

Linzer biol. Beitr.	49/1	657-662	28.7.2017
---------------------	------	---------	-----------

***Paracanestrinia denmarkica* nov.gen., nov.sp.  
(Astigmata: Canestriniidae) from Denmark**

Ryszard HAITLINGER & Miloje ŠUNDIĆ

**A b s t r a c t :** *Paracanestrinia denmarkica* nov.gen., nov.sp. collected in Denmark from undetermined *Carabus* sp. is described and illustrated.

**K e y w o r d s :** Canestriniidae, new genus, new species, Denmark.

### Introduction

In Europe were known 17 genera of canestriniid mites: *Amansiella* KHAUSTOV & EIDELBERG 2001, *Camirohylla* HAITLINGER 1991, *Canestrinia* BERLESE 1881, *Coleopterophagus* BERLESE 1882, *Dicanestrinia* BERLESE 1911, *Lombardiniella* COOREMAN 1950, *Mesophotia* SAMŠIŃAK 1971, *Neophotia* SAMŠIŃAK 1971, *Paramansia* COOREMAN 1950, *Paraphotia* KHAUSTOV & EIDELBERG 2001, *Percanestrinia* BERLESE 1911, *Percanestriniella* KHAUSTOV & EIDELBERG 2001, *Photia* OUDEMANS 1904, *Procericola* COOREMAN 1950, *Pseudoamansia* COOREMAN 1950, *Pseudocanestrinia* KHAUSTOV & EIDELBERG 2001 and *Ibizella* HAITLINGER & ŠUNDIĆ 2016 (BERLESE 1881, 1882, 1911; OUDEMANS 1904; COOREMAN 1950; SAMŠIŃAK 1971; HAITLINGER 1991, 2001; KHAUSTOV & EIDELBERG 2001; HAITLINGER & ŠUNDIĆ 2016). In *Camirohylla* and *Lombardiniella* females are unknown. In this paper we describe *Paracanestrinia denmarkica* nov.gen., nov.sp. from Denmark.

### Material and methods

Two specimens (females) were collected by R. Haitlinger from undetermined *Carabus* sp. and preserved in 70% ethanol and later mounted on microscopic slide using Berlese medium. Measurements (given in micrometers) were made using microscope NIKON Eclipse 80i. Figures were drawn using Carl Zeiss Axioskop A1 microscope. The terminology and abbreviations follow GRANDJEAN (1939), GRIFFITHS et al. (1990), NORTON (1998) and TRACH & KHAUSTOV (2011). Additional abbreviations: GL – length of idiosoma, IW – width of idiosoma, GL – length of gnathosoma, GW – width of gnathosoma.

## Family Canestriniidae BERLESE 1884

### *Paracanestrinia* nov.gen.

**D i a g n o s i s :** female: dorsum reticulated with 6 pairs of short setae ( $c_1$ ,  $c_2$ ,  $d_1$ ,  $d_2$ ,  $e_1$ ,  $e_2$ ), setae  $d_2$  the longest, distance  $c_1$ - $c_1$  greater than  $d_1$ - $d_1$ ,  $d_1$ - $d_1 > e_1$ - $e_1$  and  $e_2$ - $e_2$ , setae  $f_2$  placed in ventral side of idiosoma at its lateral margins. Bursa copulatrix positioned posteroventrally. Propodosomal plate and setae  $ve$  absent. Sejugal suture absent.

