

A new fur mite *Lynxacarus (Lutracarus) visoni* sp. nov. (Acari, Listrophoridae) from *Mustela vison* (Carnivora, Mustelidae) in North America

Alex Fain¹ and Andrey V. Bochkov^{1,2*}

¹Institut Royal des Sciences Naturelles de Belgique, Rue Vautier 29, B-1000 Bruxelles, Belgique; ²Zoological Institute, Russian Academy of Sciences, St. Petersburg 199034, Russia

Abstract

A new species *Lynxacarus (Lutracarus) visoni* sp. nov. (Acari, Listrophoridae) is described from *Mustela vison* from the North America.

Key words

Lynxacarus (Lutracarus) visoni sp. nov., Listrophoridae, Acari, *Mustela vison*, Carnivora, North America

Introduction

The genus *Lynxacarus* Radford, 1951 (Acari, Listrophoridae) was until now divided into two subgenera, *Lynxacarus sensu stricto*, with nine species, and *Dubininetta* Fain et Lukoschus, 1978, with four species. All these species live in the fur of five orders of mammals (Carnivora, Erinacomorpha, Scandentia, Soricomorpha and Rodentia) (Fain and Hyland 1973, 1974; Fain 1978).

The discovery of a new species sharing the characters of both *Lynxacarus* and *Lutracarus* Fain et Yunker, 1980, type and only known species *Lutracarus canadensis* Fain et Yunker, 1980, from *Lutra canadensis*, in the USA (Fain and Yunker 1980), leads us to lower the status of *Lutracarus* and to include it as subgenus in the genus *Lynxacarus*. This new species, *Lynxacarus (Lutracarus) visoni* sp. nov., is described here.

Lynxacarus (Lutracarus) visoni sp. nov. (Figs. 1–4)

Male (holotype, all measurements are in μm) (Figs. 1 and 2): Body 315 long (325–350 in 2 paratypes) and 150 maximal width (155). Prescapular and postscapular shields 90 and 50 long respectively measured in the median line. Postscapular shield with 20–22 dark narrow transverse lines. The paracoxal shields IV are well developed, with the same ornamentation as the postscapular shield. There is a pair of lateral narrow opisthosomal shields, 9–11 of maximal width. These shields are separated from the paracoxal ones. Posterior lobes small,

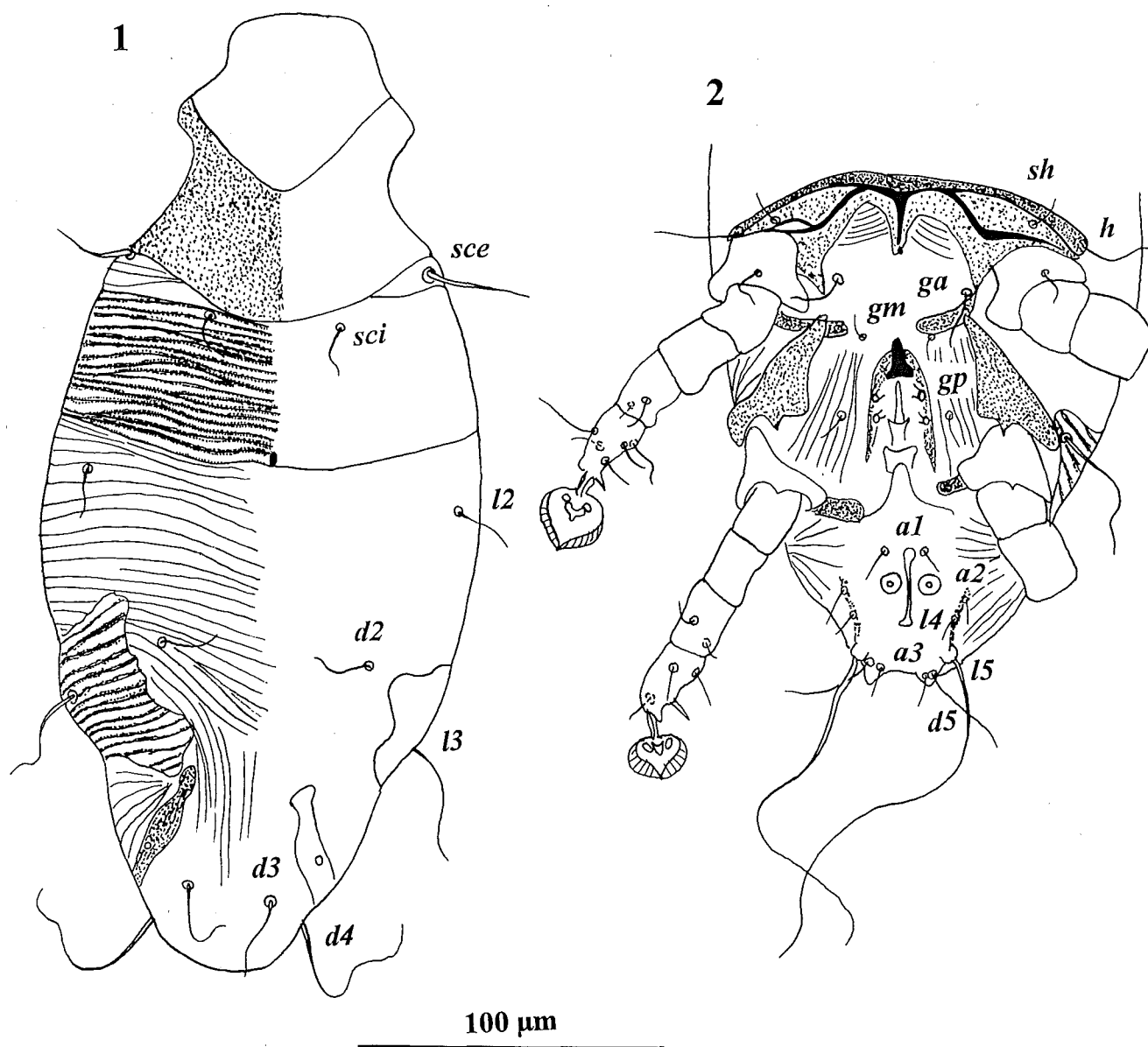
rounded and widely separated from each other. Adanal suckers normally developed but relatively small. Genital organ as in Figure 2. The U-shaped postanal frame is present, but poorly developed. Legs III and IV not thickened, about 90 long (from most basal point of the femur to the tarsal apex, excluding ambulacrum). Tarsi III–IV with a small, ventrally curved, apical process. Length of setae: *sce* 35, *d1* and *d2* about 25, *d3* 40, *d5* 40, *l2* 33, *l3* 55, *l5* 150 and *a3* 10 μm . All setae hair-like, except setae *sce* slightly thickened basally.

