reported 11 species (Blaszak & Ehnrsberger, 1993). Examining mesostigmatic mites from the marine littoral, we found a new species belonging to the genus *Halolaelaps* Berlese & Trouessart, 1889. On the basis of the present division of this genus (Blaszak & Ehrnsberger, 1995) the new species belongs to the subgenus *Saprogamasellus* Sellnick, 1957; it is characterised by the following peculiarities:

1. Genu III in adults and deutonymphs with 9 setae (genus criterion)
2. Tectum with 3 tips, the tip in the middle is furcated and always a little bit longer, the lateral tips are serrated
3. Coxa II anterior without spur
4. Femur I with 12 setae
5. Males with sternogenital shield (genus criterion).

Halolaelaps* (*Saprogamasellus*) *hispanicus sp. nov.

MATERIAL: Mediterranean Sea: Spain, Valencia - 1 female (holotype), 1 male (paratype). Tide-washed seashore area with

* Department of Animal Morphology, Institute of Environmental Biology /Poland, Adam Mickiewicz University Poznañ, Szamarzewskiego 91, 60-569 Poznañ, Poland. e-mail: blaszak@hum.amu.edu.pl

** Institute of Nature Conservation and Environmental Education, University of Vechta, D-49364 Vechta, Postbox 15 53, Germany. e-mail: rainer.ehrnsberger@uni-vechta.de

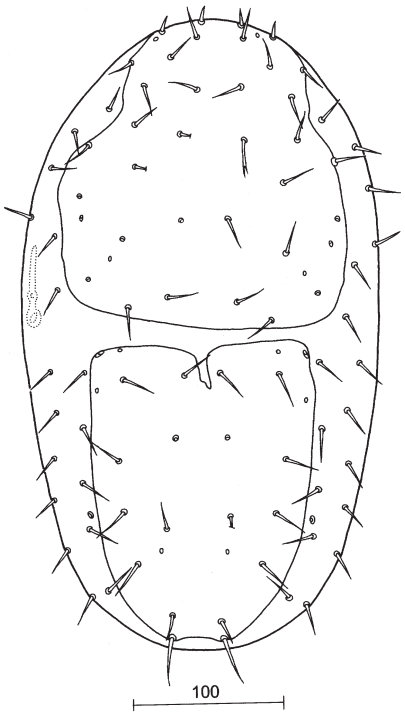

Fig. 1.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. Female, dorsal side

Fig. 1.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. Hembra, vista dorsal.

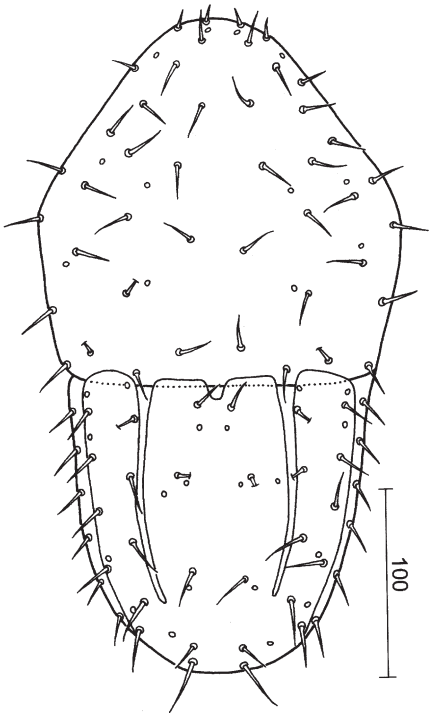

Fig. 2.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. - Male, dorsal side

Fig. 2.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. Macho, vista dorsal.

lot of brown algae (*Fucus*), 20.09.1989, leg. Rainer Ehrnsberger. TYPES: The holotype is situated in the Zoological Museum of the University of Hamburg, Germany; the paratype is in the Department of Animal Morphology of the Adam Mickiewicz University of Poznañ, Poland.

FEMALE (Fig. 1): Holotype. Length 420 µm, podonotal shield 200 µm, opisthonotal shield 200 µm. Podonotal shield with17 pairs of setae, setae of r2-r6-rows are not positioned on the shield; setae s3 at the rim of the opisthonotum; opisthonotal shield with 9 pairs of setae, setae Z5 approximately twice longer than I5, setae Z5 on the shield; setae of R- and S-rows not on the shield, median incision on opisthonotal shield deep, extending beyond the base of setae I1; peritrema short, maximal to the middle of Coxa III. Tectum with 3 tips, the tip in the middle furcated and always a little bit longer, lateral tips serrated (Fig. 4c).

