Types of Parastacidae (Crustacea: Decapoda) held in the Museum of Victoria

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Type designations, identifications, and locality labels of type specimens of 40 nominal species of Parastacidae held in the Museum of Victoria are reported and some problems over type status resolved.

Introduction

The Australian freshwater crayfish are placed in the family Parastacidae. The fauna is diverse with 10 genera and about 100 valid species.

The Museum of Victoria is a major repository of parastacid specimens. Its collection contains a significant amount of material from the family. Until 1983 these collections were part of the National Museum of Victoria. Only a few parastacid types were registered before 1980. As neither Smith nor Clark nominated any types and thus all the material which he or they examined has syntype status. The material on which he worked was not returned to the Museum of Victoria until 1920. In several parts of the collection there are labels which state (in part) “Specimens named from descriptions, and labelled by Assistant at Oxford Museum” (our emphasis.) Thus there are none of Smith’s own labels with specimens. These labels from Oxford are hand-written in ink on poor quality paper which is disintegrating (“Oxford label” in text).

It seems that when the material was unpacked, a staff member of the National Museum of Victoria wrote labels in the following style (referred to as “Smith labels”):

Each label has locality and collecting data hand-printed on one side, and on the other side, the identification of the specimen written in script. The labels were then tied on to the specimen which was wrapped in gauze, together with any other labels which may have accompanied it, and stored in a large jar with other similarly packed specimens.

Not all this material can be readily identified. Because of the method of bulk storage, and subsequent use of the specimens, labels and specimens have become separated and mixed over the years.

Parastacid types of G. W. Smith

Smith (Smith, 1912; Smith and Schuster, 1913) did not nominate any types and thus all the material which he or
which gives their status as type(s) quite clearly. Specimens from other localities were not labelled as types by Clark but may have her identification label with them.

Much of the material examined by Clark cannot be found in the Museum of Victoria. In most cases, material from her type locality has been found but much of the other material appears to be lost. It is possible that some of this material, especially from non-Victorian localities is in other Australian museums.

Apart from the material from her “type locality” Clark placed very few identification labels with her specimens. Generally type material has been located by comparing the identification (usually as made by subsequent workers) and the locality list as published by Clark.

The labels in Clark’s material are of four main kinds:

Type 1. Hand-written—these are in Clark’s own writing and generally bear her name or initials.

Type 2. Printed (type-set) with the words “det. E. Clark” and with other information (species name, date, type status) in Clark’s hand-writing.

Type 3. Printed (type-set) with the words “det. H. Clark, 1935” and with Clark’s identification and the date “11-1935” in her hand-writing.

Type 4. Printed (type-set) with the words “det. E. Clark, 1939” only.

It seems that when Clark began work on parastacids she was known, at least by some, as Helen (not Ellen which is the name under which she published). A letter in the files of the Museum of Victoria refers to her as “Miss Helen Clark”. The earlier hand-written labels (dated 1934) have the initials “H.C.” on them. Later labels have either “E.C.” or “E. Clark” written on them. The label of 1935 (type 3) is printed as “H. Clark”.

Parastacid types of E. F. Riek

All Riek’s type material is labelled by him in his own hand-writing with identification, type status and locality. Riek also identified numerous non-type specimens.

Taxonomic implications of Riek’s (1969) revision

In parts of this paper (e.g., Cherax bicarinatus p. 899), Riek makes clear unambiguous lectotype designations but his nomination of a “type” for other species of which only syntypes exist may also be interpreted as designation of a lectotype (ICZN 74(a)).

It is not clear whether Riek was aware of the existence of syntypes and what he intended by use of “type”. Nevertheless, use of “type” for species of which only syntypes exist must be interpreted as a lectotype designation (ICZN 74(a)). Where an individual fitting his “type” description can be identified (e.g., for Astacopsis kershawi) a lectotype and paralectotypes are here recognized.

More often, his nominated “type” specimen cannot be uniquely reconciled with a single animal from the syntype series and has not been labelled as “type” by Riek. In these cases no lectotype is recognized. In view of the apparent loss of numerous specimens from the collection it is possible that these “types” (lectotypes) were properly labelled as such and are also now lost. Evidence of the existence of such specimens would allow some specimens (now labelled as syntypes) to be relabelled as paralectotypes.

