

Supplementary Materials

Appendix S1. Summary of the physical, chemical, and biological attributes of the seven study sites.

Site	Aspect (°)	Slope (°)	Physiography	Mean top height (m)	Percent ground cover ¹					Litter depth (mm)	Soil pH	Soil organic matter (%)	Soil chemistry ²				
					[V]	[M]	[L]	[S]	[R]				[K]	[Ca]	[Mg]	[Na]	[N]
Tapotupotu (A)	160	20	Back-slope	9	[10]	[0]	[55]	[35]	[0]	15	6.2	7.4	[0.6]	[15.7]	[12.4]	[1.2]	[279]
Tapotupotu (B)	205	1	Terrace	7	[29]	[1]	[30]	[40]	[0]	9	5.8	8.2	[0.9]	[16.4]	[15.5]	[1.4]	[262]
Shenstone Block	197	8	Foot-slope	7	[39]	[1]	[59]	[1]	[0]	56	5.5	4.3	[0.3]	[2.6]	[2.5]	[0.3]	[126]
Kohuroa (B)	137	3	Deep gully	13	[10]	[0]	[67]	[20]	[3]	31	5.7	7.9	[0.7]	[12.4]	[8.3]	[0.6]	[243]
Te Huka (B)	200	16	Back-slope	10	[5]	[0]	[79]	[15]	[1]	16	6.2	8.7	[1.1]	[13.9]	[12.1]	[0.9]	[462]
Hauptototo	120	19	Deep gully	12	[2]	[1]	[73]	[20]	[4]	24	6.3	7.9	[1.4]	[14.9]	[9.0]	[0.4]	[317]
North Cape	182	11	Shallow gully	7	[30]	[0]	[56]	[10]	[4]	47	5.7	7.5	[0.9]	[9.2]	[8.2]	[1.2]	[330]

¹Percentage of the ground cover consisting of herbaceous vegetation under 30 cm (V), moss (M), leaf litter (L), bare mineral soil (S) and rock (R).

²Concentration of soil elements. Potassium (K), calcium (Ca), magnesium (Mg) and sodium (Na) measured in meq 100⁻¹ g soil, and available nitrogen (N) measured in kg ha⁻¹.

Appendix S2. Total numbers of spiders (adult/juvenile) of all species/taxa captured during the four seasonal pitfall trapping surveys at the seven native forest sites across Te Pahi Ecological District. The '-' symbol indicates species was not detected at the site; na = not applicable. Sites are arranged from west to east.

Family	Species (status) ¹	Site							Total
		Tapotupotu (A)	Tapotupotu (B)	Shenstone Block	Kohuroa (B)	Te Huka (B)	Hauptototo	North Cape	
Porrhothelidae	<i>Porrhothele</i> sp. (NZ)	5/2	1/1	-	2/2	3/1	3/4	-	14/10
Nemesiidae	<i>Stanwellia hollowayi</i> (E)	5/8	2/4	8/14	-	1/6	-	4/6	20/38
Anapidae	<i>Holarchoa novaeseelandiae</i> (NZ)	-	-	-	-	1/0	2/1	1/0	4/1
	<i>Rayforstia salmoni</i> (NZ)	-	9/0	-	-	-	-	-	9/0
	<i>Zealanapis</i> sp. (NZ)	7/0	-	-	-	-	-	-	7/0
Desidae	<i>Cambridgea foliata</i> (NZ)	1/0	1/0	-	-	-	-	-	2/0
	<i>Cambridgea reinga</i> (E)	4/0	15/1	6/1	3/0	2/0	0/1	5/2	35/5
	<i>Cambridgea</i> juv. ²	na/2	na/1	na/1	na/2	-	-	na/2	na/8
	<i>Paramamoea pandora</i> (E)	4/9	4/2	-	4/10	0/1	-	-	12/22
	<i>Paramamoea ?parva</i> (NZ)	-	-	-	1/0	-	-	-	1/0
	<i>Reinga apica</i> (NZ)	-	0/1	-	1/2	-	2/0	1/0	4/3
	<i>Reinga waipoua</i> (NZ)	-	3/1	-	-	-	-	-	3/1

Appendix S2. Continued.