Female (Figs. 3 and 4): Body 415–430 long and 195 wide. Prescapular shield as in the male. Postscapular shield 55–65 long ornamented as in the male. Hysterosoma uniformly striated. Opisthosoma 130–140 long, distance between setae *d3* 50. Tarsi III with a narrow ventral spine. Length of setae: *sci* 25, *sce* 40, *d1* 33–50, *d2* 35–45, *d3* 50–60, *l2* 55–70, *l3* 60–75, *d4*, *l4* and *a3* about 10, *d5* and *l5* about 140–180, *ai* and *ae* about 20 μm .

Differential diagnosis

This new species is closely related to *Lynxacarus (Lynxacarus) nearcticus* Fain et Hyland, 1973 from *Mustela* spp. in North America, but it differs, however, by the following characters: In both sexes of *L. visoni* sp. nov. the postscapular shield bears 20–22 dark lines. In the male, the setae *d3* are 40 μm long, the opisthosomal shields are narrow, their maximal width is 9–11 μm and the legs IV are not thickened. In the female of *L. visoni*, the tarsi III bear a narrow spine which is lacking in *L. nearcticus*. In both sexes of *L. nearcticus*, the postscapular shield bears only 11–12 dark lines. In the male,

*Corresponding author: abochkov@boc@zisp.spb.su



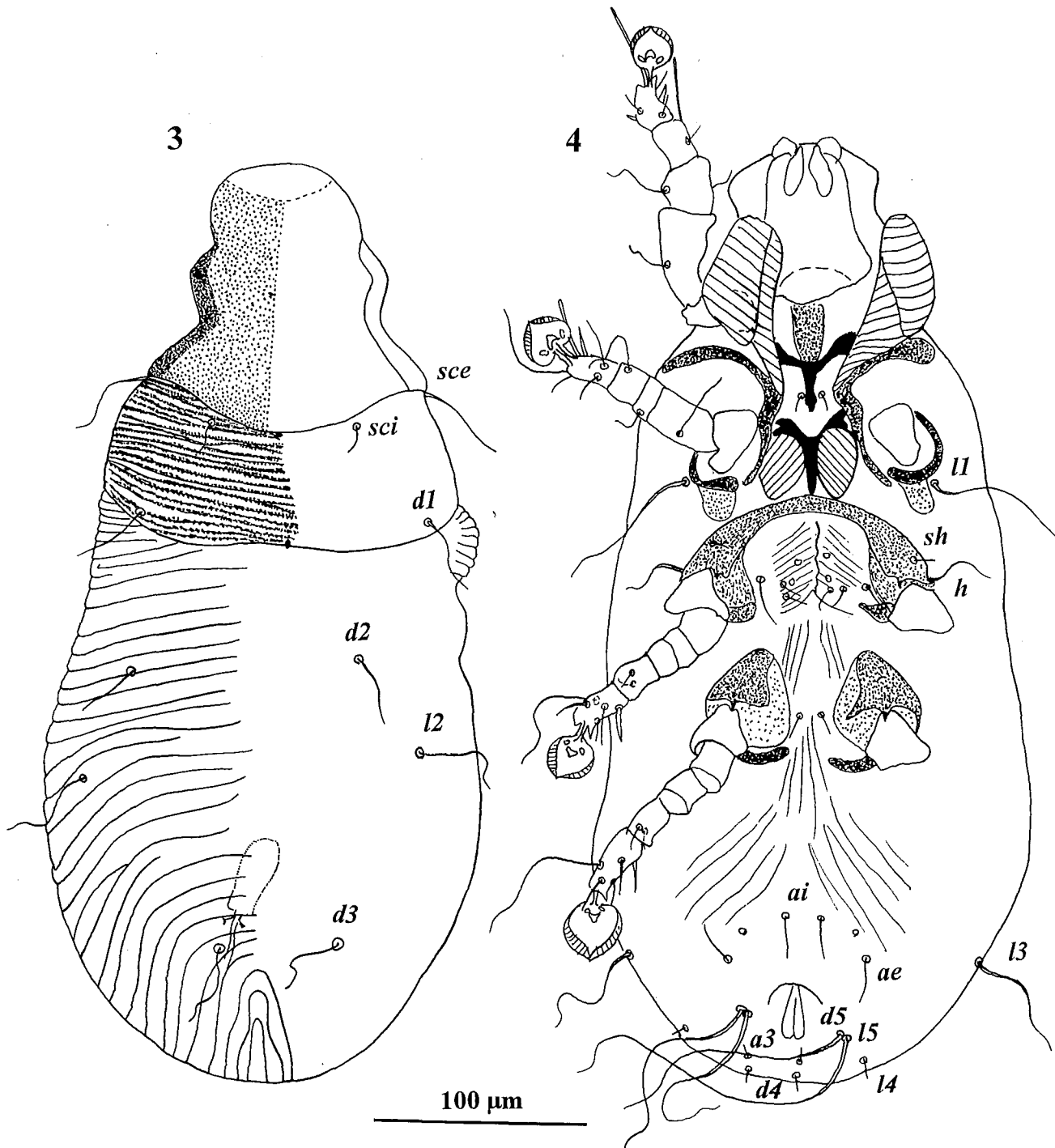
Figs. 1 and 2. *Lynxacarus (Lutracarus) visoni* sp. nov., male: 1 – dorsal view, 2 – ventral view

the setae *d3* are thick and about 80–85 µm long, the setae *h* much longer, the opisthosomal shields are wider (maximal width 25 µm) and the legs IV are much thickened. The male of *L. visoni* also differs from *L. (Lynxacarus) mustelae* by the smaller size of the posterior lobes.