ASTACOPSIS

Astacopsis Gouldi Clark, 1936

It is clear that Clark had a series of specimens when she described this species. Only a single specimen, labelled as “type”, is in the collection.

J870 LECTOTYPE designated by Riek (1969)

“Astacopsis gouldi Clark. Type. det. E. Clark 1939”—type 2 label. It is assumed that this specimen comes from the designated type locality (Circular Head, Tasmania).

Astacopsis kershawi Smith, 1912

Smith (1912) described two varieties of A. kershawi which he referred to as “the large Gippsland crayfish” from the Moe River and “the small Gippsland crayfish” from the Narracan River. Specimens of both varieties are in the Museum of Victoria collections. As Smith did not nominate a holotype, when Riek (1969: 894) stated that a holotype, allotype and paratype are in this collection, he effectively designated a lectotype. This predates the lectotype designation of Morgan (1986).

J869 LECTOTYPE designated by Riek (1969)

“Astacopsis kershawi Smith”—Oxford label.


J4528 5 PARALECTOTYPES designated by Riek (1969)

“Astacopsis kershawi Smith”—Oxford label


These specimens have become paratypes of Euastacus woiburu Morgan, 1986.

J11962 2 PARALECTOTYPES designated by Riek (1969) and removed from J869.

Astacopsis tricornis Clark, 1936

Clark described this species from five specimens. In the collection, there are two specimens and a small vial with gills and a pereopod which have been dissected from a third specimen. Two localities are given on a single label in this jar.

In her original publication (Clark, 1936) Clark did not nominate a type specimen. However in a subsequent publication (Clark, 1939) an effective lectotype designation was made (“the type of this species is only 105 mm in length”). When this length figure is combined with the type locality data it is clear that Clark was referring to a single specimen identified by Smith (1912: 56) as Astacopsis franklini var. tasmanicus. Smith stated that this animal is 100 mm long and Clark’s (1939) statement that the type measures 105 mm is regarded as a minor discrepancy in measurements.

The presence of Clark’s type label and the original locality label (in the same handwriting as “Smith” labels) makes it clear that the larger specimen (our measurement of total length, 98 mm) is the one to which Clark (1941) referred to as the “type”.

Neither specimen in the jar is likely to have come from Saundridge (the second locality mentioned on the label). A. tricornis is known only from the Lake St Clair district. The second animal is assumed to be one of the specimens from Cradle Mountain, the second locality mentioned by Clark in her publication (1936: 37). It is assumed that the
Saundridge locality refers to another specimen since removed.
J896 LECTOTYPE, PARALECTOTYPE (fragments of another paralectotype) designated by Clark (1939)
"Astacopsis tricornis Clark Types det. E. Clark 1936"—type 2 label.
"Astacopsis tasmanicus 1 spm Lake St Clair, Tas. 1.93 Pres. by Sir W.B. Spencer. 1 sp. Saundridge near Launceston, Tasm. Pres. by A. Bartholemew 24.9.88."

AUSTROASTACUS

Austroastacus cymus Clark, 1936

Only seven syntypes of the 38 examined by Clark from a single locality are in the collection. An additional Riek label also recognized these as types.
J895 7 SYNTYPES

CHAERAPS

Chaeraps intermedius Smith, 1912

This species was described from two syntypes.
J11623 2 SYNTYPES
"Chaeraps intermedius Smith. W. Australia from (unclear) 30.4.80"—Smith label.

CHERAX

Cherax albidus Clark, 1936

Clark stated that she examined 247 specimens of C. albidus from ten localities. Of these 29 are found in the Museum of Victoria. The status of most of the syntypes was deduced by comparing the locality labels (mostly handwritten by Clark) and her published list of localities (Clark, 1936: 29).

