Acarologia is proudly non-profit, with no page charges and free open access

Please help us maintain this system by encouraging your institutes to subscribe to the print version of the journal and by sending us your high quality research on the Acari.

Subscriptions: Year 2021 (Volume 61): 450 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2020): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France
ISSN 0044-586X (print), ISSN 2107-7207 (electronic)

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under the reference ID 1500-024 through the « Investissements d’avenir » programme (Labex Agro: ANR-10-LABX-0001-01)

Acarologia is under free license and distributed under the terms of the Creative Commons-BY-NC-ND which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.
**LAURITZENIA HISPANICA N. SP. FROM CATALONIA (SPAIN)**

(ACAKI, ORIBATEI)

BY M. J. MORELL *

**Summary:** A new species of the genus *Lauritzenia* is described, which is characterized by the two rounded protuberances on the middle of the rostrum tip; very long sensillus with cilia which cover the lanceolate head; notogastral setae thin and smooth; four pairs of genital setae; fissure *iad* over the anterior margin of the anal plate, near the external edge; and tarsi with three claws.

Among the soil oribatid mites from Catalonia (Spain) I have found a species that is new to Science, named *Laurentzenia hispanica*. There are five species of this genus that have been described before, and this is the first time that the genus *Lauritzenia* is found in Europe.

**Lauritzenia hispanica** n. sp.

Number of specimens: 118 adults.
Dimensions: length 324-396 μm, width 216-324 μm.


their length is about 19 μm, and they are inserted on a small lateral granulated area.

The lamellae are broad and very long, about 73 μm from the base of the bothridia to the lamellar tip, they exceed the insertions of the rostral setae. The inner border of the lamella is strongly chitinized, the last third of this border crosses over the outer one, which is curved inwards, and forms the lamellar tip where the lamellar seta is inserted. The outer margin of the lamellae on the distal third is longer than the inner one.

The bothridia are directed obliquely outwards. The anterior margin of the bothridia forms a long pointed lobe over the outer edge of the lamellae. The sensillus is very long, about 58 μm, it consists of a very thin stalk that ends in a lanceolate head of approximately 14 μm long, which is pointed distally. All the surface of the head is covered with rather long cilia. On most of the mites the sensillus is curved up and backwards.

_Notogaster_ (Fig. 1): It is rounded and wider posteriorly, and the anterior margin is strongly curved towards the prodorsum between the bothridia. All the surface is dotted with small oblong light punctures, except around the first pair of sacculi, where the integument forms big light ovoid foveolae. The external border of pteromorphae is folded towards the ventral side. There are four pairs of very long and narrow sacculi. The first one is the longest, about 17 μm, the rest are shorter, and
of the same length. The ten pairs of notogastral setae are thin, smooth, and all equally long; approximately 17 \( \mu \text{m} \).

**Ventral side** (Fig. 2): Thin epimeral setae, formula (3-1-3-3). The \( a \) and \( b \) series are about 8 \( \mu \text{m} \) long, and the \( c \) series are about 11 \( \mu \text{m} \) long. The epimeral surface is covered by polygonal and big light foveolae. The rest of the ventral setae are also smooth and thin. Four pairs of genital setae; two near the anterior margin, and about 8 \( \mu \text{m} \) long, and two near the posterior margin and about 5 \( \mu \text{m} \) long. One pair of adanal setae inserted near one to the other, and approximately 7 \( \mu \text{m} \) long. Two pairs of anal setae of the same length as the genital ones. Three pairs of adanal setae, about 8 \( \mu \text{m} \) long. Setae \( ad3 \) are inserted near the anterior and the external edge of the anal plates, at short distance of \( iad \) fissures, which are set between these setae, over the anterior margin of the anal plates, \( ad2 \) are inserted close to the posterior-external margin of the anal plates, and \( ad1 \) are set in a postanal position.

**Legs**: The tarsi have three claws, the middle one much thicker than the lateral ones. Tibia I (Fig. 4) has distally a long protuberance with a thin and very long solenidion and proximally a narrow pointed tooth on the ventral side. Femur II (Fig. 5) has a ventral keel, which ends in a distal tooth.

