

**Checklist of the Collembola:**

**Pictorial key to common surface dwelling species of Collembola from the Netherlands**



This key is still under construction. **Note** that missing figures will be provided as soon as possible. Currently, the key is in the feasibility study phase to find out how to integrate in the checklist in a modular way a key that has been generated with [DELTA](#).

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**Preamble**

This experimental and macrophotographically illustrated key is intended to key out the most common surface dwelling species of Collembola from the region of Hardenberg, the Netherlands, based on habitus inspection of alive specimens in the field using at most a magnification of 5 times.

All illustrations courtesy of macrophotographer Ab H. Baas.

**Key**

- 1(0). Body form elongate (fig.1a)..... [2](#)
- Body form subglobular (fig.1b)..... [23](#)



Fig.1.

- 2(1). Body iridescent, covered with scales (fig.2)..... [3](#)
- Body not iridescent, not covered with scales..... [6](#)



Fig.2.

- 3(2). Apical antennomere about equal to subapical antennomere (fig.3); antenna with 5 segments (fig.4): basal

antennomere subdivided..... *Heteromurus major*  
 Apical antennomere much shorter than subapical antennomere;  
 antenna with 4 segments..... [4](#)



Fig.3.



Fig.4.

4(3). Third antennal segment subcylindric (fig.5)..... [5](#)  
 Third antennal segment tapering (fig.6).....  
 ..... *Pogonognathellus flavescens*



Fig.5.



Fig.6.

5(4). Body dark purplish with transversal goldish bands at  
 intersegmental margins (fig.7)..... *Tomocerus vulgaris*  
 Body uniform bluish-grey (fig.8)..... *Tomocerus minor*



Fig.7.



Fig.8.

- 6(2). Head blackish..... [7](#)  
 Head not blackish..... [8](#)
- 7(6). Abdomen with distinct whitish transversal band (fig.9),  
 (fig.10)..... *Orchesella cincta* adult  
 Abdomen without whitish transversal band (fig.11).....  
 ..... *Isotoma viridis* var *violacea*



Fig.9.



Fig.10.





Fig.11.

- 8(6). Body with long dorsal setae..... [9](#)  
 Body without long dorsal setae..... [22](#)
  
- 9(8). Body with few long dorsal setae..... [10](#)  
 Body with many long dorsal setae..... [15](#)
  
- 10(9). Body background colour not uniform..... [11](#)  
 Body background colour uniform..... [13](#)
  
- 11(10). Body pigmentation in longitudinal pattern..... [12](#)  
 Body pigmentation in transversal pattern (fig.12).....  
 ..... *Isotoma viridis* var *annulata*



Fig.12.

- 12(11). Lateral thoracic pigmentation distinctly patchy; middorsal segmental pigmentation in the shape of a crown (fig.13); tibiotalpi distinctly differently coloured than femora.....  
 ..... *Isotomurus maculatus*  
 Lateral thoracic pigmentation indistinct; middorsal segmental pigmentation in the shape of a solid line (fig.14); tibiotalpi and femora equally coloured. *Isotomurus palustris*



Fig.13.



Fig.14.

- 13([10](#)) . Body background colour greenish (fig.15)..... *Isotoma viridis*  
 Body background colour not greenish..... [14](#)



Fig.15.

- 14([13](#)) . Body background colour brownish with pale random dot pattern  
 (fig.16)..... *Isotoma anglicana* juvenile  
 Body background colour dark violet with distinct pale dot  
 pattern lateral on abdomen (fig.17). *Isotoma anglicana* adult



Fig.16.



Fig.17.

- 15([9](#)) . Antenna with 4 segments; trunk with one abdominal segment  
 distinctly longer than the others (fig.18)..... [16](#)  
 Antenna with 6 segments (fig.19): basal two antennomeres  
 subdivided; trunk with subequal abdominal segments..... [20](#)

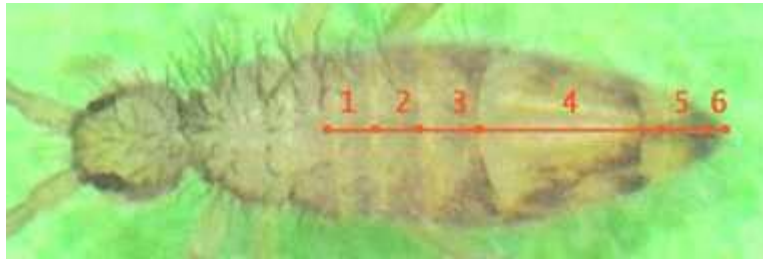


Fig.18.



Fig.19.

- 16([15](#)). Thoracic dorsal pigmentation absent..... [17](#)  
 Thoracic dorsal pigmentation present..... [18](#)
- 17([16](#)). Dorsal pigmentation of the second and third abdominal segment  
 in distinct transversal bands (fig.20).....  
 ..... Entomobrya nivalis forma dorsalis  
 Dorsal pigmentation of the second and third abdominal segment  
 in indistinct transversal patches (fig.18), (fig.21).....  
 ..... Entomobrya nicoleti



Fig.20.



