

Supplementary Material

Table S1. Primers used for PCR and DNA sequencing in this study.

Gene target	Primer	Primer sequence	Annealing temperature	Reference
16S	LR-J-12887	5'-CGCCTGTTTAACAAAAACAT-3'	52°C	Simon et al. (1994)
16S	LR-N-13398	5'-CCGGTCTGAACTCAGATCACGT-3'	52°C	Simon et al. (1994)
COI	LC01490	5'-GGTCAACAAATCATAAAGATATTGG-3'	52°C	Folmer et al. (1994)
COI	HC02198	5'-TAAACTTCAGGGTGACCAAAAAATCA-3'	52°C	Folmer et al. (1994)

	Specimen name	Identification or morpho-species	Ecological group	Punakaiki		Bankside		Banks Peninsula				Eyrewell			Lincoln	
				Nikau Reserve	Restored land	Scientific Reserve	Okuti Reserve	Bossu Roadside	Southern Summit Roadside	Kaituna Reserve	Ahuriri Reserve	Northern Summit Road side	DOC scientific Reserve	Spencer Bower Reserve	Liffey Spring	Lincoln University
Exotic earth-worms	End2	<i>Amyntas corticis</i>	Epigeic ³		M											
	RTU1	<i>Aporrectodea caliginosa</i>	Endogeic ²		M	M	L									
	RTU3, RTU7	<i>Aporrectodea trapezoides</i>	Endogeic ⁴		L											
	Exo3	<i>Dendrobaena octaedra</i>	Epigeic ²		L											
	RTU6	<i>Dendrodrilus rubidus</i>	Epigeic ²			M										
	RTU4	<i>Eiseniella tetraedra</i>	Epigeic ²			M										
	Exo1	<i>Lumbricus rubellus</i>	Epigeic ²	L	M								L			
	YN7 Gold	<i>Megascolex laingii</i>	?	L	L											
	Exo5	<i>Octolasion cyaneum</i>	Endogeic ²	L	M							H	M			
	End8	<i>Octolasion lacteum</i>	Endogeic ²		M											
RTU5	Lumbricidae sp.	?				L										

¹Kim et al. 2015; ²www.earthwormsoc.org.uk/earthworm-information/earthworm-information-page-2; ³Garcia & Fragoso 2003; ⁴Crumsey et al. 2013.

Table S3. Synthetic classification of New Zealand earthworms based on their family and genus groups according to Sims and Gerard (1985), Galsby et al. (2009) and Buckley et al. (2012, 2015).

Phylum Order	Class Suborder						Subclass		Oligochaeta	
Annelida Haplotaxida							Clitellata Lumbricina			
Family	Megascolecidae						Lumbricidae		Glossoscolecidae	
Subfamily	Acanthodrilinae			Megascolecinae						
Genus	(17) ^a	129 ^b	2 ^c	(10) ^a	50 ^b	6 ^c	(8) ^a	17 ^c	(1) ^a	1 ^c
<i>Acanthodrilus</i>	1			<i>Amyntas</i>		3	<i>Allolobophora</i>	1	<i>Pontoscolex</i>	1
<i>Decachaetus</i>	2			<i>Aporodrilus</i>	2		<i>Aporrectodea</i>	5		
<i>Deinodrilus</i>	9			<i>Didymogaster</i>		1	<i>Dendrobaena</i>	1		
<i>Dinodriloides</i>	1			<i>Diporochoeta</i>	11		<i>Dendrodrilus</i>	1		
<i>Eodrilus</i>	9			<i>Megascolex</i>	2	1	<i>Eisenia</i>	2		
<i>Eudinodiloides</i>	1			<i>Megascolides</i>	22		<i>Eiseniella</i>	1		
<i>Hoplochaetina</i>	8			<i>Notoscolex</i>	2		<i>Lumbricus</i>	4		
<i>Leucodrilus</i>	4			<i>Perionyx</i>	4	1	<i>Octolasion</i>	2		
<i>Maoridrilus</i>	29			<i>Plutellus</i>	3					
<i>Microscolex</i>	5	2		<i>Spenceriella</i>	4					
<i>Neochaeta</i>	2									
<i>Neodrilus</i>	5									
<i>Octochaetus</i>	14									
<i>Perieodrilus</i>	4									
<i>Plagiochaeta</i>	3									
<i>Rhododrilus</i>	31									
<i>Sylvodrilus</i>	1									

^aTotal number of genus; ^bTotal number of native species; ^cTotal number of exotic species.

References

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