**Types**: Holotype from Llafranc-4 (dead leaves), 12 paratypes from Tamariu-1 (dead leaves), 4 from Tamariu-2 (pine needles), 9 from Tamariu-3 (Ilex leaves), 4 from Tamariu-4 (moss), 49 from Llafranc-1 (dead leaves), 12 from Llafranc-2 (Ilex leaves), 4 from Llafranc-3 (moss), 7 from Llafranc-4 (dead leaves), and 1 from Blanes-3 (dead leaves). Holotype and paratypes are preserved in the collection of the National Museum of Natural Science (Museo Nacional de Ciencias Naturales), Madrid, Spain.

**DISCUSSION**

This is a very interesting discovery since there are only five known species in this genus, one them from the Argentine, two from New Zealand, and the other two from Taiwan, so this is the first species from Europe. J. & P. Balogh 1984, indicate in their code tables that the genus *Lauritzenia* has monodactyle tarsi, but only *Lauritzenia longipluma* Hammer, 1958 has tarsi with one claw. The genus *Lauritzenia* was described by Hammer, 1958, and up to date there are only five species described, which are easily distinguished from the new one as follows:

- **Lauritzenia longipluma** Hammer, 1958: This species is very similar to *L. hispanica* on the following characters: they have almost the same length, 320 \( \mu \text{m} \) *L. longipluma* and 324-396 \( \mu \text{m} \) *L. hispanica*; the shape of the lamellae, pointed lobe of bothridia, the general aspect of the body, the notogastral sculpture, the disposition of the notogastral setae and notogastral sacculi, the disposition of the ventral setae, and the structures of the legs, mainly tibia I and femur II.

  But *L. longipluma* has a uniformly rounded rostrum; shorter and thinner rostral, lamellar, and interlamellar setae; sensillus with cilia on its distal half and narrower head; notogastral setae very short; \( iad \) parallel to the side of the anal field; and tarsi with one claw. Hammer does not draw \( iad \) fissures, but as she says “parallel to the side of the anal field”, we consider this an adanal position.

- **Lauritzenia acutirostrum** Hammer, 1968: This species has a bigger length than the new one, 430 \( \mu \text{m} \), and it presents a rostrum which ends in a pointed tip; broad and shorter lamellae; lamellar setae only distally barbed; a very thin sensillus slightly thickened on its distal end and set with tiny cilia on the posterior border of its distal half; and five or six genital setae on each genital plate. Hammer indicates than the anterior genital setae are very difficult to observe.

- **Lauritzenia rotundirostrum** Hammer, 1968: This is the biggest species described in this genus, 700 \( \mu \text{m} \) long, and it presents longer lamellar setae densely barbed; long sensillus that ends in a tiny lanceolate head, thinner than in the new species; notogastral setae of different lengths; \( ta \) bent and shorter than the remaining setae which are very long, thin and smooth; five or six genital setae on each genital plate (also difficult to observe).

There are two species more, both described by
**FIG. 3-5.** *Lauritzenia hispanica* n. sp., lateral side of prodorsum (3), tibia I (4) and femur II (5).

Tseng, 1984. Tseng indicates as a diagnosis for the genus *Lauritzenia* Hammer, 1958, 10 pairs of notogastral setae, 4 pairs of area porosae, 4 pairs of genital setae, and legs monodactyl. Hammer, 1958 describes the genus *Lauritzenia* with chitinous pores or slits instead of areae porosae. When Tseng describes *Lauritzenia minuta*, among other characters there are, 8 pairs of notogastral setae, 4 pairs of sacculi, and 5 pairs of genital setae. And when the same author describes *Lauritzenia carneus*, among other characters there are 5 pairs of genital setae, but he only draws four pairs. Tseng provides no information about number of claws, dimensions, and structures of tibia I and II. Although we have several doubts about the correct genus where these two species must be, most of the characters of these two species are completely different from the new one.

The new species is well characterized by:
- Rostrum that forms on the middle of its tip two rounded and small protuberances.
- Sensillus constituted by a long stalk that ends in a lanceolate head. Only the head is covered with rather long cilia.
- Notogastral setae smooth, thin, and all of the same length; about 17 μm.
- Four pairs of genital setae.
- Fissures *iad* over the anterior margin of the anal plate, near the external edge.
- Tarsi with three claws, the middle one thicker.

**REFERENCES**