Recent work by A. Sokol (1986) has led him to conclude that Clark’s type series is not monospecific. He considers J10662, J11877 and J11878 to be Cherax destructor. Based on Sokol’s identification J13414 is herein designated as lectotype.
J872 2 PARALECTOTYPES
No locality label. “Cherax albidus Clark Types det. E. Clark 1936”—type 2 label.
J10662 4 PARALECTOTYPE
"det C. destructor A. Sokol Aug 1986"
J10672 4 PARALECTOTYPE
J11875 5 PARALECTOTYPES
"Nurrabiel, Victoria. (F.E. Hutchinson, Nov. 1935)"
J11876 7 PARALECTOTYPES
"Nurrabiel, Vict."
J11877 3 PARALECTOTYPES
"det C. destructor A. Sokol Aug 1986"
J11878 5 PARALECTOTYPES
"Bordertown, S.A. L. Larwood 1936”—modern transcription of damaged original label.
"det C. destructor A. Sokol Aug 1986"
J13414 LECTOTYPE
"det C. albidus A. Sokol Aug 1986"
“Nurrabiel F.E. Hutchinson Nov 1935” removed from J11875.

Cherax barretti Clark, 1941

This species was described from a single male specimen. The holotype is not in the Museum of Victoria.

Cherax davisi Clark, 1941

This species was described from “a large series of specimens” from a single locality (Clark 1941: 34). The syntypes held in the Museum of Victoria do not comprise the entire series and were not labelled by Clark.
J877 5 SYNTYPES
"Dumaresq Creek, Armidale. 3000' Consett Davis, Nov. 36"
23.5.1906"—Smith label.
J11891 1 PARALECTOTYPE
“Cherax destructor Clark det. E. Clark 1939”—type 4 label.
“from swamp at Pyramid Hill. Prestd. by Rev. E.H. Hennell 18.9.90"
J11892 1 PARALECTOTYPE
“Parachaeraps bicarinatus Muckleford Creek, Victoria. Coll. T.S. Hall. D. Sir W.B. Spencer April 1920”—Smith label annotated by Clark ("H.C.").
J11896 3 PARALECTOTYPES
J11897 4 PARALECTOTYPES
J11898 5 PARALECTOTYPES
J11899 7 PARALECTOTYPES
J11900 5 PARALECTOTYPES
“Mosquito Creek, 8 mls. Sth. of Naracoorte, S.A. H.A. Lindsay, 1936. Don. by Sth. Aust. Mus., 1-7-1936"
J11901 4 PARALECTOTYPES
J11902 5 PARALECTOTYPES
J11903 2 PARALECTOTYPES

Cherax punctatus Clark, 1936

Of the nine specimens examined by Clark, seven can be found in the Museum’s collections. The type locality as published by Clark contains a typographical error and is Cooran (not Coorari). J980 SYNTYPE
“Cherax punctatus Clark. Type det. E. Clark 1936”—type 2 label.
“Parachaeraps bicarinatus Cooran, Queensland, October 1891. In field on hillside. D. Sir W. B. Spencer April 1920.”—Smith label.
J11874 6 SYNTYPES
“Cherax punctatus Clark”—hand-written by Clark.

Cherax rotundus Clark, 1941

Clark did not say how many specimens she examined but it is clear that there was more than one (“Length of average adult specimen...”). There is a single syntype in the Museum of Victoria collections.

J11624 SYNTYPE
“Cherax rotundus Clark Type”—hand-written by Clark.
“Muddy R. Severn Crayfish from E. Sutton, Fletcher, Q.”

ENGAEUS

Engaeus affinis Smith & Schuster, 1913

Almost all of the specimens listed by Smith and Schuster are in the collections. Those missing are at least one specimen from Warburton (Smith and Schuster had at least six) and a single specimen from Victoria.
J38451 possible SYNTYPE, 1 other specimen
“Engaeus affinis”—Oxford label.
“Engaeus affinis Upper Yarra, F.J. Williams, 2.12.1869.”

