

Spiders of the Family Archaeidae from Australia and New Zealand

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Abstract

THREE new species of Archaeid spiders are described, one from Australia and two from New Zealand, and two new genera are established. The male pedipalp of *Pararchaea rubra* (Forster) is described and figured and new locality records are given for previously known species.

INTRODUCTION

THE first definite record of an archaeid spider from New Zealand was made by Wilton (1946) who described a species from the Wairarapa, for which he established the genus *Zearchaea*. Hewitt (1919) mentioned earlier, in a footnote to his paper on South African spiders, in which he described an archaeid from South Africa, that Mr. H. R. Hogg had informed him that he had seen specimens of *Mecysmauchenius* from New Zealand. Wilton (1946) considered that this record might have been based on the male of *Landana lautiuscula* Dalmas, but in view of the fact that Hogg had for some time been receiving arachnid material from both Canterbury and the Hollyford Valley region it seems possible that he may have seen specimens of the species described below as *Pararchaea alba*, which is very similar in appearance to *Mecysmauchenius*.

A single species is known from Australia, *Archaea hickmani* Butler, recorded from Victoria, which appears to differ considerably from the species described below from Queensland. The present author (Forster, 1949) described three new species from New Zealand, two of which were placed in *Zearchaea* Wilton and one in *Archaea* Koch. In the present paper two new genera are established. *Pararchaea* n gen contains three species, two of which are described herein as new, while *Zearchaea rubra* Forster is transferred from *Zearchaea* to this genus. The species previously described as *Archaea novaeseelandiae* Forster is now considered to be the type species of a new genus *Holarchaea*.

The close affinity shown between *Pararchaea binnaburra* n sp. from South Queensland and *Pararchaea alba* n sp. from the South Island of New Zealand is of considerable interest.

ACKNOWLEDGMENTS

I am most grateful to Mr J S Dugdale, who has collected moss and leafmould samples from many areas where it was considered that archaeid spiders might exist, and also to Miss B Holloway for permission to examine a specimen collected by her in the Tararua Ranges. To Dr. T. E. Woodward, of the University of Brisbane, I am deeply indebted for extensive collections of cryptozoic spiders from both New Zealand and Australia.

Family ARCHAEIDAE

Subfamily ARCHAEINAE

KEY TO THE NEW ZEALAND GENERA OF THE ARCHAEINAE

- | | |
|--|---|
| 1. Anterior and posterior pairs of eyes separated by a distance equal to less than the diameter of an AME. Tarsal "drums" absent | 2 |
| Anterior and posterior pairs of eyes separated by a distance which is much greater than the diameter of an AME. Tarsal "drums" present | |
| 2. Six spinnerets Tracheal spiracle absent | <i>Pararchaea</i> n.gen. |
| Two spinnerets Tracheal spiracle present | <i>Holarchaea</i> n.gen.
<i>Zearchaea</i> Wilton |

Genus *HOLARCHAEA* n gen.

Eight eyes; anterior median eyes smallest, spaced less than the diameter of an anterior median eye from the posterior median eyes. Carapace higher than wide but without a definite "neck". Chelicerae long and slender, with two small teeth; ventral lamella, lateral condyles and stridulating ridges absent. Fang long, equal to one half of the length of the chelicera. Maxillae arched over labium with scopulae and serrula. Labium slightly wider than long. Sternum as wide as long, truncated posteriorly, posterior pedal coxae separated by a distance approximately equal to their width. Legs 4 1 2 3, long and slender, without spines. Trichobothria on tibiae of all legs and metatarsi of legs 1-3; tibia 1 with three trichobothria. Three claws, tarsal drum lacking. Female pedipalp without claw. Male pedipalp with apophyses on tibia and patella, but not on cymbium. Embolus long and coiled. Six spinnerets, with colulus; tracheal spiracle lacking.

Genotype *Archaea novaeseelandiae* Forster, 1949

Holarchaea may be separated from *Archaea* by the absence of a "neck", the broad sternum, and the relative lengths of the legs. It may be separated from *Pararchaea* by the long slender legs and absence of a tarsal "drum", the shorter relative distance between the median pairs of eyes and the slender chelicera which lacks a ventral lamella. *Holarchaea* appears to be most closely related to *Zearchaea* with which it shares the relatively long legs, the absence of tarsal "drums", and the general grouping of the eyes, but is separated from it by possessing only three trichobothria on tibia 1, instead of four, and by the absence of a tracheal spiracle.

***Holarchaea novaeseelandiae* (Forster, 1949)**

1949 *Archaea novaeseelandiae* Forster, Rec. Cant. Mus. 5 (4), 200

This spider was originally recorded from the Mount Arthur District in Nelson, Homer and Caswell Sound.

New Records.

Okarito, ex. moss, December 7, 1949, R. R. Forster, 1 male, 1 female (C.M.A. 1076).

