

SOME CRYPTOSTIGMATID MITES (Acari : Cryptostigmata) FROM CROZET ISLANDS

By John A. Wallwork¹

Abstract : Seven species of Cryptostigmata representing 5 families and 6 genera are reported here from Possession Island in the Crozet group. Redescriptions are provided for *Antarctozetes crozetensis* (Richters) and *Ceratozetes gaussi* (Richters), n. comb.

The mite fauna of the Crozet Islands is known mainly from the work of Richters (1907) who listed 6 species of Cryptostigmata. Recently, collections were made on these islands by Dr Lewis Davies, and these include all but one of the species recorded by Richters, and also 2 new records. These collections allow a re-assessment of Richters' work, more precise identifications and, where appropriate, redescriptions, and further information on zoogeographical distribution patterns in the subantarctic. The following account presents the determinations made on these collections and a discussion of their significance. Thanks are expressed to the administration of Territoire des Terres Australes et Antarctiques Francaises (Administrateur Superieure M. Pierre Rolland) for allowing Dr Lewis Davies to visit Possession Island and for generously providing full living and working facilities during the period January to April 1968 when the material described below was collected.

Locality data : A total of 25 samples was examined, and details of the collection sites are given below, together with the original code numbers assigned to the samples. Subsequently in this paper, the localities will be referred to only by the code number. All samples were taken near Port Alfred, Baie du Navire, Ile de la Possession, Iles Crozet, by L. Davies.

No. 1 : Mosses (incl. *Rhacomitrium*) and *Blechnum*, 90 m, on slope near top of telepherique, 14.II.1968.

No. 2 : Mosses as in No. 1 - no fern, 90 m, 20.II.1968.

No. 4 : *Deschampsia elegantula* clumps, 110 m, 26.II.1968.

No. 5 : Rockpool, Pointe Lieutard, HWM, 8.II.1968.

No. 8 : Sweep from grass meadow (incl. *Poa cookii*) in valley bottom adjoining Riviere du Camp, 21.I.1968.

No. 9 : *Poa cookii* tussock on peat, 80 m, 1.II.1968.

No. 12 : Tullgren extract of moss and grass from south slope of valley of Riviere du Camp, 90 m, 5.III.1968.

No. 14 : As for No. 1, 17.II.1968.

No. 15 : As for No. 4, 10.IV.1968.

No. 16 : Peat under mixed *Acaena adscendens* and grasses, 50 m, 22.III.1968.

No. 17 : As for No. 9, 7.II.1968.

No. 18 : Hand sorted in stony area adjoining Base, 110 m, 22.I.1968.

1. Department of Zoology, Westfield College, University of London, London, England.

- No. 19 : Tullgren extract of moss and *Polypodium* on peat, 90 m, 1.II.1968.
 No. 20 : *Azorella selago* cushion and peat, 110 m, 3.III.1968.
 No. 22 : As for No. 19, 14.II.1968.
 No. 23 : Tullgren extract of *Blechnum* from near teleferique ; 90 m, 10.IV.1968.
 No. 24 : Moss cushions, 110 m, 20.III.1968.
 No. 26 : *Deschampsia* tussock, near Pointe Lieutard, 60 m, 9.II.1968.
 No. 27 : As for No. 4, 8.III.1968.
 No. 28 : As for No. 19, 2.II.1968.
 No. 29 : As for No. 1, 6.II.1968.
 No. 30 : As for No. 19, 2.II.1968.
 No. 31 : As for No. 26, 8.II.1968.
 No. 32 : As for No. 4, 29.III.1968.
 No. 33 : Nest material *Procellaria*, 80 m, 5.IV.1968.

Family METRIOPPIIDAE Balogh, 1943

Genus *Macquarioppia* Wallwork, 1964

Macquarioppia striata (Wallwork, 1963)

This species, which was first described under the name *Macquariella striata* from Macquarie I. (Wallwork 1963), has not been recorded previously from the Crozet Islands. It has been recorded from Heard and Kerguelen (Wallwork 1970b).