Smith and Schuster stated that a single specimen with this locality and collection date was examined and that “the chelae are equal in size”. Of the two specimens in this lot, one has a chela missing (the possible syntype) and the other has unequal chela.
J3846 SYNTYPE
“Engaeus affinis”—Oxford label.
J3849 SYNTYPE
“Engaeus affinis”—Oxford label.
“Engaeus affinis Upper Yarra, F.D. Williams, 1871”—Smith label.
J3853 3 SYNTYPES
“Engaeus australis”—Oxford label.
J3921 2 SYNTYPES
“Engaeus affinis Top of Black Spur, Fernshaw, 1880”—Smith label.
J4057 2 SYNTYPES
“Warburton, 13.11.1905”

Since this specimen was registered, the original labels have been lost. The identification and locality are given as they appear in the register. Also in the jar is a label with a description of the specimen when it was alive.

Engaeus australis Riek, 1969

J910 HOLOTYPE
J3910 PARATYPE
“Engaeus australis Riek PARATYPE”—hand-written by Riek
“Lilly Pilly Gully, Wilson’s Prom Coll: J. Furphy /vi/62”

Engaeus connectus Riek, 1969

Originally all Riek’s type material was stored in a single jar. The holotype has been removed and registered individually. It is impossible to separate the allotype from the paratypes as two of the specimens are the same length as that given for the allotype.
J882 HOLOTYPE
Engaeus fultoni Smith & Schuster, 1913

Two of the three syntype specimens examined by Smith and Schuster are in the collection. Riek (1969) erred when he recorded a specimen from Beech Forest (J901) as the "holotype" as this specimen is not part of the original syntype series.

There is a note enclosed with J3967 which indicates that the second specimen from Ferntree Gully was sent out of the Museum on loan during the 1930s. It cannot now be found.

Engaeus hemicirratulus Smith & Schuster

The majority of Smith and Schuster's syntypes are in the collection. Only the specimen from "Kongwak via Jumbunna" is definitely missing. As there are six syntypes in the collection which could be Rick's (1969) "type" this lectotype designation is disregarded.

Engaeus jumbunna Riek, 1969

Riek (1969) based this species on a single specimen which he described as a male, 65 mm long, with equal chelae. The specimen (J903) labelled as holotype by Riek matches this description and therefore is his material. The type locality, Kongwak, published by Riek is identical to that given by Smith and Schuster (1913: 124) for one of the syntypes of Engaeus hemicirratulus and is written on the label with the holotype. However, this specimen does not match the description of the individual of E. hemicirratulus from "Kongwak near Jumbunna" mentioned by Smith and Schuster which was 50 mm long and with an enlarged right chela. It ties much better with their syntype from Moyarra which otherwise cannot be accounted for. It seems probable therefore that labels have been mixed and that "Moyarra near Outtrim (=Outtrim)" is the type locality of this species.

Engaeus leptorhynchus Clark, 1939

None of Clark's types can be found in the collection. There is a single specimen of E. leptorhynchus from the type locality, but the collecting details are not as published. As none of the labels is in Clark's handwriting it cannot be assumed that this specimen is a type. Riek (1969) stated that he had seen the "types". Whatever specimens they were, they can not now be found in the Museum of Victoria.

Engaeus marmoratus Clark, 1941

None of Clark's material can be found in the Museum of Victoria.

Engaeus orientalis Clark, 1941

Material from Scanlon's Creek and Orbost cannot be found. There is no single specimen from the type locality, but the collecting details are not as published. As none of the labels is in Clark's handwriting it cannot be assumed that this specimen is a type. Riek (1969) stated that he had seen the "types". Whatever specimens they were, they can not now be found in the Museum of Victoria.
*Engaeus phyllocercus* Smith & Schuster, 1913

The total number of specimens examined by Smith and Schuster is unknown. In the collections there are specimens from each of the localities listed. As in *E. orientalis* there is no single specimen which can be unambiguously identified as Riek's (1969) “type”.

J3953 SYNTYPE

*Engaeus phyllocercus*—Oxford label.

“Engaeus phyllocercus”—Oxford label.

“Narracan, near Narracan River, Gippsland. Collected by W. Kershaw 1889”.

J3955 2 SYNTYPES (both partially dissected)

*Engaeus phyllocercus*

“Narracan River, Gippsland. Collected by W. Kershaw 1889”.

Large specimen loose, smaller specimen with label tied on. Large specimen (TL = 60 mm), may be the illustrated specimen.

J11620 1 SYNTYPE

*Engaeus phyllocercus*—Oxford label.