Genus *ZEARCHAEA* Wilton 1946

Eight eyes, anterior median eyes smallest, spaced less than the diameter of an anterior median eye from the posterior median pair. Carapace almost as wide as high, projecting forward slightly, without neck. Chelicerae relatively slender, with two small teeth on promargin, retromargin smooth, lateral boss and ventral lamella absent. Maxillae arched over labium, with scopulae and serrula. Labium

much wider than long Sternum slightly longer than wide, bluntly rounded posteriorly, fourth pair of pedal coxae separated by a distance equal to their approximate width. Legs slender. 1 4.2.3, or 4 1.2 3; three claws with onychia Trichobothria present on tibiae and metatarsi of all legs; tarsal "drum" absent. Female pedipalp without claw. Male pedipalp with an apophysis on tibia. sometimes on femur, cymbium without apophysis Posterior and median spinnerets reduced to minute eminences or absent; colulus minute; tracheal spiracle present

Genotype *Zearchaea clypeata* Wilton, 1946

As far as is known this genus is endemic to New Zealand, although it seems probable that representatives may in the future be found in Australia. The relationship of *Zearchaea* to overseas genera has been discussed previously (Wilton, 1946) I have retained *Zearchaea magna* Forster in this genus although it may be considered necessary at some later date to establish a further genus for its reception.

KEY TO THE SPECIES OF *Zearchaea*

- | | |
|---|----------------------------------|
| 1 Small, less than two millimetres in length, chelicerae uniformly slender | 2 |
| Relatively large, from two to four millimetres in length, chelicerae somewhat distended | <i>Zearchaea magna</i> Forster |
| 2. Carapace with three pairs of erect setae on the dorsal surface | <i>Zearchaea fiordensis</i> n.sp |
| Carapace without erect hairs on dorsal surface | <i>Zearchaea clypeata</i> Wilton |

***Zearchaea clypeata* Wilton, 1946**

1946. *Zearchaea clypeata* Wilton. Dom Mus. Rec Entom 1 (3): 21.

1949 *Zearchaea clypeata* Wilton Forster, Rec Cant Mus 5 (4): 200.

This species has been previously recorded from a number of localities in the southern portion of the North Island. In addition to listing further locality records for the North Island I am able to add a number of records from Canterbury, in the South Island

Previous Records

Mangarei, near Masterton; Solway, near Masterton; Rimutaka Range; One-puhi, Manawatu

New Records

Days Bay, Wellington, November 30, 1947, R R Forster, 1 female (C.M.A. 1059), Smith's Creek, Tararua Range, ex lichens, September 7, 1952. B. A. Holloway, 1 female (D.M. 2/1015); Lake Rubicon, Canterbury, ex. moss, November 9, 1950. R R Forster, one immature female (C.M.A. 1060); Hood's Bush, Malvern Hills, Canterbury, ex moss, May 3, 1953, R. R. Forster, 2 males. 1 female (C.M.A. 1061); Kowai Bush, Springfield, Canterbury, ex moss, May 18, 1952, J S Dugdale, 1 male, 1 female, 4 immature (C.M.A. 1062)

***Zearchaea magna* Forster, 1949**

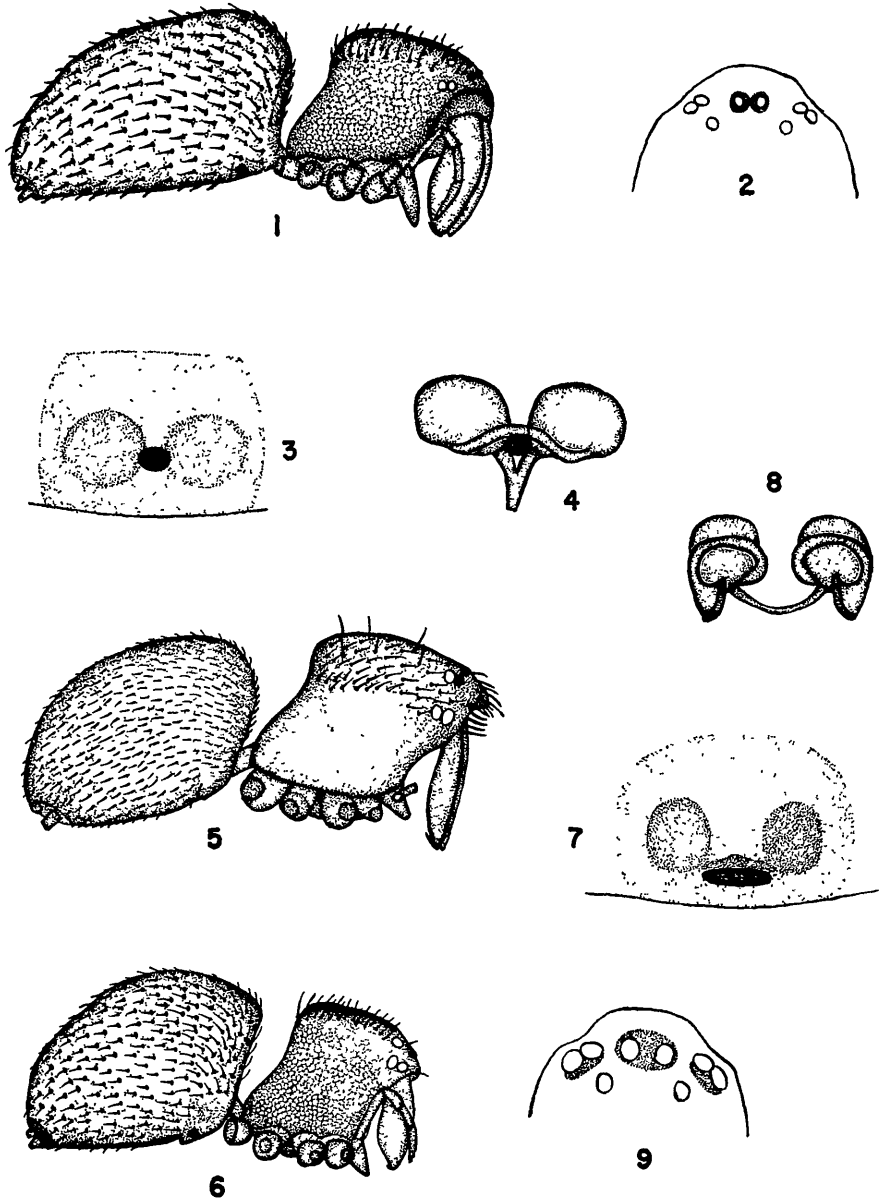
1949. *Zearchaea magna* Forster Rec. Cant. Mus. 5 (4): 193