DISTRIBUTION : This species occurs on Crozet at localities 4, 8, 9 and 22.

Family OPPIIDAE Grandjean, 1954

Genus *Oppia* Koch, 1836

Oppia crozetensis (Richters, 1907)

Notaspis crozetensis Richters, 1907

One of the most widely distributed species in the subantarctic, *O. crozetensis* was described originally from Possession Island. It has been redescribed from Macquarie I. (Wallwork 1963) and also recorded from South Georgia and South Sandwich Islands.

DISTRIBUTION : Localities 9, 19, 20, 22, 31 and 32.

Genus **Globoppia** Hammer, 1962

Globoppia intermedia Hammer, 1962 subsp. **longiseta** Wallwork, 1970

The nominate form of this species was described from southern Chile, and the subspecies *longiseta* from South Georgia (Wallwork 1970a). In the the eastern subantarctic it has been recorded previously only from Heard I. (Wallwork 1970b), although it is extremely probable that this is the form designated by Richters (1907) as *Damaeus nitens*.

DISTRIBUTION : Localities 1, 2, 9, 14, 16, 17, 20, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, and 33.

Family PODACARIDAE Grandjean, 1955

Genus *Halozetes* Berlese, 1916***Halozetes crozetensis*** (Richters, 1907)*Scutovertex crozetensis* Richters, 1907

This species, described originally from Crozet Islands, has been redescribed from Macquarie I. (Wallwork 1963), and also occurs on Heard I. and Kerguelen (Richters 1907, Wallwork 1970b). As far as present records go, it is evidently widely distributed in the eastern subantarctic, but does not occur in the west.

DISTRIBUTION : The species was recorded from only one locality (5) in the present collections.

Halozetes belgicae (Michael, 1903)

This is the first record of this widely distributed species from Crozet Islands, and only one specimen, the damaged shell of a male, was found. The specimen has relatively short interlamellar setae, reminiscent of the subspecies *brevipilis* which occurs on Macquarie I. However, it also possesses a number of features which recall the nominate form, hitherto known only from the western part of Antarctica. These characters include strongly developed aggenital neotrichy, represented by the presence of 7 pairs of setae, and the relatively long pseudoanal setae ps_1 on the posterior region of the notogaster.

DISTRIBUTION : The single specimen occurred in the sample from locality 5.

Family CERATOZETIDAE Jacot, 1925

Genus *Ceratozetes* Berlese, 1908***Ceratozetes gaussi*** (Richters 1907), new combination*Oribata gaussi* Richters, 1907*Jeannelia gaussi* (Richters) : Dalenius & Wilson, 1958

The systematic position of the species *Oribata gaussi* Richters has been in some doubt since the genus *Oribata* is no longer valid and the original description of the species was too short and incomplete to allow an exact determination. The collections examined in the present work include a number of specimens of a ceratozetid mite which appears, beyond any reasonable doubt, to be that designated *Oribata gaussi*. The species is redescribed below under the name *Ceratozetes gaussi* (Richters), new combination.

Material examined : 12 adults.

Measurements : Average length of body : 390.5 μ (range : 379.5 μ —407.0 μ) ; average width of body : 280.5 μ (range : 275.0 μ —291.5 μ).

Integument : Body and legs brown in color.

Prodorsum : Details of the dorsal surface are shown in fig. 1. Rostrum is entire and rounded anteriorly ; without incisions, lobes or lateral teeth. Rostral setae moderately long and barbed, curving forwards around sides of rostrum, inserted rather far back on distinct apophyses which