Fig.21.

- 18([16](#)). Thoracic dorsal pigmentation in longitudinal bands (fig.22)....  
 ..... Entomobrya muscorum  
 Thoracic dorsal pigmentation in transversal bands..... [19](#)





Fig.22.

- 19 ([18](#)) . Dorsal abdominal pigmentation in irregular transversal bands (fig.23)..... Entomobrya multifasciata  
 Dorsal abdominal pigmentation in the shape of a capital U (fig.24)..... Entomobrya nivalis



Fig.23.



Fig.24.

- 20 ([15](#)) . Body pigmentation pattern in complex pattern of patches (fig.25)..... Orchesella villosa  
 Body pigmentation pattern in distinct bands..... [21](#)



Fig.25.

- 21 ([20](#)) . Body pigmentation in longitudinal bands (fig.26).....  
 ..... Orchesella flavescens  
 Body pigmentation in transversal bands (fig.27).....

..... *Orchesella cincta* juvenile



Fig.26.



Fig.27.

- 22(8). Body colour greenish (fig.28)..... *Desoria olivacea*  
Body colour greyish (fig.29)..... *Desoria tigrina*



Fig.28.



Fig.29.

- 23(1). Body background colour brownish..... 24  
Body background colour yellowish with patchy brown  
pigmentation..... 26
- 24(23). Body texture dull..... 25  
Body texture glossy (fig.30)..... *Allacma fusca*





Fig.30.

- 25(24). Dorsum uniformly coloured (fig.31)..... *Dicyrtoma fusca*  
 Dorsum with middorsal yellow longitudinal stripe (fig.32).....  
 ..... *Dicyrtomina ornata* <sup>1</sup>



Fig.31.



Fig.32.

- 26(23). Dorsal posterior patch multi barred cross shaped (fig.33);  
 second antennomere colour distinctly more pale than that of  
 third antennomere, especially at the joint (fig.34b).....  
 ..... *Dicyrtomina saundersi*  
 Dorsal posterior patch solid rectangular (fig.35); second  
 antennomere colour gradually fading into that of third  
 antennomere (fig.34a)..... *Dicyrtomina ornata*



Fig.33.

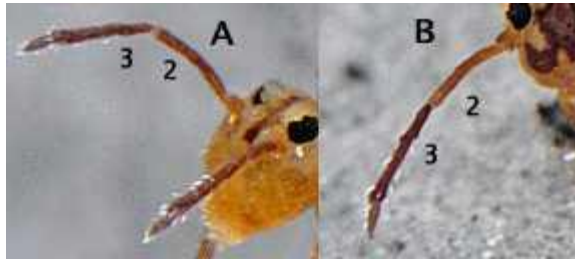


Fig.34.



Fig.35.

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## Endnotes

<sup>1</sup> Very dark colour form lacking the typical patchy pigmentation.

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## Differential diagnoses

### **Allacma fusca**

Body background colour brownish. Body form subglobular (fig.1b). Body texture glossy (fig.30).

### **Desoria olivacea**

Body not iridescent, not covered with scales. Body without long dorsal setae. Body colour greenish (fig.28). Body form elongate (fig.1a). Head not blackish.

### **Desoria tigrina**

Body not iridescent, not covered with scales. Body without long dorsal setae. Body colour greyish (fig.29). Body form elongate (fig.1a). Head not blackish.

### **Dicyrtoma fusca**

Body background colour brownish. Body form subglobular (fig.1b). Body texture dull. Dorsum uniformly coloured (fig.31).

### **Dicyrtomina ornata**

Body background colour yellowish with patchy brown pigmentation. Body form subglobular (fig.1b). Dorsal posterior patch solid rectangular (fig.35). Second antennomere colour gradually fading into that of third antennomere (fig.34a).

### **Dicyrtomina ornata <sup>1</sup>**

Body background colour brownish. Body form subglobular (fig.1b). Body texture dull. Dorsum with middorsal yellow longitudinal stripe (fig.32).

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### **Dicyrtomina saundersi**

Body background colour yellowish with patchy brown pigmentation. Body form subglobular (fig.1b). Dorsal posterior patch multi barred cross shaped (fig.33). Second antennomere colour distinctly more pale than that of third antennomere, especially at the joint (fig.34b).

### **Entomobrya multifasciata**

Antenna with 4 segments. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body with many long dorsal setae. Dorsal abdominal pigmentation in irregular transversal bands (fig.23). Head not blackish. Thoracic dorsal pigmentation present. Thoracic dorsal pigmentation in transversal bands. Trunk with one abdominal segment distinctly longer than the others (fig.18).

### **Entomobrya muscorum**

Antenna with 4 segments. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body with many long dorsal setae. Head not blackish. Thoracic dorsal pigmentation present. Thoracic dorsal pigmentation in longitudinal bands (fig.22). Trunk with one abdominal segment distinctly longer than the others (fig.18).

### **Entomobrya nicoleti**

Antenna with 4 segments. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body with many long dorsal setae. Dorsal pigmentation of the second and third abdominal segment in indistinct transversal patches (fig.18), (fig.21). Head not blackish. Thoracic dorsal pigmentation absent. Trunk with one abdominal segment distinctly longer than the others (fig.18).