Previous Records.

Takahe Valley, Fiordland; Eglinton Valley, Caswell Sound

New Records.

Lake Te Au, Esk Valley, beyond the South Fiord of Lake Te Anau, ex moss, January 12-24, 1953, R R Forster, 2 females, 8 immature (C.M.A. 1080),



TEXT-FIG 1.—FIGS. 1-4—*Parachaca alba* n gen n.sp. FIG 1—Side view of body of female FIG. 2—Eyes of male from above. FIG 3—Epigynum of female FIG. 4—Female genitalia from below (cleared) FIG. 5—*Zearchaea fiordensis* n.sp. Side view of body of male FIGS 6-9—*Parachaea binnavia* n gen. n.sp. FIG. 6—Side view of body of female FIG 7—Epigynum of female. FIG 8—Female genitalia from below (cleared) FIG. 9—Eyes of female from above.

Sealers Bay, Codfish Island, near Stewart Island, November 4, 1948, R. K. Dell (D.M. 2/1018).

Zearchaea fiordensis n.sp. Figs. 5, 10-12, 20-21

MALE

Measurements (in millimetres).

	Length of cephalothorax					0.805
	Width of cephalothorax					0.498
	Height of cephalothorax					0.498
	Length of abdomen					0.830
	Width of abdomen					0.664
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Leg 1	0.581	0.149	0.498	0.415	0.215	1.858
Leg 2	0.460	0.166	0.332	0.332	0.249	1.539
Leg 3	0.439	0.147	0.290	0.331	0.199	1.406
Leg 4	0.539	0.166	0.415	0.448	0.224	1.792
Palp	0.215	0.083	0.124		0.290	0.712
	Chelicera Length, 0.456					

Colour. Cephalothorax and appendages yellowish-brown, but clypeus reddish brown. Abdomen uniform creamy-white

Carapace (Fig. 5). Smooth, dorsal surface covered with small recumbent hairs as in *clypeata* but also with three pairs of erect hairs which are not present in *clypeata*. The shape of the carapace is similar to *clypeata*, as high as it is wide, slightly constricted but not forming a definite neck. The clypeus projects forward over the chelicerae, broad, bluntly pointed, height equal to $12/5$ of the diameter of an anterior median eye.

Eyes. Ratio of AME:ALE:PME:PLE = 5.7:6.6. The AME are separated from each other and from the ALE by a distance equal to twice the diameter of an AME. The lateral eyes are contiguous, while the anterior and posterior median eyes are sub-contiguous. The PME are separated from each other by $12/5$ and from the PLE by $11/5$ of the diameter of an AME. The median ocular quadrangle is wider behind than in front in the ratio of 7.5. The AME are black, remainder pearly-white

Chelicerae (Fig. 10). Long and relatively slender, clothed with serrate setae which, except for a large seta near the base, are uniformly small. There is a row of smooth setae along the promargin, with two small teeth as in *clypeata*. The retromargin is smooth. The fang is short and slightly curved near the base.