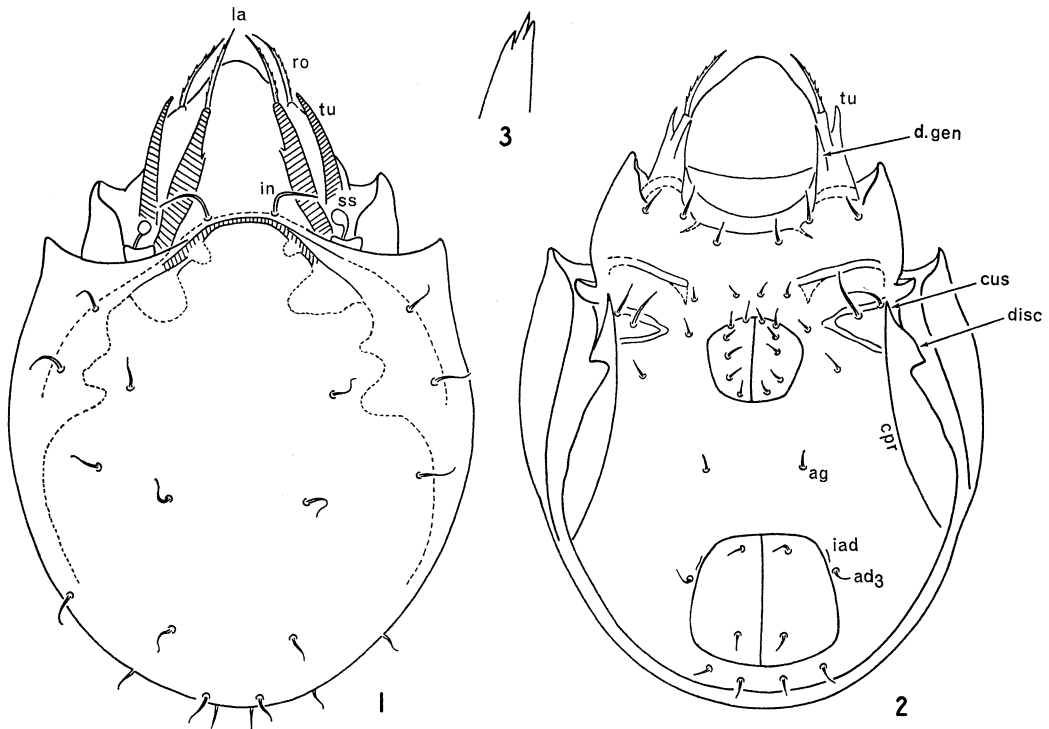


Fig. 1-3. *Ceratozetes gaussi* (Richters), n. comb.; 1, dorsal, 2, Ventral, 3, tip of tutorium. *la*=lamellar setae; *ro*=rostral setae; *in*=interlamellar setae; *ss*=sensillus; *tu*=tutorium; *d. gen*=genal process; *cus*=custodium; *disc*=discidium; *cpr*=circum-pedal ridge; *ag*=aggenital seta; *iad*=adanal fissure; *ad₃*=adanal seta.

are ventrolateral in position to lamellar cusps. Lamellae are long blades extending forward from bothridia almost to the rostrum, slightly S-shaped posteriorly, each with a freely projecting cusp which is about 1/2 as long as fixed portion of lamella and slightly narrower. The tip of each lamellar cusp bears the insertion of the barbed lamellar seta; this seta projects forward over rostrum. There is no translamella. Interlamellar setae are inserted posteriorly on prodorsum, strongly upcurved, smooth or only minutely barbed and slightly longer than lamellar setae. Each bothridium is a deep cup, partly covered by base of pteromorph. Sensillus has a short stem and a dark-colored, ovoid head which projects beyond the rim of bothridium.

Notogaster: Broadly rounded, anterior margin distinctly arched over posterior part of prodorsum. Pteromorphs broad and strongly curved ventrad. Ten pairs of notogastral setae, moderately long with hook-shaped tips. Notogastral areae porosae and fissures indistinct.