Remarks

The subgenus *Lutracarus* now includes two species, i.e. *Lynxacarus canadensis* and *L. visoni* sp. nov. In both species

the pregenital sclerite of the male is poorly developed and lacks the two sclerotized lateral arms, and in the female, tarsi III bear a narrow ventral spine. In all the species of the typical subgenus *Lynxacarus*, the lateral arms of the pregenital sclerite are well developed and strongly sclerotized, and in the female all the setae of the tarsi III and IV are thin. The males of these two species are, however, clearly distinct from each other by the degree of development of the adanal suckers. These suckers are normally developed in *L. visoni* and vestig-



Figs. 3 and 4. *Lynxacarus (Lutracarus) visoni* sp. nov., female: 3 – dorsal view, 4 – ventral view

ial in *L. canadensis*. However, our new species possesses intermediate characters between these genera, excluding the structure of the adanal suckers, which are well developed. Therefore, the genus *Lutracarus* is lowered to subgenus rank within the genus *Lynxacarus*.

Type material

From fur of body: male holotype, 2 male and 3 female paratypes from the everglades mink *Mustela vison evergladensis* (Carnivora, Mustelidae); 01 May 1985; Fl. Collier Co., USA; coll. D. Jansen.

Holotype and paratypes deposited in the Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgique.

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