Maxillae. Lateral margins sub-parallel longer than wide at the base in the ratio of 9.7, arched over the labium, sub-contiguous. Serrula and distal scopula present

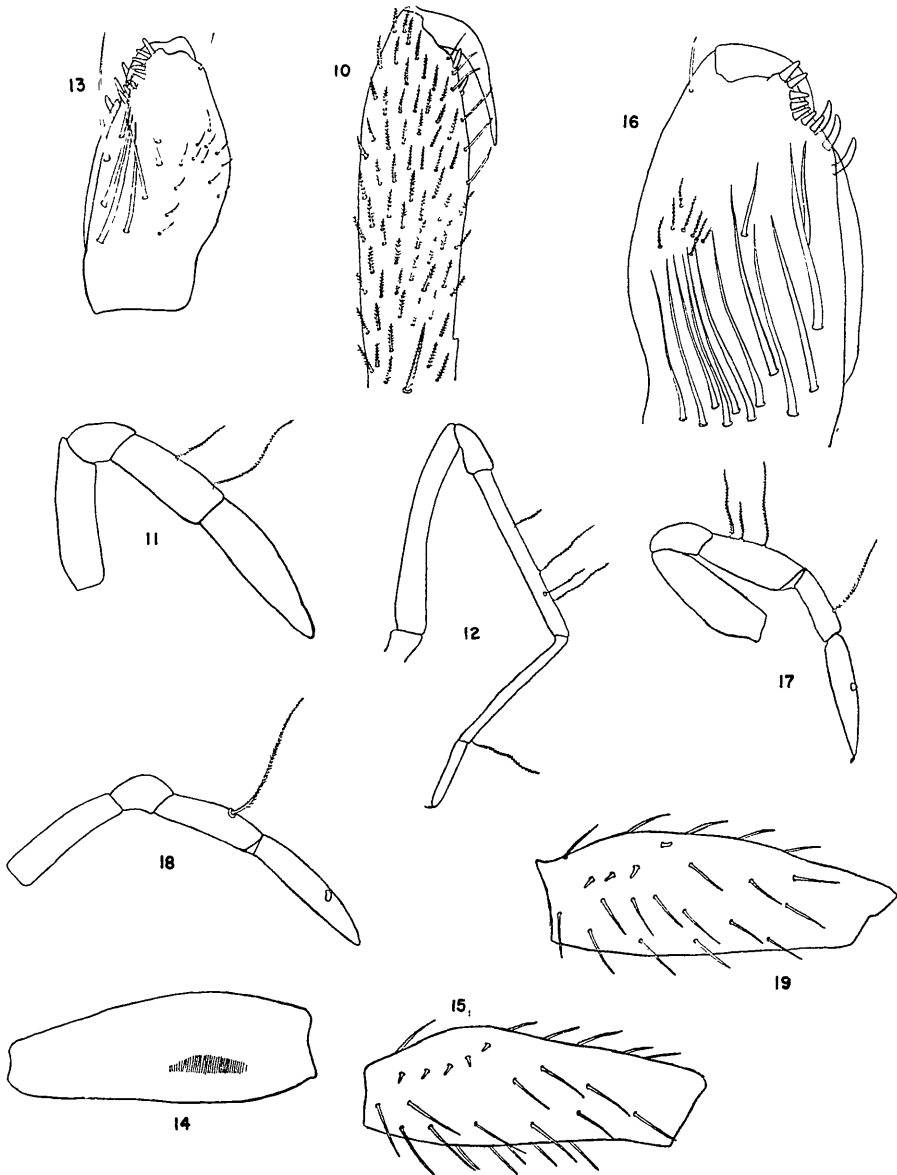
Labium. Nearly three times as wide as long, anterior margin rounded.

Sternum. Similar in appearance to *clypeata*, with raised sub-marginal ridges, longer than wide in the ratio of 7.5 and rounded posteriorly. The fourth pair of coxae are separated from each other by a distance which is equal to slightly less than their width.

Legs. 1.4.2.3. Relatively slender, clothed with small serrated setae. Legs 1, 2 and 4 are provided with four trichobothria on the tibiae and one on the sub-distal surface of the metatarsi. Leg 3 with three trichobothria on the tibia and one on the metatarsus. Tarsal drums absent. Three claws are present rising from a small onychium. The superior claws appear to be homogeneous, with three or four small teeth along the ventral surface. Inferior claw slender on tarsus 1

but stouter than the superior claws, although shorter, on legs 2-4 and armed with a single ventral tooth

Palps (Figs. 20-21). There is no apophysis on the femur as in *clypeata*, but there is a strong tibial apophysis present which is similar to that possessed by *clypeata* but much more strongly developed. Tibia with two long trichobothria on the dorsal surface. The cymbium is curved slightly down on the retromargin but is not armed with an apophysis. Tarsal drum lacking The genital bulb is



TEXT-FIG. 2—FIGS. 10-12—*Zearchaea foidensis* n.sp. FIG. 10—Chelicera of male FIG. 11—Female pedipalp (hairs not drawn). FIG. 12—First leg of female FIGS. 13-15—*Pararchaea binnaburra* n.gen. n.sp. FIG. 13—Female chelicera. FIG. 14—Prolateral surface of the second leg of the female showing the stridulating ridges. FIG. 15—Retrolateral surface of the first leg of the female showing the stridulating rods FIGS. 16-19—*Pararchaea alba* n.gen. n.sp. FIG. 16—Male chelicera FIG. 17—First leg of the female showing the stridulating rods

as figured and differs considerably from that of *clypeata*, which is refigured (Figs 22–23) to permit comparison

FEMALE						
Measurements (in millimetres).						
	Length of cephalothorax					0.745
	Width of cephalothorax					0.415
	Height of cephalothorax					0.415
	Length of abdomen					0.830
	Width of abdomen					0.604
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Leg 1	0.623	0.132	0.539	0.456	0.240	1.990
Leg 2	0.498	0.166	0.373	0.390	0.207	1.634
Leg 3	0.456	0.149	0.332	0.381	0.215	1.533
Leg 4	0.581	0.182	0.531	0.572	0.249	2.115
Palp	0.207	0.074	0.166		0.214	0.661
	Chelicera: Length, 0.456.					