Venter: The main features of this region, which are typically those associated with the genus *Ceratozetes*, are shown in fig. 2. Only coxisternal ridges II, the ventro-sejugal and ridges III are developed; there is no distinct sternal thickening; the ventro-sejugal ridge and ridge III join medially to produce a "wish-bone" configuration. Coxisternal setal formula is apparently normal, although seta 4c could not be identified. Genital aperture is trapezoidal in shape, each genital plate with 6 setae of which 2 are inserted on anterior margin. There is a single pair of aggenital setae located half-way between genital and anal fields. Anteriormost adanal seta (*ad₃*) is inserted just off the lateral rim of anal aperture and immediately behind adanal fissure;

the remaining 2 pairs of adanal setae are post-anal in position. All ventral setae are short, with the exception of the lateral coxisternal setae which are rather longer than the remainder.

Lateral region of podosoma: Genae are weakly developed along margin of camerostome and are not projecting. Tutoria are strongly developed with projecting cusp which is serrated at the tip (fig. 3). Pedotectum I is large and scoop-shaped; pedotectum II is bract-shaped. Discoidal process strongly developed and triangular in shape; circum-pedal ridge extends forward to level of pedotectum II where it terminates in a short pointed custodium.

Legs: Chaetotaxy was not studied in detail. All tarsi terminate in a single strongly developed claw.

DISTRIBUTION: The species is present in samples from localities 1, 12, 18, 20, 22, 27 and 29.

Remarks: As noted above, this species was originally described by Richters (1907) under the name *Oribata gaussi*. Since the generic name is not valid, Dalenius & Wilson (1958) proposed the combination *Jeannelia gaussi*. The generic name *Jeannelia* was applied initially by these authors to another Crozet species described by Richters (1907) under the name *Oribata crozetensis*. Dalenius & Wilson believed that *Oribata crozetensis* and *Oribata gaussi* are congeneric, and hence both species were re-designated *Jeannelia*. However, Balogh (1961) pointed out that the name *Jeannelia* was preoccupied, and proposed instead the new name *Antarctozetes*. Evidence will be presented later in this paper to support the suggestion that while the combination *Antarctozetes crozetensis* (Richters) is probably valid, that of *Antarctozetes gaussi* (Richters) is not. *Gaussi* is not congeneric with *crozetensis*, and indeed there are good reasons for placing the 2 species in different families (see below). *Oribata gaussi* has many features associated with the genus *Ceratozetes*, notably the form of the prodorsal lamellae and the patterns of ventral chaetotaxy, and accordingly the new combination *Ceratozetes gaussi* (Richters) is proposed for this species.

In a number of respects, *C. gaussi* shows a remarkable similarity to *C. bicornis* Hammer, 1967 from New Zealand. The 2 species are similar in body size, in the general form of the prodorsal lamellae, the shape of the sensillus, the arched anterior notogastral margin, the hook-shaped notogastral setae, the weak development of notogastral areae porosae and the monodactylous tarsi. The main differences between the 2 species are that the rostrum in *gaussi* lacks the lateral teeth that are present in *bicornis*, and the interlamellar setae in *gaussi* are shorter than in *bicornis*.

As Hammer (1967) has pointed out, *C. bicornis* appears to be related to the European *Ceratozetes furcatus* (Pearce & Warburton) which she has also recorded from the Argentine. These 2 species, together with another Argentine form, *C. nigrisetosus*, and the Crozet species, *C. gaussi*, may form a natural grouping distinct from other *Ceratozetes* species and characterized by the following combination of features: (1) Lamellae with well developed cusps. (2) Translamella absent or very weakly developed. (3) Hook-shaped notogastral setae. (4) Globular sensillus. (5) Monodactylous tarsi.

Family MYCOBATIDAE Grandjean, 1954
Genus *Antarctozetes* Balogh, 1961

Antarctozetes crozetensis (Richters, 1907)

Oribata crozetensis Richters, 1907

Jeannelia crozetensis (Richters): Dalenius & Wilson, 1958

Antarctozetes crozetensis (Richters): Balogh, 1961

As already mentioned, the name *Antarctozetes* was proposed by Balogh (1961) because the name *Oribata* is not valid and *Jeannelia* is preoccupied. Recently I suggested that *Antarctozetes crozetensis* belonged in the family Ceratozetidae (Wallwork 1970b), a suggestion which was based on the published descriptions of Richters (1907) and Dalenius & Wilson (1958). After examining specimens collected by Dr Davies, and establishing the identity of these with Richters' *Oribata crozetensis*, it now seems more probable that this species belongs in the family Mycobatidae. A more detailed discussion of the reasons for suggesting this will be given after the redescription.