MALE: Paratype. Length 340 µm, podonotal shield 200 µm, opisthonotal shield 150 µm.

DORSAL SIDE (Fig. 2): Podonotal shield with 22 pairs of setae; opisthonotal shield with 14 pairs of setae. All setae of R-rows not on the shield. Setae Z5 at least twice longer than I5; I5 shortest setae on opisthonotum; median incision in opisthonotal shield not deep, not reaching to the base of I1; opisthonotal shield with two additionally lateral deep incisions, reaching to setae Z4.

VENTRAL SIDE (Fig. 3): Ventroanal shield with 9 pairs of setae and single postanal seta. The adanal setae are very long, reaching to the end of the opisthosoma. In the anterior part of this shield, two small thick clasps of chitin are situated; between sternogenital and ventroanal shield one small shield. Peritrema short, reaching to the middle of Coxa III.

LEGS (Fig. 4): Genu III with 6 knots, tibia III with 6 knots, tarsus III with 2 knots and 1 apophysis. Genu IV with 4 knots, tibia IV with 6 knots, tarsus IV with 2 knots and 1 apophysis.

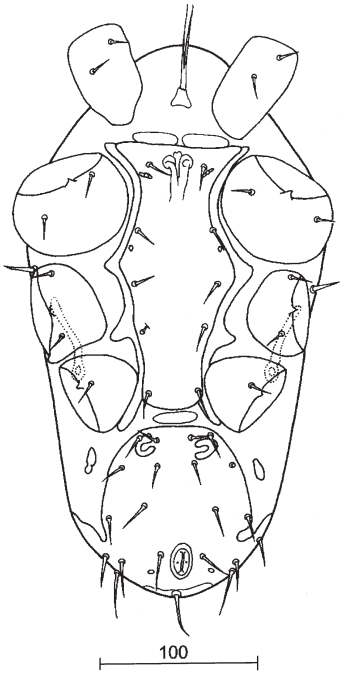

Fig. 3.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. - Male, ventral side

Fig. 3.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. Macho, vista ventral.

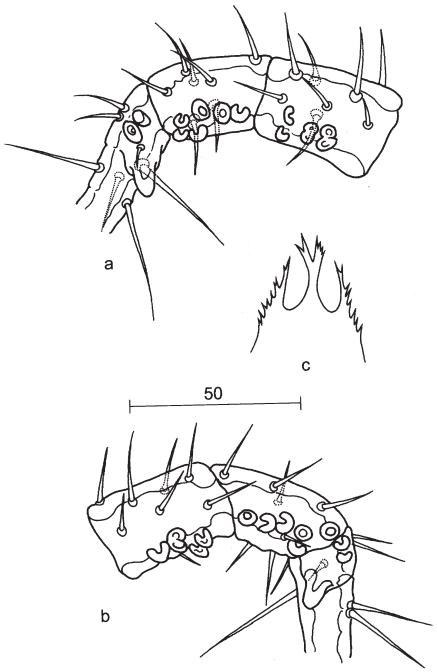

Fig. 4.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. a) Leg III male: genu, tibia, tarsus; b) Leg IV male: genu, tibia, tarsus; c) Tectum of female

Fig. 4.— *Halolaelaps* (*Saprogamasellus*) *hispanicus* sp. nov. a) Pata III del macho: genu, tibia, tarso; b) Pata IV del macho: genu, tibia, tarso; c) Tectum de la hembra.

DIFFERENTIAL DIAGNOSIS: The new species belongs to the "*strenzkei*"-group, with 9 pairs of setae on the opisthonotal shield (see Table 1).

ETYMOLOGY: The name of the new species *Halolaelaps* (*Saprogamasellus*) *hispanicus* was derived from the name of the country where it was found.