The female is similar in colouration and general appearance to the male Legs 4 1 2 3. There are four trichobothria on the tibiae of legs 1, 3 and 4 and 3 on the tibia of leg 2. There is a single trichobothrium on the sub-distal surface of the metatarsus of all legs. The pedipalp is as shown in Fig. 11, with two trichobothria on the tibia and tarsal claw lacking.

Types Holotype male (C.M.A. 1087), allotype female (C.M.A. 1088) and four immature paratype specimens (C.M.A. 1089), from Lake Manapouri, ex moss, January 23, 1951, R. R. Forster. Further paratypes from Lake Te Anu, Esk Valley, ex moss, April 6, 1954, R. R. Forster, 1 male, 4 females, 2 immature (C.M.A. 1085, D.M. 2/1019), (one female will also be deposited in the American Museum of Natural History, New York).

Records

Arthur Pass, ex moss, April 6, 1954, Griffiths, 1 male, 2 immature (C.M.A. 1086); Cass, Canterbury, ex leafmould, July 10, 1949, H. B. Wisely, 1 female (C.M.A. 1009); Lake Sumner, ex moss, April 13, 1952, J. S. Dugdale, 1 female (C.M.A. 1063).

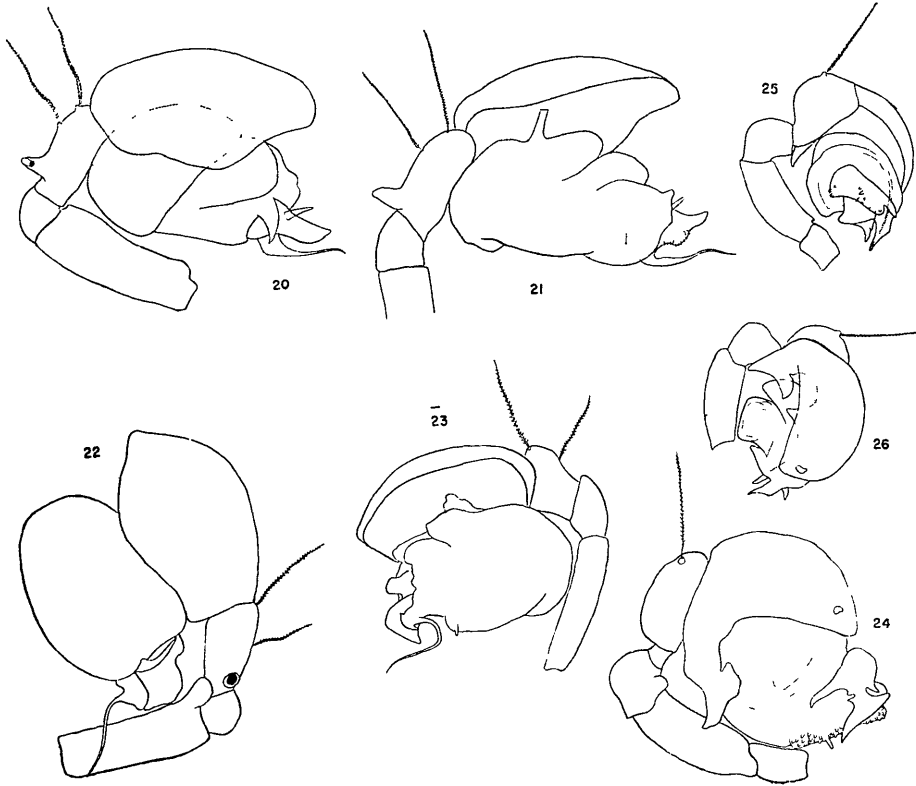
Remarks. This species is very closely related to *Z. clypeata* Wilton from which it may be separated by the structure of the male pedipalp and female reproductive organs, and by the presence of three pairs of erect hairs on the dorsal surface of the carapace.

Genus PARARCHIAEA n.gen.

Eight eyes, anterior median eyes separated from the posterior median eyes by a distance which is equal to more than four times the diameter of an anterior median eye. Clypeus broad, terminating in an obtuse point. Carapace nearly as high as wide, projecting forward, but not constricted to form a "neck". Chelicerae relatively stout, with teeth on both pro- and retromargins, transparent lamella on ventral surface, lateral bosses absent. Maxillae arched over labium, with scopula and serrula. Labium much wider than long. Sternum wider than long, bluntly rounded posteriorly. coxae 4 separated by a distance approximately equal to the width of one of them. Legs relatively short and stout. 4 1 2 3, three tarsal claws without onychia. Tarsal drum present on all tarsi. Trichobothria present on tibiae and metatarsi of all legs, three on tibia 1. Pedipalps of both male and female with a single trichobothrium on tibia and "drum" on tarsi.