There are three locality labels with this animal, two of which are in the standard Smith format.

3. “Engaeus phyllocercus Fig spm. Top of hill near Thorpdale, Gippsland. W. Kershaw 1890.”

The animal in the jar is definitely not the figured specimen (TL = 50 mm).

J11621 1 SYNTYPE

*Engaeus phyllocercus*—Oxford label.

“Engaeus phyllocercus”.

“From small creek near Thorpdale. Collected by W. Kershaw 1890.”

J11622 1 SYNTYPE

*Engaeus phyllocercus Trafalgar, Gippsland. J.A. Kershaw 2-88*—Smith label.

Engaeus quadrimanus Clark, 1936

There are six of Clark's 46 syntypes in the collection. The specimens identified as *E. cunicularius* by Smith and Schuster (J3948, J3950, J3951) are included where their locality agrees with that given by Clark. None of these specimens has labels written by Clark. Smith and Schuster identified one specimen from Lakes Entrance as *E. cunicularius*, yet there are two specimens with this locality in the collection. As there is no accompanying Clark label J3950 is regarded as a possible syntype only. There is no single specimen which could be identified as Riek's (1969) “type”.

J879 2 SYNTYPES

*Engaeus quadrimanus Clark TYPES. det. Clark —11-1935*—type 3 label.

“Warragul, Gippsland, W. Kershaw 1888.”

J3928 1 SYNTYPE

*Engaeus quadrimanus Clark det. H. Clark 11-1935*—type 3 label.

“Near Lakes Entrance, W.K.—87”

J3948 1 SYNTYPE

*Engaeus cunicularius*—Oxford label.

“Croydon, Victoria. S.W. Fulton. 28.5.1907”

J3950 1 possible SYNTYPE

“Engaeus cunicularius”—Oxford label.

“Near Lakes Entrance, Gippsland. Collected W. Kershaw 1887.”

J3951 1 SYNTYPE

*Engaeus cunicularius*—Oxford label.


Engaeus sericatus Clark, 1936

Only nine of Clark's 30 syntypes can be found. There is no single specimen which can be identified as Riek's (1969) “type”.

J905 2 SYNTYPES

*Engaeus sericatus Clark. Types det. E. Clark 1936”—type 2 label.

“Croydon, Victoria. S.W. Fulton” This label is in Clark's hand-writing.

J3939 3 SYNTYPES

*Engaeus sericatus Clark det. E. Clark 1936”—type 2 label.

“Mortlake, Victoria.”

J3941 SYNTYPE


J3942 4 SYNTYPES

*Engaeus sericatus Clark. det. E. Clark 1936”—type 2 label.


Engaeus tuberculatus Clark, 1936

Only two of Clark's 43 syntypes can be found. There is no single specimen which can be identified as Riek's (1969) “type”.

J883 2 SYNTYPES

*Engaeus tuberculatus Clark Types”—hand-written by Clark.

“Sherbrook Fall, Vict. (on hill). N.V. Favaloro Esq. 6.11.26”

Engaeus urostrictus Riek, 1969

All of Riek's types are in the Museum of Victoria.

J902 HOLOTYPE

“Engaeus urostrictus Riek HOLOTYPE”—handwritten by Riek.

“Dandenong Creek, at Alpine Road, Vic. J. Kane 24.3.1963.”

J911 2 PARATYPES (females)

“Engaeus urostrictus Riek Type series”—handwritten by Riek.

Locality as for holotype.

J11619 3 PARATYPES (juveniles)

Removed from J911

Engaeus victoriensis Smith & Schuster, 1913

Described from an unknown number of specimens from nine localities. The Museum has 15 syntypes from seven localities in its collections. The “Oxford label” accompanies all lots except J3897. Riek's (1969) use of “type” uniquely identified the specimen from the Dandenong Ranges. This lectotype cannot now be found. All the remaining specimens are paralectotypes.