**R e m a r k s :** The new genus belongs to genera group without propodosomal plate. The only genera *Camirohylla* and *Canestrinia* are without this plate but *Camirohylla* was described based on males only. It differs from *Canestrinia* in 6 pairs of short dorsal setae on hysterosoma vs. 7 pairs of short setae, sejugal suture absent vs. sejugal suture present, setae  $ve$  absent vs. setae  $ve$  present, distance  $c_1$ - $c_1$  greater than distance  $d_1$ - $d_1$  vs. distance  $c_1$ - $c_1$  shorter than distance  $d_1$ - $d_1$ ,  $h_2$  and  $h_3$  placed on ventral side of idiosoma vs. setae  $h_2$  and  $h_3$  placed on or near posterior margin of idiosoma and 8 pairs of short setae beyond genital region vs. 6 pairs of short setae beyond genital region. From genera having propodosomal plate it differs from *Dicanestrinia* in sejugal suture absent vs. sejugal suture present, setae  $ve$  absent vs. setae  $ve$  present, tarsi IV short ( $<70$ ) vs. tarsi IV long ( $>80$ ), 6 pairs of hysterosomal setae (excluding setae  $h_1$  and  $h_2$ ) vs. 8 pairs of setae; from *Percanestrinia* in idiosoma ornamented vs. idiosoma not ornamented or only incompletely ornamented, posterior part of opisthosoma narrow vs. posterior part of opisthosoma wide, posterior margin of opisthosoma rounded vs. posterior margin of opisthosoma almost straight or in middle part concave, tarsi I-II short ( $<40$ ) vs. tarsi I-II longer ( $>60$ ), sejugal suture absent vs. sejugal suture present; from *Photia* in setae  $ve$  absent vs. setae  $ve$  present, sejugal suture absent vs. sejugal suture present, sickle-shaped structure present, distance  $c_1$ - $c_1$  distinctly greater than distance  $d_1$ - $d_1$  vs. distance  $c_1$ - $c_1$  subequal with distance  $d_1$ - $d_1$ ; from *Pseudocanestrinia* in absence of setae  $ve$ ,  $c_1$  and  $d_1$  similar long vs.  $c_1$  distinctly shorter than  $d_1$ , if have similar length then both setae are very short, distance  $c_1$ - $c_1$  distinctly greater than distance  $d_1$ - $d_1$  vs. distance  $c_1$ - $c_1$  and  $d_1$ - $d_1$  similar, sejugal suture absent vs. sejugal suture present; from *Pseudocanestriniella* in dorsal surface reticulated vs. dorsal surface not reticulated, propodosomal plate absent vs. propodosomal plate present (weakly developed, small), setae  $c$ ,  $d$ ,  $e$  relatively long vs. setae  $c$ ,  $d$ ,  $e$  very short, thin, distance  $c_1$ - $c_1$  distinctly greater than distance  $d_1$ - $d_1$  vs. distance  $c_1$ - $c_1$  and  $d_1$ - $d_1$  almost equal, sejugal suture absent vs. sejugal suture present; from *Coleopterophagus* in sejugal suture absent vs. sejugal suture present, distance  $c_1$ - $c_1$  distinctly greater than distance  $d_1$ - $d_1$  vs. distance  $c_1$ - $c_1$  and  $d_1$ - $d_1$  almost equal, posterior margin of idiosoma narrow vs. posterior margin of idiosoma wide and very long setae  $h_1$  ( $>320$ ) and  $h_2$  ( $>350$ ) vs. setae  $h_1$  and  $h_2$  distinctly shorter ( $<260$  and  $<230$  respectively); from *Mesophotia* in setae  $ve$  absent vs. setae  $ve$  present, sejugal suture absent vs. sejugal suture present and setae  $h_1$  placed on ventral side of idiosoma vs. setae  $h_1$  placed on dorsal side of idiosoma; from *Neophotia* in setae  $ve$  absent vs. setae  $ve$  present, sejugal suture absent vs. sejugal suture present; from *Paramansia* in posterior part of idiosoma narrow vs. posterior part of idiosoma wide, idiosomal dorsum reticulated vs. idiosomal dorsum not reticulated, setae  $ve$  absent vs. setae  $ve$  present; from *Paraphotia* in dorsal surface of idiosoma reticulated vs. dorsal surface of idiosoma not reticulated, setae  $ve$  absent vs. setae  $ve$  present, 2 adanal setae vs. 3 adanal setae and setae  $h_1$  placed on ventral side of idiosoma vs. setae  $h_1$  placed on