Cymbium of male pedipalp with strongly developed apophysis. Tracheal spiracle present; six spinnerets; colulus absent.

Genotype *Pararchaea alba* n.sp.



TEXT-FIG. 3.—FIGS 20-21—*Zearchaea fiordensis* n.sp. FIG 20—Retrolateral view of the male pedipalp. FIG. 21—Prolateral view of the male pedipalp. FIGS 22-23—*Zearchaea clypeata* Wilton FIG. 22, retrolateral view of the male pedipalp, FIG. 23, prolateral view of the male pedipalp FIG 24—*Pararchaea rubra* (Forster) Retrolateral view of the male pedipalp FIGS 25-26—*Pararchaea alba* n.gen. n.sp FIG 25—Prolateral view of the male pedipalp FIG 26—Retrolateral view of the male pedipalp.

Pararchaea shows some affinity with the South American genus *Mecysmauchenius* in the shape of the carapace, the presence of an apophysis on the cymbium, the structure of the chelicera and the development of the epigynum, but is separated from it by the presence of eight eyes and six spinnerets as compared with the six eyes and two spinnerets which are characteristic for *Mecysmauchenius*. When compared with the remaining two genera known from New Zealand it is more closely related to *Zearchaea* than *Holarchaea*, but may be separated from both of these genera by the much greater distance between the median pairs of eyes, the structure of the chelicerae, the relatively short and stout legs, and the presence of a tarsal drum.

Two new species, one from New Zealand and one from Australia, are described below, and *Zearchaea rubra* Forster is transferred to this genus. The close relationship shown between the Australian species *P. binnaburra* and *P. alba* is of great interest in that it provides yet another indication of the

close affinity of a section of the Australian cryptozoic fauna with that of New Zealand.

KEY TO THE SPECIES OF PARARCHAEA

- | | | | |
|----|--|---------|------------------------------------|
| 1 | Abdomen uniform creamy white | | 2 |
| | Abdomen orange yellow with reddish shading | | <i>Pararchaea rubra</i> (Fors) |
| 2. | Femur of first leg with five small peg-like spines on the retrolateral surface | | <i>Pararchaea binnaburra</i> n.sp. |
| | Femur of first leg with four small peg-like spines on the retrolateral surface | | <i>Pararchaea alba</i> n.sp. |

Pararchaea alba n.sp. Figs. 1-4, 16-19, 25-26.

MALE

Measurements (in millimetres).

	Length of cephalothorax	..	0.631			
	Width of cephalothorax		0.581			
	Height of cephalothorax		0.469			
	Length of abdomen		0.913			
	Width of abdomen		0.581			
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Leg 1	0.415	0.182	0.315	0.199	0.332	1.443
Leg 2	0.373	0.159	0.315	0.199	0.298	1.344
Leg 3	0.298	0.116	0.249	0.196	0.249	1.108
Leg 4	0.456	0.165	0.381	0.224	0.290	1.516
Palp	0.166	0.083	0.124		0.215	0.588
	Chelicera Length, 0.498					

Colour. Cephalothorax and appendages pale-brown. Abdomen creamy white, but the small plates at the base of each seta and the muscle attachments are pale-brown.

Carapace (Fig 2) Wider than high in the ratio of 6.5; when viewed from the side the ocular area is seen to be gently rounded, but the dorsal surface is almost flat, rounded posteriorly before sloping down steeply posteriorly. The posterior slope is slightly indented, but not sufficiently to form a "neck". The surface of the carapace, particularly the posterior and lateral surface, is coriaceous. A number of small, erect setae are present on the dorsal surface, but absent elsewhere

Eyes (Fig. 2). Relatively small, ratio of AME.ALE.PME.PLE = 4.8:9.8. The eye group extends over almost the entire width of the carapace in this region. The AME are each surrounded by a ring of black pigment which meets in the mid-line. AME black, remainder pearly-white.

AME separated from each other by 14/4 and from the ALE by 22/4 of the diameter of an AME. ALE and PLE are contiguous. PME separated from each other by 34/4 and from the PLE by 12/4 of the diameter of an AME. PME separated from the AME by a distance equal to 18/4 of the diameter of an AME. The median ocular quadrangle is wider behind than it is in front in the proportion of 26:11 and longer than its posterior width in the proportion of 31.52. The clypeus is broad, narrowing to a blunt median point, height equal to two and a-half times the diameter of an AME.

Chelicerae (Fig 16). Stout, slightly more than twice as long as its greatest width. Promargin with three strong, curved, rod-like teeth; retromargin with seven similar but smaller teeth. There is a thin, transparent, erect lamella extending down about two-thirds of the ventral surface. Prolateral surface with from 12-14 strong smooth setae and a group of small serrated setae. The fangs

are relatively short and curved. There are well developed "stridulating ridges" on the retrolateral surface.