J3877 1 PARALECTOTYPE designated by Riek (1969)
J3878 2 PARALECTOTYPES designated by Riek (1969)
J3879 2 PARALECTOTYPES designated by Riek (1969)
J3888 1 PARALECTOTYPE designated by Riek (1969)
J3892 6 PARALECTOTYPES designated by Riek (1969)
“Engaeus victoriensis Victoria (-3-80) D. Sir W.B. Spencer April 1920”—Smith label.
J3895 1 PARALECTOTYPE designated by Riek (1969)
J3897 1 PARALECTOTYPE designated by Riek (1969)
J3905 1 PARALECTOTYPE designated by Riek (1969)
“Engaeus victoriensis Croydon (under logs) D. F.P. Spry 1.1.1904”—Smith label.

Engaeus villosus Clark, 1936
None of the larger specimens examined by Clark is in the collection (maximum length of syntypes is 30 mm).
J3863 78 SYNTYPES
“Engaeus villosus Clark”—hand-written by Clark.

EUASTACUS

Euastacus bidawalus Morgan, 1986
The holotype is the only specimen held in this collection.
J4526 HOLOTYPE
“Euastacus bidawalus Ident. by G.J. Morgan”

Euastacus bispinosus Clark, 1941
Clark described this species from an unknown number of specimens. She labelled one of her specimens from the Glenelg River as “type” and another as “paratype”. This does not constitute designation of a holotype since it was not done in her paper. Morgan’s (1986) use of the term “holotype” is a valid lectotype designation (ICZN 74(b)).
J875 LECTOTYPE designated by Morgan (1986)
“Euastacus bispinosus Clark. Type Glenelg River, Victoria”—hand-written by Clark.
J873 PARALECTOTYPE designated by Morgan (1986)
“Euastacus bispinosus Clark. Paratype”—hand-written by Clark.

Euastacus elongatus Clark, 1941
This species was described by Clark from more than one specimen. There are seven syntypes in the Museum of Victoria but these do not cover all the localities mentioned in the text.
J874 SYNTYPE
“Euastacus elongatus Clark Type Echuca, Murray River”—hand-written by Clark.
J6200 4 SYNTYPES
J6201 SYNTYPE
J6216 SYNTYPE

Euastacus neodiversus Riek, 1969
All Riek’s type material is in the collection.
J4531 HOLOTYPE
“Euastacus neodiversus Riek HOLOTYPE”—hand-written by Riek.
“National Park, Wilsons Promontory, 25.11.22. D. J.A. Kershaw 28.11.22. In stream on E. slope of Sealers Cover track about 1,000 ft about sea level.”
J4532 PARATYPE

Euastacus suttoni Clark, 1941
It is clear that Clark had a series of specimens of E. suttoni. Only one specimen is held in the Museum of Victoria. Riek (1969) designated a lectotype by the words “Holotype male in MN”. The only specimen in this collection is a female, not labelled by Riek so may be considered a paralectotype only if the existence of Riek’s male can be confirmed.
J877 SYNTYPE

Euastacus woiwuru Morgan, 1986
All of Morgan’s types are in the Museum of Victoria.
J4527 HOLOTYPE male
“Dobson's Creek, Dandenong P. Horwitz, 9.6.82.”
J4528 5 PARATYPES
See Astacopsis kershawi
J4529 2 PARATYPES
“Euastacus cf. kershawi In a creek crossing Clegg Rd at its lowest point near a railway bridge between Mt Evelyn & Wandin. Taken in nets 4 pm—cloudy day in 2’ water. J. Kane /9/63”
J4530 1 PARATYPE
“Euastacus nobilis”
“Mason's Falls Coll. D. Dening 14.3.63”

GEOCHARAX

Geocharax falcata Clark, 1941
Clark gave no indication of the number of specimens which she examined. The Museum of Victoria holds a series

“Fyans Creek”
“South of Divide Grampians Dec 21st-31st 1934”—handwritten by Clark.

From Fyans Creek, the locality details are as in J894 (modern copy of an old label). J11879 10 PARALECTOTYPES designated by Riek (1969) “Grampians Dec 21st-31st 1934”—hand-written by Clark.

Geocharax gracilis Clark, 1936

The collection contains 33 syntypes and another seven possible syntypes (J11880). The possible syntypes have two locality labels, which differ, but one of these is the original Smith label belonging to animals collected from Clark’s type locality. It appears that Clark separated some of these specimens (J907) and placed her own labels with them. Riek’s (1969) “type” cannot be identified as a single specimen. J907 5 SYNTYPES

“Geocharax gracilis Clark. Types”—hand-written by Clark.