dorsal side of idiosoma; from *Percanestriniella* in idiosoma reticulated vs. idiosoma not reticulated, 5 setae on tarsus IV vs. 6 setae on tarsus IV, setae *ve* absent vs. setae *ve* present and sjugal setae absent vs. sejugal setae present; from *Amansiella* in sejugal suture absent vs. sejugal present, but developed only medially and setae *ve* absent vs. setae *ve* present; from *Procericola* in setae *ve* absent vs. setae *ve* present, sejugal setae absent vs. sejugal setae present and dorsal idiosoma reticulated vs. dorsal idiosoma not reticulated; from *Pseudoamansia* in sejugal suture absent vs. sejugal suture present, setae *ve* absent vs. setae *ve* present, setae *d*<sub>1</sub> placed far from base of setae *e*<sub>1</sub> vs. setae *d*<sub>1</sub> extended far beyond base of setae *e*<sub>1</sub>, idiosoma reticulated vs. idiosoma with spine-like structures and beyond genital region 8 pairs of short setae vs. 6 pairs of short setae and from *Ibizella* in posterior margin of idiosoma narrow vs. posterior margin of idiosoma wide, idiosoma reticulated vs. idiosoma not reticulated and setae *e*<sub>1</sub> placed far from setae *e*<sub>2</sub> vs. setae *e*<sub>1</sub> and *e*<sub>2</sub> placed almost same level.

**T y p e s p e c i e s :** *Paracanestrinia denmarkica* nov. sp.

**E t y m o l o g y :** Named after the similar genus *Canestrinia* and is added word para.

***Paracanestrinia denmarkica* nov.sp.**

**M a t e r i a l e x a m i n e d :** 2 ♀ ♀ Locus typicus: Denmark, 11 km north of Hvidbjerg, 6 July 2007, from undetermined *Carabus* sp., coll. R. Haitlinger, Holotype and paratype are deposited at the Museum of Natural History, Wroclaw University, Poland.

**D i a g n o s i s :** as for the genus.

**D e s c r i p t i o n** (♀): Idiosma pear-shaped. Gnathosoma relatively narrow (50 holotype, 47 paratype). Dorsal surface of idiosoma reticulated as on Fig 1. Setae *c*<sub>1</sub>, *c*<sub>2</sub>, *d*<sub>1</sub>, *d*<sub>2</sub>, *e*<sub>1</sub> and *e*<sub>2</sub> short; setae *d*<sub>2</sub> are the longest (Table 1). Setae *c*<sub>2</sub> not reach the bases of setae *d*<sub>2</sub>. The distance *c*<sub>1</sub>-*c*<sub>1</sub> is longer than distance *d*<sub>1</sub>-*d*<sub>1</sub>, *e*<sub>1</sub>-*e*<sub>1</sub> and *e*<sub>2</sub>-*e*<sub>2</sub>. Setae *h*<sub>1</sub> and *h*<sub>2</sub> very long whip-like, placed at posterior margin of idiosoma.. Posterior part of idiosoma narrow.

Ventral surface with thin setae, *h*<sub>3</sub> and *ad*<sub>2</sub> are the longest (Table 1). Setae *f*<sub>2</sub> placed at lateral margins, widely arranged (*f*<sub>2</sub>-*f*<sub>2</sub> 155-166). Apodemes I joint medially to form Y-shaped structure. Gnathosoma only partially covered by propodosoma. Bursa copulatrix positioned posteroventrally (Figs 2, 3).

Legs. Tarsus IV is the longest. Tarsus III > tarsi I, II. Ta I: ω1, ω2, ω3, ε, *d*, *wa*, *e*, *p*, *q*, Ti I φ, Ge I σ, mG, cG, Fe I vF, Tr I vTr (Fig. 4); Ta II ω, *d*, *wa*, *e*, *la*, *ra*, Ti II φ, Ge II σ, mG, cG, Fe II vF, Tr II vTr (Fig. 5); Ta III *w*, *d*, *e*, Ti III φ, Ge III nG, Tr III vTr (Fig. 6); Ta IV *w*, *d*, *e*, Ti IV φ, Tr IV vTr (Fig. 7). Measurements are given in Table 1.