Maxilla. Sub-rectangular, directed across the labium, longer than the width at the base in the ratio of 5.3. with a thick distal scopula. Serrula present

Labium. Almost three times as wide as long, indented apically where there is a thin scopula.

Sternum. Coriaceous, slightly convex. scutiform with lateral margins indented opposite the pedal coxae. Longer than wide in the ratio of 9.8, bluntly rounded posteriorly between the fourth pair of coxae, which are separated by a distance which is equal to slightly more than their width.

Legs. 4.1.2.3. Relatively stout, without spines, but clothed with fine hairs which are generally smooth but tend to be serrated on the metatarsi and tarsi. Legs 1-3 with three trichobothria on the tibiae and one on the metatarsi: leg 4 with four on the tibia and one on the metatarsus. Tarsi stout, tapering distally, each with a "drum" on the dorsal surface immediately before the mid-point. Three tarsal claws, superior homogeneous with a few small teeth, inferior with a single ventral tooth. There is a row of four peg-like spines on the retrolateral surface of the femur of leg 1 but there appears to be no trace of the corresponding stridulating ridges on the prolateral surface of femur 2 as described below for *binnaburra*.

Palps (Figs 25-26) Patella and tibia smooth, without apophyses. Tibia with a single trichobothrium on the mid-dorsal surface. Cymbium with a prominent process extending down from the retrolateral surface as shown in Fig 26, and with a prominent "drum" on the sub-distal surface. Genital bulb relatively complex as shown in Fig 25.

Abdomen. Ovoid, clothed with short, smooth setae, each of which rises from a small sclerotic plate. There are two further pairs of larger sclerotic plates on both the dorsal and ventral surfaces where abdominal muscles are attached. The epigynal area is covered by a sclerotic plate which extends dorsally to enclose the petiolus. Six spinnerets, median and posterior pairs small, colulus absent. The spinnerets are enclosed by a sclerotic ring in some specimens but in others it is reduced to a small area in front of the spinnerets on the ventral surface where the spiracle opens.

FEMALE

Measurements (in millimetres)

	Length of cephalothorax	0.788				
	Width of cephalothorax	0.763				
	Height of cephalothorax	0.622				
	Length of abdomen	0.954				
	Width of abdomen	0.792				
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Leg 1	0.415	0.157	0.332	0.207	0.340	1.451
Leg 2	0.356	0.132	0.290	0.190	0.315	1.283
Leg 3	0.332	0.132	0.249	0.166	0.249	1.128
Leg 4	0.491	0.166	0.390	0.240	0.323	1.610
Palp	0.199	0.074	0.149		0.190	0.612
	Chelicera Length, 0.415					

The female is very similar to the male in general appearance and structure. Only the following points need mention. The length of the palp is equal to approximately one and a-half times the length of the femur of the first leg.

A single trichobothrium on the tibia, tarsus with "drum" but lacking a claw. (Fig. 18.) Chelicerae without stridulating ridges. Epigynum as shown in Figs. 3, 4.

Types. Holotype male (C.M.A. 1070), Allotype female (C.M.A. 1071), two male, six female paratypes (C.M.A. 1072, D.M. 2/1017, and American Museum of Natural History, New York), Lake Te Anau, Esk Valley, beyond the South Fiord of Te Anau, ex moss, 12-14 January, 1953, R. R. Forster. Lake Manapouri, ex moss, January 23, 1951, R. R. Forster, 1 male, 1 female (C.M.A. 1067).

Records Lake Marion, Kiwi Valley, near Lewis Pass, ex moss. November 14, 1949, R. R. Forster, 1 female (C.M.A. 1065); Mount Grey, Canterbury, ex moss, March 27, 1953, R. R. Forster, 1 female (C.M.A. 1066); Moana, Westland, ex moss, September 3, 1951, H. B. Wisely, 1 female (C.M.A. 1068).

Pararchaea binnaburra n.sp. Figs. 6-9, 13-15.

FEMALE

Measurements (in millimetres).

	Length of cephalothorax						0.581
	Width of cephalothorax						0.456
	Height of cephalothorax						0.431
	Length of abdomen						0.954
	Width of abdomen						0.747
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total	
Leg 1	0.381	0.149	0.282	0.166	0.323	1.301	
Leg 2	0.299	0.141	0.282	0.166	0.290	1.178	
Leg 3	0.332	0.124	0.249	0.149	0.240	1.094	
Leg 4	0.456	0.174	0.340	0.232	0.332	1.534	
Palp	0.166	0.058	0.124		0.174	0.522	
	Chelicera: Length, 0.399.						

Colour. Carapace, sternum, chelicerae and legs dark-brown. Abdomen creamy-white, with small brown sclerites at the base of the hairs.