Family	Species (status) ¹	Site							Total
		Tapotupotu (A)	Tapotupotu (B)	Shenstone Block	Kohuroa (B)	Te Huka (B)	Hauptoto	North Cape	
Gnaphosidae	<i>Hypodrassodes apicus</i> (E)	9/0	15/0	7/0	9/0	3/0	3/0	22/0	68/0
	<i>Hypodrassodes maoricus</i> (NZ)	-	1/0	1/0	-	-	-	-	2/0
	<i>Hypodrassodes</i> juv. ²	na/31	na/23	na/11	na/21	na/17	na/24	na/47	na/174
Hahniidae	<i>Alistra reinga</i> (E)	-	-	-	-	-	-	3/3	3/3
	<i>Kapanga</i> sp. (U)	-	-	8/1	5/0	-	-	6/3	19/4
	<i>Rinawa</i> sp. (U)	10/5	7/0	-	56/8	68/50	78/22	-	219/85
	<i>Hahniidae</i> juv. ²	na/1	-	na/3	na/2	na/2	na/39	na/5	na/52
Linyphiidae	<i>Dunedinia denticulata</i> (NZ)	-	14/0	-	-	-	-	12/2	26/2
	<i>Haplinis</i> sp. (NZ)	-	1/0	-	-	-	-	-	1/0
	<i>Laetesia minor</i> (NZ)	-	-	-	0/1	-	-	-	0/1
	<i>Maorineta minor</i> (NZ)	-	-	-	-	2/0	-	-	2/0
	<i>Novalaetesia anceps</i> (E)	-	-	-	-	2/0	-	-	2/0
	<i>Pseudafroneta lineata</i> (NZ)	-	-	-	1/0	-	-	-	1/0
Lycosidae	<i>Artoria hospita</i> (NZ)	-	1/0	-	-	-	6/26	-	7/26
Mimetidae	<i>Australomimetes</i> sp. (T)	0/12	0/9	-	0/1	0/8	0/10	0/22	0/62
Mysmenidae	<i>Mysmena</i> sp. (T)	-	-	-	-	-	6/0	-	6/0
Orsolobidae	<i>Tangata waipoua</i> (NZ)	-	-	-	-	1/0	0/1	-	1/1
	? <i>Waipoua</i> sp. (U)	-	-	-	-	1/0	-	-	1/0
Physoglenidae	<i>Pahoroides balli</i> (E)	-	-	-	-	4/0	2/0	-	6/0
Pisauridae	<i>Dolomedes minor</i> (NZ)	-	-	0/1	-	-	-	0/2	0/3
Salticidae	' <i>Trite</i> ' <i>auricoma</i> (NZ)	1/3	1/1	0/2	1/1	1/2	3/4	3/6	10/19
Theridiidae	<i>Episinus</i> sp. (NZ)	0/4	1/10	-	-	0/1	-	-	1/15
	<i>Euryopsis nana</i> (NZ)	-	-	3/3	-	-	-	0/1	3/4
	<i>Euryopsis</i> sp. (NZ)	-	1/0	-	-	-	-	-	1/0
	<i>Pholcomma</i> sp. (NZ)	2/0	1/0	2/0	2/0	-	-	1/0	8/0
	<i>Theridion zantholabio</i> (NZ)	0/3	1/0	0/5	-	-	-	-	1/8
	Undescribed therediid (U)	-	-	-	1/0	5/2	-	-	6/2
Thomisidae	<i>Sidymella angularis</i> (NZ)	-	-	-	0/2	1/0	-	2/1	3/3
Toxopidae	<i>Gasparia</i> sp. (U)	-	-	-	1/0	-	-	-	1/0
	<i>Gasparia tepakia</i> (E)	-	-	1/0	-	-	-	-	1/0
	<i>Hulua convoluta</i> (NZ)	3/0	-	-	10/3	-	6/4	-	19/7

Appendix S2. Continued.

Family	Species (status) ¹	Site							Total
		Tapotupotu (A)	Tapotupotu (B)	Shenstone Block	Kohuroa (B)	Te Huka (B)	Haupatoto	North Cape	
Zoropsidae	<i>Uliodon</i> sp. (E)	13/5	1/0	1/2	6/6	20/8	25/9	4/2	70/32
	Undescribed zoropsid (U)	-	3/0	2/0	7/1	3/0	5/3	9/2	29/6
	Zoropsidae juv. ²	na/20	na/22	na/10	na/39	na/60	na/76	na/16	na/243
Indet. juv. ³		na/17	na/11	na/8	na/55	na/5	na/37	na/16	na/149
Total (A/J) ⁴		64/122	83/87	39/62	110/156	118/163	141/261	73/138	628/989
Total ⁴		186	170	101	266	281	402	211	1617

¹NZ = New Zealand endemic species; E = Endemic to Te Paki Ecological District; U = unknown distribution, currently only known from Te Paki ecological district and assumed to be a New Zealand endemic; T = taxonomic and distributional status indeterminate.