**E t y m o l o g y :** Named after the country where holotype was collected.

## References

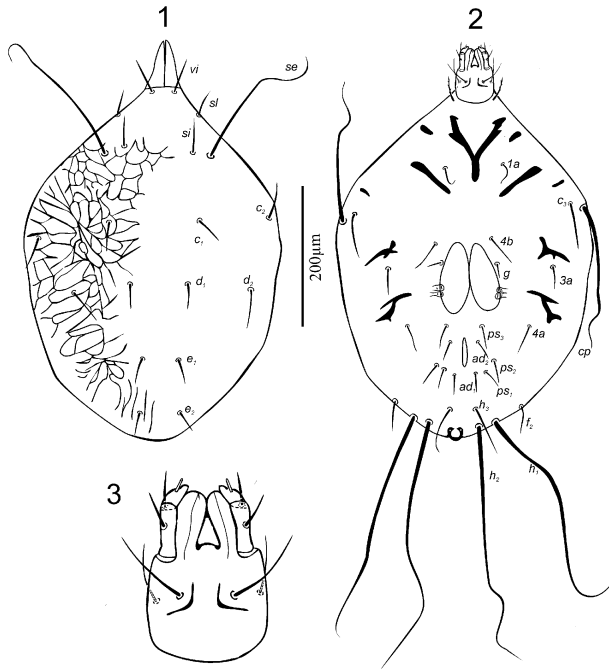
- BERLESE A. (1881): Sopra un nuovo generi di acari parassiti degli insetti — Atti Reale Istit. ven. sci., lett. Arti. 7: 747-752.
- BERLESE A. (1882): Acari, Myriapoda et Scorpiones hucusque in Italia reperta, Padova 1882, II.
- BERLESE A. (1911): Alcuni acari entomofili nuovi — Redia 7: 183-186.

- COOREMAN J. (1950): Etude de quelques Canestriniidae (Acari) vivant sur des Chrysomelidae et sur des Carabidae (Insecta: Coleoptera) — Bull. Inst. Roy. Sci. Nat. Belg. **26** (33): 1-54.
- GRANDJEAN F. (1939): La chaetotaxie des pattes chez les Acaridiae — Bull. Soc. Zool. France **64** (1): 50-56.
- GRIFFITHS D.A., ATYEO W.T., NORTON R.A. & C.A. LYNCH (1990): The idiosomal chaetotaxy of astigmatid mites — J. Zool. (London) **220**: 1-32.
- HAILTLINGER R. (1991): New canestriniid mites (Acari, Astigmata, Canestriniidae) associated with some Tenebrionidae and Carabidae (Insecta, Coleoptera) — Zesz. Nauk. Akad. Roln. Wroc., Zootechnika **35** (206): 273-281.
- HAILTLINGER R. (2001). *Camirohylla feziana* HAILTLINGER, 1991 and *Canestrinis samsinaki* BERON, 1975 (Acari: Astigmata: Canestriniidae) new mite species to fauna of Spain, found on Ibiza and Formentera (Balearic Islands) — Boll. Soc. Hist. Nat. Balears **44**: 23-26.
- HAILTLINGER R. & M. ŠUNDIĆ (2016): *Ibizella balearica* n. gen., n. sp. (Astigmata Canestriniidae) from Balearic Islands, Spain — Redia XCIX: 75-82.
- KHAUSTOV A.A. & M.M. EIDELBERG (2001): A review of the mite family Canestriniidae (Acarina: Astigmata) of the eastern Palearctic — Acarina **9** (1): 23-46.
- NORTON R.A. (1998): Morphological evidence for the evolutionary origin of Astigmata (Acari: Acariformes) — Experim. Appl. Acarol. **22** (10): 559-594.
- OUDEMANS A.C. (1904): Acarologische Aanteekeningen XIV — Entomol. Ber. **1** (20): 192.
- TRACH V.A. & A.A. KHAUSTOV (2011): A review of the genus *Coleopterophagus* BERLESE, 1882 (Acari: Astigmata: Canestriniidae) of Ukraine — Acarina **19** (2): 213-230.

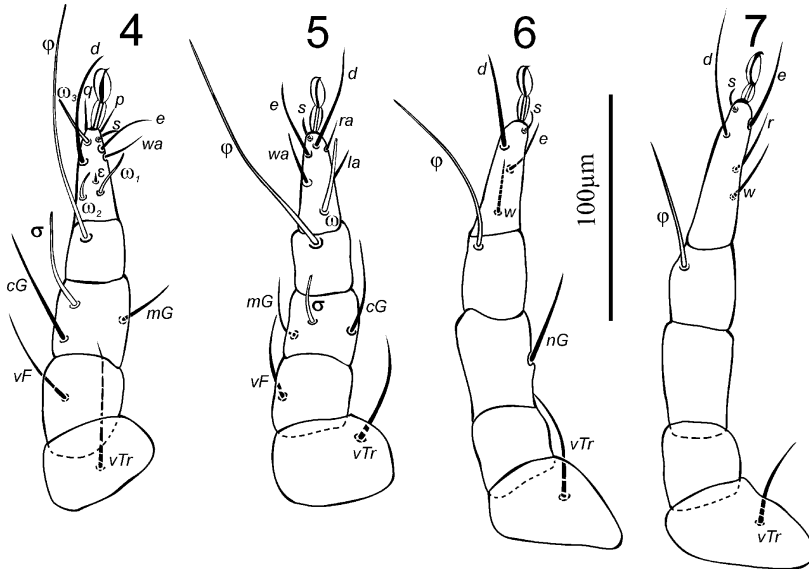
## Authors' addresses:

Prof. Dr. habil. Ryszard HAILTLINGER  
 Institute of Biology, Department of Invertebrate Systematics and Ecology  
 Wrocław University of Environmental and Life Sciences  
 Koźuchowska 5B  
 PL-51-631 Wrocław, Poland  
 E-mail: ryszard.haitlinger@up.wroc.pl

Dr. Miloje ŠUNDIĆ  
 University of Montenegro  
 Faculty of Natural Sciences and Mathematics  
 2000 Podgorica, Montenegro  
 E-mail: miloje@t-com.me



**Figs 1-3.** *Paracanestrinia denmarkica* nov. sp. (♀) (1) dorsal view, idiosoma; (2) ventral view, idiosoma; (3) gnathosoma.



**Figs 4-7.** *Paracanestrinia denmarkica* nov.sp. (♀) (4) leg I; (5) leg II; (6) leg III; (7) leg IV.

**Table 1.** Metric data (in  $\mu\text{m}$ ) for females *Paracanestrinia denmarkica* nov.gen., nov.sp.

Character	H	P	Character	H	P	Character	H	P
IL	513	505	Ta I $\omega$ 3	27	30	Ti III $\phi$	84	74
IW	384	369	Ta I d	58	59	Ge III nG	43	46
c1	51	44	Ta I wa	15	16	Tr III vTr	43	38
c2	57	53	Ta I e	25	22	Ta IV d	49	48
c3	52	54	Ta I p	9	11	Ta IV e	36	38
d1	-	44	Ta I q	10	7	Ta IV w	23	30
d2	65	59	Ta I $\epsilon$	5	4	Ta IV r		6
e1	44	42	Ti I $\phi$	104	90	Ti IV $\phi$	59	43
e2	35	35	Ge I $\sigma$	47	39	Tr IV vTr	38	38
f2	24	29	Ge I cG	34	46	<i>1a</i>	21	25
h1	367	391	Ge I mG	55	30	<i>3a</i>	16	21
h2	395	-	Fe I vF	40	42	<i>4a</i>		27
h3	40	46	Tr I vTr	61	45	<i>4b</i>	34	
ps1	22	20	Ta II $\omega$	31	32	<i>se</i>	243	293
ps2	19	16	Ta II d	45	49	<i>si</i>	56	57
ps3	19	21	Ta II wa	17	18	<i>vi</i>	69	67
ad1	24	28	Ta II e	29	32	<i>sl</i>	42	
ad2	21	22	Ta II la	18	16	<i>Cp</i>	214	187
<i>g</i>	14	13	Ta II ra	21	28	Ta I	37	37
c1-c1	123	154	Ti II $\phi$	118	90	Ta II	34	38
d1-d1	77	80	Ge II $\sigma$	20	21	Ta III	44	47
e1-e1	61	62	Ge II cG	47	44	Ta IV	60	60
e2-2e2	62	68	Ge II mG	26	29	Leg I	160	169
f2-f2	155	166	Fe II vF	43	54	Leg II	160	172
GL	115	96	Tr II vTr	48	46	Leg III	181	186
GW	50	52	Ta III w	25	28	Leg IV	205	207
Ta I $\omega$ 1	22	30	Ta III d	35	46			
Ta I $\omega$ 2	8	8	Ta III e	23	35			

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2017

Band/Volume: [0049\\_1](#)

Autor(en)/Author(s): Haitlinger Ryszard, Sundic Miloje

Artikel/Article: [Paracanestrinia denmarkica nov.gen., nov.sp. \(Astigmata: Canestriniidae\) from Denmark 657-662](#)