Determination key to the males of the subgenus *Halolaelaps* (*Saprogamasellus*) Sellnick, 1957

1. Without clasps of chitin on the anterior part of the ventroanal shield .. ***H.* (*S.*) *similis*** Blaszak & Ehrnsberger, 1993
* With 1 or 2 clasps of chitin on the anterior part of the ventroanal shield 2
2. With 1 clasp of chitin on the anterior part of the ventroanal shield 3
* With 2 clasps of chitin on the anterior part of the ventroanal shield 4
3. Opisthonotal shield with lateral lacunes. Genu IV with 4 knots ..... ***H.* (*S.*) *nodosus*** Willmann, 1952
* Opisthonotal shield with lateral incisions. Genu IV with 5 knots .... ***H.* (*S.*) *nodosoides*** Blaszak & Ehrnsberger, 1993
4. Opisthonotal shield without lateral incisions or lacunes (only with anterior single incision) ..... ***H.* (*S.*) *obtusus*** Blaszak & Ehrnsberger, 1993
* Opisthonotal shield with lateral incisions or lacunes 5
5. Opisthonotal shield with lateral lacunes 6
* Opisthonotal shield with lateral incisions 9
6. Tibia IV with 7 knots ..... ***H.* (*S.*) *coxalis*** Sellnick, 1957
* Tibia IV with 6 or 5 knots 7
7. Tibia IV with 6 knots ..... ***H.* (*S.*) *incisus*** Hyatt, 1956
* Tibia IV with 5 knots 8
8. Tarsus IV with 3 knots .. ***H.* (*S.*) *strenzkei*** Sellnick, 1957
* Tarsus IV without knots .. ***H.* (*S.*) *simplex*** Sellnick, 1957
9. Tibia IV with 6 knots ..... ***H.* (*S.*) *hispanicus*** sp. n.
* Tibia IV with 5 knots or less 10
10. Tibia IV with 5 knots 11
* Tibia IV with 4 or less knots 13
11. Tarsus IV with 2 knots .. ***H.* (*S.*) *remanei*** Willmann, 1939
* Tarsus IV with 1 knots 12
12. Genu IV with 3 knots ..... ***H.* (*S.*) *albertii*** Blaszak & Ehrnsberger, 1993
* Genu IV without knots .... ***H.* (*S.*) *suecicus*** Sellnick, 1957
13. Tibia IV with 4 knots 14
* Tibia IV with 3 or 2 knots 16

Table 1.— Differential diagnosis of *Haloaelaps (Saprogamasellus) hispanicus.*

Table 1.— Diagnosis diferencial de *Haloaelaps (Saprogamasellus) hispanicus.*

FEMALES

H.* (*S.*) *hispanicus sp. n.	***H.* (*S.*) *albertii*** Blaszak & Ehrnsberger, 1993	***H.* (*S.*) *incisus*** Hyatt, 1956
Podonotum with 17 pairs of setae	Podonotum with 15 pairs of setae	Podonotum with 16 pairs of setae
r1 on podonotum	r1 not on podonotum	r1 not on podonotum
s3 on podonotum	s3 on podonotum	
Opisthonotal shield with 9 pairs of setae		Opisthonotal shield with 8 pairs of setae

MALES

H.* (*S.*) *hispanicus sp. n.	***H.* (*S.*) *albertii*** Blaszak & Ehrnsberger, 1993	***H.* (*S.*) *incisus*** Hyatt, 1956
Genu IV with 4 knots	Genu IV with 3 knots	Genu IV without knots
Tarsus IV with 2 knots	Tarsus IV with 1 knots	Tarsus IV with 3 knots
Tibia IV with 6 knots	Tibia IV with 5 knots	
Opisthonotal shield with lateral incisions		Opisthonotal shield with 2 lateral lacunas

14. Tarsus IV with 2 knots .... ***H.* (*S.*) *balticus*** Sellnick, 1957
* Tarsus IV with 1 knots 15
15. Opisthonotal setae Z5 always needle like and sharp .... ***H.* (*S.*) *sinuosus*** Blaszak & Ehrnsberger, 1993
* Opisthonotal setae Z5 always blunt .... ***H.* (*S.*) *caesariensis*** Athias-Henriot, 1961
16. Tibia IV with 3 knots, Tarsus IV with 1 knots .... ***H.* (*S.*) *rafalskii*** Blaszak & Ehrnsberger, 1993
* Tibia IV with 2 knots, Tarsus IV without knots..... ..... ***H.* (*S.*) *reinharti*** Blaszak & Ehrnsberger, 1993

Determination key to the females of the subgenus *Halolaelaps* (*Saprogamasellus*) Sellnick, 1957