²Juveniles identifiable to family or genus but not to species.

³Juveniles not identifiable to family but assumed to be part of the epigeal spider fauna.

⁴Total epigeal spider fauna trapped (A = adult; J = juvenile).

Appendix S3. Notes on spiders of uncertain taxonomic status collected during this study. Refer to the World Spider Catalog (2022) for further details.

Porrhothelidae

Porrhothele sp.: Although *Porrhothele quadrigyna* has been reported from Tom Bowling Bay to Great Barrier Island, only the female has been described. On the basis of variations in the female genitalia over that range, more than one species might be present, so we have taken a conservative approach.

Anapidae

Zealanapis sp.: Most of the described species of *Zealanapis* have an ovoid abdomen, but four have conical abdomens. Of these four, two are known from the South Island; the other two are *Z. insula*, known from male and female from the Noises Islands in the Hauraki Gulf, and *Z. kuscheli*, known from Lynfield, Auckland (male) and Fielding (female). The specimens from Te Paki have a conical abdomen and may represent an undescribed species.

Hahniidae

Kapanga sp.: This might be *K. manga*, described from Mount Mangamuka, known only from the holotype female. The only other North Island species, *K. festiva*, is from Masterton.

Rinawa sp.: The species at Te Paki is much larger than the four described species of *Rinawa* (three from the South Island, one from southern North Island). Males of *Rinawa* have “numerous, strong, smooth and erect, curved bristles” on the dorsal surface of the abdomen.

Linyphiidae

Haplinis sp.: Probably a *Haplinis* sp., from the presence of sulci, chelicerae with 6 teeth on promargin, three central ones large, others small. Five small teeth on retromargin. Genitalia resemble those of *H. subdola* (among others). Insufficient material to identify further.

Mimetidae

Australomimetes sp.: All New Zealand mimetids are included in the genus *Australomimetes*. As only immatures were caught in the pitfall traps it is not possible to place the immatures to genus, let alone species.

Mysmenidae

Mysmena sp.: This undescribed species closely resembles two Australian species in form but differs in colour.

Orsolobidae

?*Waipoua* sp.: Pattern on carapace and uniform colour on abdomen place it possibly as *W. toronui* or *W. hila*, the two species recorded from Waipoua Forest. Just one female was caught.

Salticidae

‘*Trite*’ *auricoma*: This is not a true *Trite* as it is fissidentate and has a distinctive male palp and epigynum. This species should be placed in a new genus. Almost all of the salticids collected at Te Paki belonged to this species.

Theridiidae

Episinus sp.: Few specimens, mainly immature, were caught.

Euryopsis sp.: An undescribed species, with a white band around the margin of the anterior half of the abdomen; widely distributed in the North Island.

Pholcomma sp.: This is probably *Pholcomma antipodiana*, but another species (*Pholcomma hickmani*) that is very similar, or identical, has also been described. Until the identity of these is resolved we refer to this as *Pholcomma* sp.

Undescribed theridiid: This species is slightly larger than *Pholcomma* sp. and has a row of pale, interconnected dots down abdominal mid-line and shorter rows dorsolaterally. In darker specimens the dots are larger and almost merge. This may be the same undescribed theridiid associated with the webs of cyatholipids.

Toxopidae

Gasparia sp.: The appearance of the epigynum does not match any of the described species, so it may be an undescribed species.

Zoropsidae

Uliodon sp.: This is in the “*Uliodon albopunctatus*” group and is probably a Te Paki endemic. Female epigynum has a long median lobe, without setae; male palp without dorsal tibial macroseta; tegular apophysis not sclerotised.

Undescribed Zoropsid: Lacks the diagnostic features given for *Uliodon*. Smaller than the Te Paki species of *Uliodon*. Female epigynum with short median lobe; male palp with dorsal tibial macroseta, tegular apophysis sclerotised and protruding.