Carapace (Fig. 6). The eyes occupy almost the entire width of the carapace in that region. When viewed from the side the carapace is seen to slope gently back from the eyes to reach its greatest height on the posterior margin before sloping steeply down. The posterior surface of the carapace is slightly indented but not sufficiently to form a "neck". The entire surface is coriaceous, with small hairs on the dorsal surface.

Eyes (Fig. 9) The ratio of AME:ALE:PME:PLE = 5:6.11:6. The AME are whitish and are enclosed by an oval black area which does not have the appearance of two discrete areas as in *alba*. The AME are separated from each other by a distance equal to 4/5 of their diameter and from the ALE by a distance equal to their width. The lateral eyes are contiguous. The PLE are separated from the PME by a distance equal to 6/5 of the diameter of an AME. The PME are separated from each other by 11/5 and from the AME by 3/5 of the diameter of an AME. The median ocular quadrangle is wider behind than in front in the ratio of 19:12. The clypeus is broad, similar in shape to *alba*, but the height is only equal to the diameter of an AME.

Chelicerae (Fig. 13). Stout, similar in appearance to *alba*, with three strong teeth on the retromargin but with eight smaller teeth on the promargin. There is a group of strong, smooth setae on the prolateral surface as in *alba*, and a group of small hairs, but these latter appear to be smooth. A thin, erect, trans-

parent lamella extends down the median two-thirds of the ventral surface. The fang is short and slightly curved.

Maxillae. Longer than wide at the base in the ratio of 5:3, converging over labium, with thick distal scopula. Serrula distinct.

Labium. Three times as wide as long, distal margin indented, provided with a thin scopula.

Sternum. Coriaceous, scutiform, slightly indented laterally at bases of the pedal coxae; longer than wide in the ratio of 6:5. The posterior margin is bluntly rounded, terminating between coxae 4, which are separated from each other by a distance equal to slightly more than their diameter.

Legs. 4:1:2:3. Relatively stout, without spines, clothed with smooth setae, which, however, tend to be slightly serrate on the metatarsi and tarsi, particularly on the ventral surfaces of the segments. Legs 1-3 with three trichobothria on the tibia and one on the metatarsus. Leg 4 with four trichobothria on the tibia and one on the metatarsus. There is a tarsal "drum" on all tarsi, subproximal in position. There is a row of five small peg-like spines on the retro-lateral surface of the femur of the first leg (Fig. 15) and number of fine ridges forming a stridulating organ on the prolateral surface of the femur of the second leg (Fig. 14). Three claws, homogeneous, superior claws with from 3-4 small teeth on the ventral surface, inferior claw with a single ventral tooth.

Palps. Somewhat less than one and a-half times the length of the femur of the first legs, with a single trichobothrium near the mid-point of the tibia. Tarsal "drum" present but claw lacking.

Abdomen. Ovoid, clothed with short smooth setae, each of which rises from a small sclerotic plate. There are two pairs of small sclerotic plates on both dorsal and ventral surfaces. Six spinnerets, posterior and median pairs smallest, enclosed by a wide sclerotic ring from which the spiracle opens on the ventral surface. The epigynum is as shown in Figs. 7, 8.

Types. Holotype female, Binna Burra, Lamington Plateau, South Queensland, from leafmould from rain forest, September 7, 1952, T. E. Woodward, in Queensland Museum, Brisbane. Paratype female, same data, in Canterbury Museum (C.M.A. 1078).

Remarks. This species is very closely related to *P. alba* from the South Island of New Zealand. It may be separated from it by the relatively larger size of the anterior median eyes in relation to the other eyes, the anterior median eyes of *binnaburra* being almost equal in size to the lateral eyes as compared with *alba* where the anterior median eyes are only one half of the size of the lateral eyes.

Pararchaea rubra (Forster, 1949)

1949 *Zearchaea rubra* Forster. Rec. Cant. Mus. 5 (4). 197. Fig. 24

This species was originally placed by the present author in *Zearchaea* Wilton, but it should undoubtedly be now transferred to *Pararchaea* Forster. It may be readily separated from both *alba* and *binnaburra* by the bright orange-yellow abdomen which contrasts strongly with the creamy-white abdomens of the latter two species. Dr. T. E. Woodward has forwarded to me an adult male specimen of this species which he collected from Little Barrier Island. In addition to providing an interesting extension to the known range of the species, this specimen has permitted the figuring and description of the male pedipalp,

which was not possible earlier owing to the immaturity of the male specimens available.

Male Palp (Fig. 24). There is a short but broad apophysis on the retrolateral surface of the patella. Apophyses are absent from the femur and tibia. Tibia with a single trichobothrium on the dorsal surface. Cymbium with a strongly developed, irregularly shaped process on the retrolateral margin which extends down below the level of the genital bulb. The genital bulb is as figured.

Previous Records.

Maropapa River, Lake Waikaremoana.

New Records.

Raorikia, Wanganui, October 19, 1947, collector unknown, 2 immature males (C.M.A. 1084); Little Barrier Island, Summit Track, 2,200-2,300 feet, ex moss, November 30, 1952, T. E. Woodward, 1 male (C.M.A. 1064).

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