**Table S1**. Source of the *Panagrolaimus* isolates used in this study. The names of newly isolated strain are indicated in bold underlined font.

**Species and Strain Geographical Location Habitat Source Reproduction**

*Panagrolaimus* *davidi* (CB1) Ross Island McMurdo Sound, Moss and algae1 Prof. David Wharton Parthenogenetic

Antartica1

*Panagrolaimus paetzoldi* Paulina saltmarsh, Westerscheldt Decomposing cordgrass (*Spartina anglica*) 2 Dr. Ilse De Mesel Male/female3

Estuary, Netherlands2

*Panagrolaimus* *rigidus* (AF36) Fayette County, Soil CGC5 Male/female

Pennsylvania, USA4 (isolated by Prof. Andras Fodor)

*Panagrolaimus superbus* (DF5050)Surtsey Island, Iceland6 Gull’s nest in a lava cavity. Prof. Bjorn Sohlenius Male/female

(Nest primarily made from moss

*Rhacomitrium* sp.)6

***Panagrolaimus* sp. AS01** Leixlip, Co. Kildare, Ireland A roof gutter Dr. Adam Shannon Male/female

***Panagrolaimus* sp. AS03** Maynooth, Co. Kildare, Ireland Roof moss (*Bryum capillare* Hedw) Dr. Adam Shannon Male/female

*Panagrolaimus* sp. JB115 Forest Falls, San Bernadino Pine forest soil7 Prof Steven Nadler Parthenogenetic3 County, California7 (isolated by Doug Edelman)

*Panagrolaimus* sp. JB051 Diourbel, central Senegal7 Soil Prof Steven Nadler Parthenogenetic3

(isolated by Dr. Pierre Baujard)

*Panagrolaimus* sp. JU765 Yangshuo, Guangxi, China8 Soil at edge of rice paddy Isolated by Dr. M.-A. Félix Hermaphrodite8

***Panagrolaimus* sp. JU1361** Periyar Natural Preserve, A rotting orange-colored fruit Isolated by Dr. M.-A. Félix Male/female8

Kerala, India8

***Panagrolaimus* sp. JU1365** Between Periyar and Madurai, A rotting Okra pod Isolated by Dr. M.-A. Félix Male/female8

Tamil Nadu, India8

***Panagrolaimus* sp. JU1366** Between Madurai and Tanjore, A rotting cactus stem Isolated by Dr. M.-A. Félix Male/female8

Tamil Nadu, India8

***Panagrolaimus* sp. JU1367** Between Madurai and Tanjore, Soil Isolated by Dr. M.-A. Félix Male/female8

Tamil Nadu, India8

***Panagrolaimus* sp. JU1369** Cuddatore, Tamil Nadu, India8 A mix of rotting fruits, soil and coconut debris Isolated by Dr. M.-A. Félix Male/female8

***Panagrolaimus* sp. JU1371** Government Place, Pondicherry, Soil and leaf litter Isolated by Dr. M.-A. Félix Male/female8

India8

***Panagrolaimus* sp. JU1387** La Réunion, Indian Ocean8 Rotting velvet apples (*Diospyros philippensis*) Isolated by Dr. M.-A. Félix Male/female8

***Panagrolaimus* sp. JU1645** Between Matinho and Caibros Rotting agave leaves Isolated by Dr. M.-A. Félix Male/female8

on Santo Antao Island,

Cape Verde8

***Panagrolaimus* sp. JU1646** Ribeira Cumba Small rotting fruits Isolated by Dr. M.-A. Félix Male/female8

Santiago Island, Cape Verde8

*Panagrolaimus* sp. PS443 Byurakan, Armenia9 Soil CGC Male/female

(isolated by Raffi Aroian)

*Panagrolaimus* sp. PS1159North Carolina, USA Soil CGC Parthenogenetic3

(isolated by J. Millar)

*Panagrolaimus* sp. PS1579 Huntington Botanical Gardens Soil CGC Parthenogenetic

San Marino, California, USA(isolated by Dr. M.-A. Félix)

*Panagrolaimus* sp. PS5056 Phnom Phen, Cambodia10 John DeModena Male/female

***Panagrolaimus* sp. PS6470** Galileo Hill, Mid Mojave Desert, Soil Isolated by John DeModena Male/female

Kern County, California10

*Panagrolaimus* sp. SN103 Eagle Lake Field Station11 Tree stump with frass and fungus11 Prof Steven Nadler Parthenogenetic3

Lassen County, California

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