### **Entomobrya nivalis**

Antenna with 4 segments. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body with many long dorsal setae. Dorsal abdominal pigmentation in the shape of a capital U (fig.24). Head not blackish. Thoracic dorsal pigmentation present. Thoracic dorsal pigmentation in transversal bands. Trunk with one abdominal segment distinctly longer than the others (fig.18).

### **Entomobrya nivalis forma dorsalis**

Antenna with 4 segments. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body with many long dorsal setae. Dorsal pigmentation of the second and third abdominal segment in distinct transversal bands (fig.20). Head not blackish. Thoracic dorsal pigmentation absent. Trunk with one abdominal segment distinctly longer than the others (fig.18).

### **Heteromurus major**

Antenna with 5 segments (fig.4): basal antennomere subdivided. Apical antennomere about equal to subapical antennomere (fig.3). Body iridescent, covered with scales (fig.2). Body form elongate (fig.1a).

### **Isotoma anglicana adult**

Body not iridescent, not covered with scales. Body with long dorsal setae. Body background colour uniform. Body background colour not greenish. Body background colour dark violet with distinct pale dot pattern lateral on abdomen (fig.17). Body form elongate (fig.1a). Body with few long dorsal setae. Head not blackish.



**Isotoma anglicana juvenile**

Body not iridescent, not covered with scales. Body with long dorsal setae. Body background colour uniform. Body background colour not greenish. Body background colour brownish with pale random dot pattern (fig.16). Body form elongate (fig.1a). Body with few long dorsal setae. Head not blackish.

**Isotoma viridis**

Body not iridescent, not covered with scales. Body with long dorsal setae. Body background colour uniform. Body background colour greenish (fig.15). Body form elongate (fig.1a). Body with few long dorsal setae. Head not blackish.

**Isotoma viridis var annulata**

Body not iridescent, not covered with scales. Body with long dorsal setae. Body background colour not uniform. Body form elongate (fig.1a). Body pigmentation in transversal pattern (fig.12). Body with few long dorsal setae. Head not blackish.

**Isotoma viridis var violacea**

Abdomen without whitish transversal band (fig.11). Body not iridescent, not covered with scales. Body form elongate (fig.1a). Head blackish.

**Isotomurus maculatus**

Body not iridescent, not covered with scales. Body with long dorsal setae. Body background colour not uniform. Body form elongate (fig.1a). Body pigmentation in longitudinal pattern. Body with few long dorsal setae. Head not blackish. Lateral thoracic pigmentation distinctly patchy. Middorsal segmental pigmentation in the shape of a crown (fig.13). Tibiotarsi distinctly differently coloured than femora.

**Isotomurus palustris**

Body not iridescent, not covered with scales. Body with long dorsal setae. Body background colour not uniform. Body form elongate (fig.1a). Body pigmentation in longitudinal pattern. Body with few long dorsal setae. Head not blackish. Lateral thoracic pigmentation indistinct. Middorsal segmental pigmentation in the shape of a solid line (fig.14). Tibiotarsi and femora equally coloured.

**Orchesella cincta adult**

Abdomen with distinct whitish transversal band (fig.9), (fig.10). Body not iridescent, not covered with scales. Body form elongate (fig.1a). Head blackish.

**Orchesella cincta juvenile**

Antenna with 6 segments (fig.19): basal two antennomeres subdivided. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body pigmentation in transversal bands (fig.27). Body pigmentation pattern in distinct bands. Body with many long dorsal setae. Head not blackish. Trunk with subequal abdominal segments.

**Orchesella flavescens**

Antenna with 6 segments (fig.19): basal two antennomeres subdivided. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body pigmentation in longitudinal bands (fig.26). Body pigmentation pattern in distinct bands. Body with many long dorsal setae. Head not blackish. Trunk with subequal abdominal segments.

**Orchesella villosa**

Antenna with 6 segments (fig.19): basal two antennomeres subdivided. Body not iridescent, not covered with scales. Body with long dorsal setae. Body form elongate (fig.1a). Body pigmentation

pattern in complex pattern of patches (fig.25). Body with many long dorsal setae. Head not blackish. Trunk with subequal abdominal segments.

**Pogonognathellus flavescens**

Antenna with 4 segments. Apical antennomere much shorter than subapical antennomere. Body iridescent, covered with scales (fig.2). Body form elongate (fig.1a). Third antennal segment tapering (fig.6).

**Tomocerus minor**

Antenna with 4 segments. Apical antennomere much shorter than subapical antennomere. Body iridescent, covered with scales (fig.2). Body uniform bluish-grey (fig.8). Body form elongate (fig.1a). Third antennal segment subcylindric (fig.5).

**Tomocerus vulgaris**

Antenna with 4 segments. Apical antennomere much shorter than subapical antennomere. Body iridescent, covered with scales (fig.2). Body dark purplish with transversal goldish bands at intersegmental margins (fig.7). Body form elongate (fig.1a). Third antennal segment subcylindric (fig.5).

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**References**

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