1. Opisthonotal shield with 14 pairs of setae 2
* Opisthonotal shield with less setae 3
2. Peritrema very long (nearly to the anterior rim of Coxa I) ..... ***H.* (*S.*) *nodosus*** Willmann, 1952
* Peritrema short (never to the anterior rim of Coxa II) .... ***H.* (*S.*) *silveae*** Blaszak & Ehrnsberger, 1993
3. Opisthonotal shield with 13 pairs of setae .... ***H.* (*S.*) *nodosoides*** Blaszak & Ehrnsberger, 1993
* Opisthonotum with less setae 4
4. Opisthonotal shield with 11 pairs of setae .... ***H.* (*S.*) *suecicus*** Sellnick, 1957
* Opisthonotal shield with 10 pairs of setae or less 5
5. Opisthonotal shield wit 10 pairs of setae 6
* Opisthonotal shield with less setae 7
6. Setae S4 not on the opisthonotal shield, setae S5 on the shield ..... ***H.* (*S.*) *coxalis*** Sellnick, 1957
* Setae S4 on opisthonotal shield, setae S5 not on the shield ..... ***H.* (*S.*) *propinquus*** Blaszak & Ehrnsberger, 1993
7. Opisthonotal shield with 9 pairs of setae 8
* Opisthonotal shield with 8 pairs of setae 11
8. Setae i1 on the podonotal shield 9
* Setae i1 not on the podonotal shield 10
9. Setae r1 on the podonotal shield; podonotal shield with 17 pairs of setae ..... ***H.* (*S.*) *hispanicus*** sp. nov.
* Setae r1 not on the podonotal shield; podonotal shield with 15 pairs of setae .... ***H.* (*S.*) *albertii*** Blaszak & Ehrnsberger, 1993
10. Setae z1 not on the podonotal shield .... ***H.* (*S.*) *strenzkei*** Sellnick, 1957
* Setae z1 on the podonotal shield .... ***H.* (*S.*) *simplex*** Sellnick, 1957
11. Tarsus IV with apophysis! .... ***H.* (*S.*) *remanei*** Willmann, 1939
* Tarsus IV without apophysis 12
12. Opisthonotal shield with whip like setae, setae Z5 at least 2,5 times longer than I5 ..... ***H.* (*S.*) *incisus*** Hyatt, 1956
* Opisthonotal shield with needle like or blunt setae, setae Z5 maximal twice as long as I5 (regularly 1,5 times) .. 13
13. Podonotal shield with 17 pairs of setae (setae i1, z1 and r1 on podonotal shield) .... ***H.* (*S.*) *caesariensis*** Athias-Henriot, 1961
* Podonotal shield with 16 or 15 pairs of setae 14
14. Podonotal shield with 15 pairs of setae (setae i1 and r1 not on podonotal shield) .... ***H.* (*S.*) *rafalskii*** Blaszak & Ehrnsberger, 1993
* Podonotal shield with 16 pairs of setae 15
15. All setae on opisthonotal shield (also on podonotal shield) blunt ..... ***H.* (*S.*) *obtusus*** Blaszak & Ehrnsberger, 1993
* A lot of setae on opisthonotal shield needle-like (setae I1 always acute) 16
16. Median incision on opisthonotal shield very broad and only reaching to the base of setae I1 .... ***H.* (*S.*) *similis*** Blaszak & Ehrnsberger, 1993
* Median incision on opisthonotal shield normally narrow and always reaching to the end of setae I1 17

17. Setae i1 on podonotal shield, setae r1 not on podonotal shield ..... ***H.* (*S.*) *balticus*** Sellnick, 1957

* Setae i1 not on podonotal shield, setae r1 on podonotal shield ..... ***H.* (*S.*) *sinuosus*** Blaszak & Ehrnsberger, 1993

References

ATHIAS-HENRIOT, C., 1961. Mesostigmates (Urop. excl.) Edaphiques Mediterraneens (Acaromorpha, Anactinotrichida). *Acarologia*, 3(4): 381-509.

BLASZAK, C. & EHRNSBERGER, R., 1993. Beiträge zur Kenntnis von *Halolaelaps* (*Saprogamasellus*) Götz, 1952 (Acari: Gamasida: Halolaelapidae). *Genus*, 4(3): 143-267.

BLASZAK, C. & EHRNSBERGER, R., 1995. Beiträge zur Kenntnis von *Halolaelaps* (*Halogamasellus*) subgen. nov., (Acari: Gamasida: Halolaelapidae). *Osnabrücker Naturwissenschaftliche Mitteilungen*, 20/21: 25-94.

Recibido, el 22-I-1998
Aceptado, el 17-III-1999
Publicado, el 15-XII-1999