Material examined: 15 adults.

Measurements: The majority of specimens examined fall within the size limits noted by Richters (1907), namely 480 μ -550 μ , but some are rather smaller than this (450 μ -460 μ).

Integument: Color of body and legs is dark brown, pteromorphs paler in color. A cerotegument was not observed.

Prodorsum: Rostrum is 3-lobed, the central lobe being strongly developed and rounded anteriorly; the much smaller lateral lobes are bract-shaped and encompass the lateral margins of the central lobe. Lamellae are slightly convergent ridges, broader posteriorly than anteriorly, located above lateral margins of prodorsum, each terminating anteriorly in a very short cusp bearing the insertion of the lamellar seta. Lamellar setae only slightly longer than their mutual distance, distinctly barbed. Rostral setae similar in form to lamellars, inserted laterally on prodorsum just anterior to turtorium. In dorsal view (fig. 4), the turtorium is seen to project freely

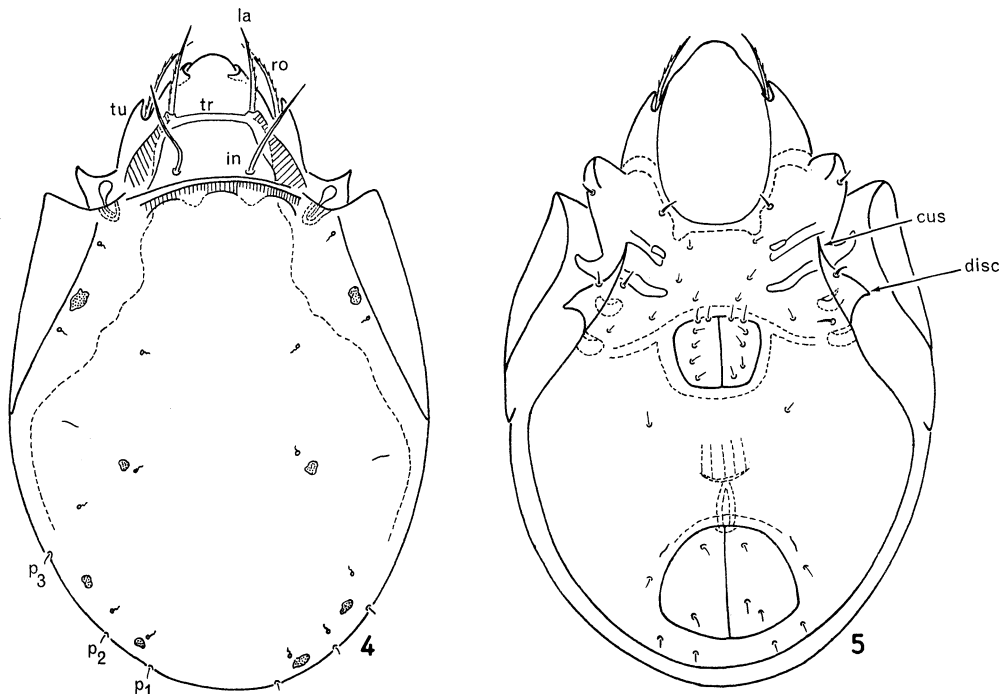


Fig. 4-5. *Antarctozetes crozetensis* (Richters): 4, dorsal, 5, ventral; *tr*=translamella; other notations as in fig. 1-3.

from lateral prodorsal contour, and terminates in a fine point. A translamella is present connecting the 2 lamellar cusps, complete and slightly arched. Interlamellar setae inserted near posterior margin of prodorsum, similar in form to the rostrals and lamellars but more finely barbed. Bothridia covered by base of pteromorphs; each sensillus has a short stem and a globular head which is dark in color.

