



ARTÍCULO:

A new species of oribatid mite, *Subiasella (Lucioppia) swiftae*, from the Hawaiian islands (Acariformes, Oribatida, Oppiidae)

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ARTÍCULO:

**A NEW SPECIES OF ORIBATID MITE,
SUBIASELLA (LUCIOPPIA) SWIFTAE,
FROM THE HAWAIIAN ISLANDS
(ACARIFORMES, ORIBATIDA, OPPIIDAE)**

Luis S. Subías & Antonio Arillo

Abstract:

A new species of oribatid mite, *Subiasella (Lucioppia) swiftae* sp. n., from the Hawaiian Islands is described. The new species belongs to the family Oppiidae Grandjean, 1951, subfamily Oxyoppiinae Subías, 1989, and is the second species reported to the subgenus.

Key words: Acari, Oribatida, Oppiidae, Oxyoppiinae, new species, Hawaii Islands.

Taxonomy: *Subiasella (Lucioppia) swiftae* sp. n.

***Subiasella (Lucioppia) swiftae*, nueva especie de ácaro oribátido de las Islas Hawai (Acariformes, Oribatida, Oppiidae)**

Resumen:

Se describe una nueva especie de ácaro oribátido, *Subiasella (Lucioppia) swiftae* sp. n., de las Islas Hawai. La nueva especie pertenece a la familia Oppiidae Grandjean, 1951, subfamilia Oxyoppiinae Subías, 1989, y se trata de la segunda especie citada en dicho subgénero.

Palabras clave: Acari, Oribatida, Oppiidae, Oxyoppiinae, nueva especie, Islas Hawai.

Taxonomía: *Subiasella (Lucioppia) swiftae* sp. n.

Introduction

As result of the study of the oribatid fauna of the Hawaiian Islands, Dr. Sabina Swift sent us material belonging to the family Oppiidae Grandjean, 1951 for its identification. Amongst this material was a mite belonging to the subfamily Oxyoppiinae Subías, 1989 that we propose here as a new species.

Results

***Subiasella (Lucioppia) swiftae* sp. n.**

Figs. 1-3

TYPE MATERIAL: 65 specimens were studied, all of them from a single sample: Hawaii, Volcanoes National Park, Mauna Loa Trail-Transect, 1.250 m, July 22, 1970. Duff and soil. F.J. Radovsky leg.; 20 specimens were preserved on a semipermanent slide with Hoyer and, the rest were preserved in lactic acid (70%). The holotype is stored in the collection of the Bishop Museum, Honolulu, Hawaii; paratypes are stored both in this collection and in the collection of the Department of Zoology (Entomology) of the Faculty of Biology of the Complutense University in Madrid, Spain.

ETYMOLOGY: Named after Dr. Sabina Fajardo Swift, from the Bishop Museum of Honolulu, who sent us the specimens.

DIAGNOSIS: Small, elongated and flattened Oxyoppiinae oribatid mite of light sclerotization with tenuous lamellar lines and two pairs of clear spots between them, in front of interlamellar setae, and a sensillus of short tail and globular head, from dorsal view; notogaster slightly foveolated with medium-sized notogastral setae; very short ventral setae and apodemata *apo4* nearly absent.

DESCRIPTION:

Measurements and tegument. Small body size between 235-270 µm long and 125-135 µm wide; the body shape is rather elongated and flattened. The colour of the tegument is yellowish (more or less light depending on the sclerotization). The body lacks any kind of cerotegument.

Prodorsum. (Fig. 1). The rostrum is rounded, with a central knob, both sides of which rostral setae are inserted; these setae are robust, externally barbulated and inside incurved. Lamellar and interlamellar setae are similar, being medium sized, thin and smooth and just in front of interlamellar setae there are two pairs of clear spots which are between of the both tenuous lamellar lines; between these clear spots and the lamellar setae there are some interlamellar lines, two transversal and one median lines. Bothridia are laterally opened and sensilla has a short tail with its head more or less globular in a dorsal view (fig. 1) and slightly fusiform in a lateral view (fig. 3); both tail and head are smooth.

Notogaster. (Fig. 1). Elliptical and slightly foveolated. Ten pairs of notogastral setae medium sized, arched, thin and smooth, all of similar length except setae c_2 are conspicuously shorter, located close to the anterior margin of the notogaster and near a pair of vestigial humeral processes; behind these structures ia fissures are visible. Medial fissures im are just in front of h_3 setae.

Ventral region. (Fig. 2). In the epimeral region the apodemata $apo4$ have almost disappeared and the chaetotaxy is the typical [3:1:3:3] being all epimeral setae very short and thin. Genital plates with five pairs of very small setae; anal plates, with two pairs of similar setae, are far from genital plates. Adgenital setae are behind genital plates and adanal setae ad_3 are in front of and far from anal plates, in a lateral position; adanal setae ad_1 , in postanal position; also adgenital and adanal setae are of similar length, short, thin and smooth.

Fissures iad are direct apoanal, so they converge to the back. Legs are monodactyl us.

Discussion and relationships

The genus *Subiasella* Balogh, 1983 is characterized by following features (Subías & Balogh, 1989):

- Humeral processes (common among the subfamily) are only vestigial.
- Setae c_2 are considerably shorter than rest of notogastral setae and close to the anterior margin of notogaster.
- Apodemata $apo4$ absent or poorly developed.
- Fissures iad in direct apoanal position.

Following this features, our specimens suggest placement within this genus, more exactly within the subgenus *Subiasella* (*Lucioppia*), described as new genus from Antilles by Mahunka (1985) and considered as subgenus by Subías & Balogh (1989), which includes only one species *Subiasella* (*Lucioppia*) *hauseri* Mahunka, 1985. This subgenus is characterized by having:

- More or less globular sensilli.
- Five pairs of genital setae.

The new species differs from *S. (L.) hauseri* by the presence of two pairs of prodorsal clear spots, by the interlamellar lines, by its smooth sensillus and its slightly foveolated notogaster.

References

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- SUBÍAS, L. S. & P. BALOGH 1989. Identification keys to the genera of Oppiidae Grandjean, 1951 (Acari: Oribatei). *Acta Zoológica Hungarica*, **35** (3-4): 355-412.



Figs. 1-3: *Subiasella (Lucioppia) swiftae* sp. n. 1. Body dorsal view. 2. Body ventral view. 3. Lateral view of prodorsum.