J11880 7 possible SYNTYPES

J13413 28 SYNTYPES


Geocharax laevis Clark, 1941

Clark based this species on a single specimen (Clark 1941b: 35). There is no specimen in the collection with a Clark label. The holotype is considered to be the specimen of Geocharax laevis which comes from Clark’s type locality. A second specimen, (J907) labelled by Riek as “Geocharax laevis Clark Type series” is presumably the “type” which he examined (Riek, 1969: 889). It carries no locality label and cannot be regarded as the type specimen. J11617 HOLOTYPE

“D. Mahony Bunyip 1932”
“HOLOTYPE E. laevis P. Horwitz det 1985.”

Geocharax lyelli Clark, 1936

Clark described this species from three specimens (two males and one female). Only the males can be found in the Museum of Victoria collections. The specimen which bears Riek’s label is his “type” (= lectotype). J904 1 LECTOTYPE designated by Riek, 1969

“Geocharax lyelli Clark. Type series”—Riek’s hand-writing.


J906 1 PARALECTOTYPE designated by Riek, 1969 “Geocharax lyelli Clark Types”—hand-written by Clark.


GRAMASTACUS

Gramastacus gracilis Riek, 1972

Four of Riek’s paratypes are in the Museum of Victoria. J884 4 PARATYPES

“Dwyers Creek, Grampians, Vic. E.F. Riek, 23 Nov 1969”

Gramastacus insolitus Riek, 1972

Four of Riek’s paratypes are in the Museum of Victoria. J909 4 PARATYPES

“8 km SW Myoyston Vic. E.F. Riek, 16 Nov 1969”

PARASTACOIDES

Parastacoides inermis Clark, 1939

It is not clear how many specimens Clark examined, but she gives the length of the largest as 50 mm. As Riek’s “type” cannot be identified as a single specimen, these are considered still to be syntypes. J889 2 SYNTYPES

“Parastacoides inermis Clark. Type det. E. Clark”—type 2 label.

“Adamson’s Peak, Tasmania. 2850 ft. Coll. J. Thwaites, Hobart”

Parastacoides insignis Clark, 1939

Clark’s syntype series consists of an unknown number of specimens, of which the adults measured an average 75 mm (Clark 1941b: 126). The largest specimen in the Museum of Victoria is 52 mm. There is no evidence that Riek (1969) made a valid lectotype designation. J899 8 SYNTYPES

“Parastacoides insignis Clark. Types. det. E. Clark”—type 2 label.


Parastacoides sternalis Riek, 1967

This species was described from a single specimen. J897 HOLOTYPE

“Parastacoides sternalis Riek HOLOTYPE”—hand-written by Riek.

“Tas. NE of Mt. Bowes. A. Neboiss, 11 Feb. 1965”

Parastacoides pulcher Riek, 1967

All Riek’s type material is in the Museum of Victoria. J908 HOLOTYPE

“Parastacoides pulcher Riek HOLOTYPE and 3 juveniles”—hand-written by Riek.

“Lake Pedder, Tasmania. A. Neboiss, 1 Feb. 1955.”—3 juvenile specimens removed and registered as J11624.
J11624 3 PARATYPES (juveniles) Removed from J908.

PSEUDENGAEUS

Pseudengaeus sternalis Clark, 1936

It is not known how many specimens Clark examined, but she clearly had more than one (Clark, 1936: 48). As
only one locality was given by Clark, the specimen in the collections should be regarded as a syntype. A label saying "HOLOTYPE" of unknown origin has been placed with this specimen. Riek's hand-written label suggests that this is his "type". This specimen is therefore the lectotype. J900 LECTOTYPE designated by Riek


"Warragul, Gippsland. J.A. Kershaw 12-1899."

"Engaeus sternalis (Clark) E.F. Riek, 1967"—hand-written by Riek.

**Pseudengaeus strictifrons** Clark, 1936

None of Clark’s syntypes is in the collections.

**References**