Notogaster: Pteromorphs well developed, curving strongly ventrad as rounded lobes. Each pteromorph is clearly hinged to the notogaster proper and movable. Notogastral setae (10 pairs) are virtual, except those in the posterior series (p_{1-3}) which are present as microsetae. Four pairs of notogastral areae porosae are present.

Lateral region of podosoma: In lateral view (fig. 6), the tutorium is seen as a broad plate, wider anteriorly than posteriorly, terminating anteriorly in a truncated margin. Genal process located below tutorium, but converging towards it anteriorly to the point at which the rostral seta is inserted. The genal process terminates anteriorly in a sharp point.

Ventral region: The main features of this region are shown in fig. 5. All ventral setae are short, and their distribution is normal. Each genital plate

bears 6 setae, 2 of which are inserted on the anterior margin. Fig. 5 shows an anomaly with regard to the chaetotaxy of the anal plates, in which there is an additional seta present on 1 plate. The discidium is a short, broad, triangular projection located between the insertions of legs III and IV, terminating in a sharp point. A pointed custodium is present.

Legs: All tarsi are tridactyle, with median claw slightly more strongly developed than the 2 laterals.

DISTRIBUTION: Present in localities 12, 14, 15, 17, 19, 20, 22, 23, 26, 28, 29, 30 and 31.

Remarks: Perhaps the most important feature of this species which has been overlooked in previous descriptions is the presence of hinged, movable pteromorphs. This character immediately suggests a relationship with the members of the family Haplozetidae. On the other hand, the presence of a genal process on the border of the camerostome, and 6 pairs of genital setae are features which accord more with the Ceratozetidae/Mycobatidae group than with the Haplozetidae. Within the former group, hinged pteromorphs are more characteristic of the family Mycobatidae than of the Ceratozetidae, and it is therefore proposed that the genus *Antarctozetes* be placed in the Mycobatidae, where its closest relative is probably *Humerobates*.

In 1962, Hammer described a new genus of pterogasterine mite, *Anellozetes*, from Patagonia. Subsequently, this same author described 3 new species from New Zealand and 1 from Easter Island which evidently belong to this genus (Hammer 1967, 1970). One

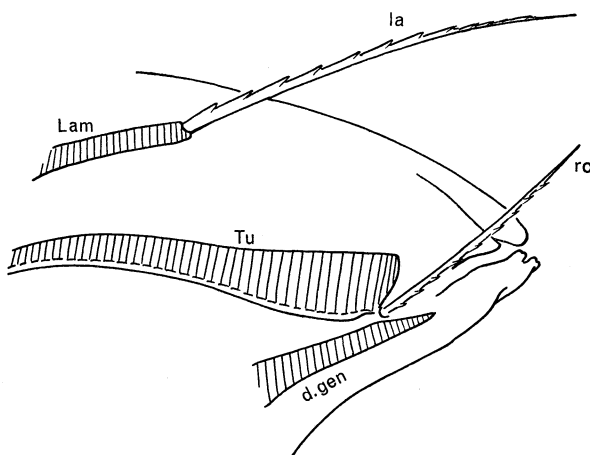


Fig. 6. *Antarctozetes crozetensis* (Richters). Prodorsum, lateral view. Lam=lamella; other notations as in fig. 1-3.

of the most characteristic features of the genus *Anellozetes* is the presence of a "semi-lunar ring" around the rostrum, identical with the bract-shaped lobes present on the rostrum of *Antarctozetes*. Further comparison shows that these 2 genera should be considered as one. Thus, the form of the lamellae, translamella and tatoria are remarkably similar in the 2, the pteromorphs are clearly demarcated from the remainder of the notogaster by a hinge in both, notogastral setae are reduced and have an identical pattern of distribution in both, and the 2 genera are very similar with respect to the appearance of the venter and the legs. Since the name *Antarctozetes* has priority over *Anellozetes*, it is proposed that the latter be regarded as a synonym of the former, and that all of the species described by Hammer as belonging to the genus *Anellozetes* be placed in the genus *Antarctozetes*.

