

Hypogastura viatica

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Collembola	Hypogastura

Common name

Synonym

Similar species

Summary

Hypogastura viatica and *H. purpurescens* are both cosmopolitan invasive species and have been recognised on various sub-Antarctic islands where they have been reported to have displaced resident species from some habitats. *H. viatica* has been introduced to the Antarctic Peninsula and to a number of other sub-Antarctic Islands. Its presence on South Georgia and its dominance in some habitats highlight the importance of strict quarantine measures to avoid the introduction of further alien invertebrates.



[view this species on IUCN Red List](#)

Species Description

Black body, three clavate tenent hairs on all legs, all positioned in apical whorl of setae (Convey *et al.* 1999).

Habitat Description

Substrate type: Dry and wet vegetation, wallow algae. Abundant (near monoculture) under supralittoral debris and wallow algae, rare away from coast.

General Impacts

Hypogastura viatica has already been introduced to the Antarctic Peninsula and to a number of other sub-Antarctic Islands where it often dominates upper marine littoral habitats. It is likely [H. purpurescens](#) will have a similar affect on native ecosystems and food-webs. As detritivores, Collembola (commonly known as springtails) may have a significant impact on decomposition processes (Greenslade 2002).

According to a Collembola species pest risk assessment for Heard Island (Greenslade 2002) the highest ranked pest species include members of the family Hypogastruridae, which are already recorded from South Georgia and the Antarctic Peninsula. Appropriate management strategies are proposed to reduce the risk of the high priority species being introduced to Heard Island.

Current records indicate that about twenty Collembola species have been already introduced to other subantarctic islands. Criteria in the pest assessment were partially selected from those currently used for pest risk and weed assessment in import risk analyses (Pheloung 2001, in Greenslade 2002). The five scored criteria were: distribution; life history; habitat; ecosystem synchrony; and dispersal ability. They relate respectively to: proximity potential; population potential; establishment potential; persistence potential; and spread. Scores given for *H. purpurescens* were 4, 3, 3, 1, 3, respectively with a total score of 14 and ranked third highest out of 20 candidate taxa scored. *H. purpurescens* is not currently present on Heard Island and strict quarantine principles are thought to be necessary to be adhered to in order to keep the species, and related species, off the island.



GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Hypogastura viatica*

Pathway

Hypogastrura spp. could be carried to Heard Island in fresh vegetables, in particular on unwashed potatoes or mushrooms (especially fresh wild collected species). They may be present in soil on equipment, vehicles or clothing (particularly boots) or from under containers and pallets (Greenlade 2002).

Principal source:

Compiler: IUCN SSC Invasive Species Specialist Group (ISSG) with support from the EU-funded South Atlantic Invasive Species project, coordinated by the Royal Society for the Protection of Birds (RSPB)

Review:

Publication date: 2009-04-27

ALIEN RANGE

[7] ANTARCTICA
[7] FRENCH SOUTHERN TERRITORIES
[1] NEW ZEALAND
[1] SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS

[5] AUSTRALIA
[1] HEARD ISLAND AND MCDONALD ISLANDS
[1] SOUTH AFRICA

BIBLIOGRAPHY

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Management information

Downie, R. 2002. An Overview of the Flora and Fauna of Deception Island In: Valencia & Downie. Workshop on a Management Plan for Deception Island. Instituto Antártico Chileno.

Greenlade, Penelope. 2002. Assessing the risk of exotic Collembola invading subantarctic islands: prioritising quarantine management. *Pedobiologia* 46, 338-344 (2002)

General information

[Australian Antarctic Data Centre., 2004. *Hypogastura viatica*](#)

Summary: Available from: http://data.aad.gov.au/aadc/biodiversity/taxon_profile.cfm?taxon_id=102109 [Accessed 25 October 2009]

Convey, P., Greenlade, P., Arnold, R.J., Block, W. Collembola of sub-Antarctic South Georgia. *Polar Biol* (1999) 22: 1-6

CSIRO. 2004. 3. Systematic Names Genus Level Phylum: Arthropoda Class: Collembola Order: Collembola Family: Hypogastruridae *Hypogastura viatica* (Tullberg)

[Frenot, Y., Chown, S.L., Whinam, J., Selkirk, P., Convey, P., Skotnicki, M., & Bergstrom, D. 2005. Biological invasions in the Antarctic: extent, impacts and implications. *Bio. Rev.* 80, 45-72.](#)

Summary: Article de synthèse sur les invasions biologiques (plantes, invertébrés et vertébrés) en antarctique.

Available from: <http://www.anta.canterbury.ac.nz/resources/non-native%20species%20in%20the%20antarctic/Talk%20%20Frenot.pdf> [Accessed 4 April 2008]

[Gressitt, J. L. and N. A. Weber., 1959. Bibliographic Introduction to Antarctic/sub-Antarctic Entomology. *Pacific Insects* 1 \(4\): 441-180 December 25, 1959](#)

Summary: Available from: <http://hbs.bishopmuseum.org/fiji/pdf/gressitt-weber1959.pdf> [Accessed 25 October 2009]

[ITIS \(Integrated Taxonomic Information System\), 2009. Online Database *Hypogastura viatica* \(Tullberg, 1872\)](#)

Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=99993 [Accessed 25 October 2009]

[Mallick and Driessen 2006. An incomplete list of introduced invertebrate animals occurring in Tasmania and the Tasmanian Wilderness World Heritage Area \(TWWHA\). Species information for TWWHA is from Mallick and Driessen \(2006\).](#)

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