As Hammer (1967) pointed out, the various species she has described are rather similar to each other, differing only in minor details, such as body size and the shape of the sensillus. *Antarctozetes crozetensis* corresponds most closely in size to the Easter Island species *A. fusiformis*; the species from New Zealand and Patagonia are smaller than both of these 2. Another similarity between *A. crozetensis* and *A. fusiformis* is the broadly developed lamellar cusps; however, the 2 species can be distinguished by the shape of the sensillus, for in *A. fusiformis* it is only slightly swollen and elongate, whereas it is strongly rounded in *A. crozetensis*. The 3 species of *Anellozetes* described by Hammer from New Zealand all have narrow lamellar cusps, and although the head of the sensillus is globular in shape, the stem is longer, in all cases, than that in *A. crozetensis*. *Antarctozetes* is also represented on Campbell Island (Wallwork, unpubl.) by a species which resembles the New Zealand *A. luteus* (Hammer) in many respects, and may be conspecific. The Campbell Island form has a short, globular sensillus, apparently shorter than that of *A. luteus*, but very reminiscent of that of *A. crozetensis*.

It is difficult to be very precise about the affinities of *A. crozetensis*. Clearly it differs in certain respects from the related forms in New Zealand. As far as the present records go, it would appear that *Antarctozetes* has radiated more widely in the New Zealand region than in South America, and it seems reasonable to suppose therefore that the origin and affinities of *A. crozetensis* lie with the New Zealand fauna. That there appears to be no very close similarity between *A. crozetensis* and the species described to date from New Zealand also seems to indicate that the isolated position of the former on the islands of Crozet and Kerguelen may have resulted in the evolution of a species quite distinct from that of its nearest relatives.

DISCUSSION

Only one of the species recorded by Richters (1907) from Possession Island in the Crozet group has not been encountered in the present work, namely *Alaskozetes antarcticus* (Mich.). Combining Richters' list and the present one, we arrive at a total of 9 species from the locality:

CURRENT NAME	RICHTERS' DESIGNATION
<i>Macquarioppia striata</i> Wallw.	—
<i>Oppia crozetensis</i> (Richters)	<i>Notaspis crozetensis</i>

<i>Globoppia intermedia</i> Hammer	
<i>longiseta</i> Wallw.	<i>Damaeus nitens</i> Koch
<i>Halozetes crozetensis</i> (Richters)	<i>Scutovertex crozetensis</i>
<i>Halozetes belgicae</i> (Mich).	—
<i>Alaskozetes antarcticus</i> (Mich.)	<i>Notaspis antarctica</i> Mich.
<i>Ceratozetes gaussi</i> (Richters)	<i>Oribata gaussi</i>
<i>Antarctozetes crozetensis</i> (Richters)	<i>Oribata crozetensis</i>
Palaeacaridae sp. undet.	—

The Palaeacaridae species is not considered further here since it could not be identified from the material available and its affinities cannot be established. A slight doubt may also be entertained about the validity of the record of *Alaskozetes antarcticus*, for it is surprising that this large-sized species was not encountered in the present collections. Richters (1907) identified it from fragments, and appears to have confused the nymphal stages with those of *Macquarioppia*. On the other hand, the species has been recorded from Marion Island and Heard Island (André 1947, Wallwork 1970b), and perhaps it could be expected to occur on the Crozet Islands. For the moment it is proposed to accept this record, thus providing a total of 8 species which have been identified with a reasonable amount of certainty.

This list includes only 1 species which, as far as present records show, is restricted to the Crozet Islands, namely *Ceratozetes gaussi*. This very low degree of endemism in the Crozet cryptostigmatid fauna is in conformity with that on Heard Island and Kerguelen (Wallwork 1970b). Of the remaining 7 species, 3 are eastern subantarctic forms (*Macquarioppia striata*, *Halozetes crozetensis* and *Antarctozetes crozetensis*), while the remaining 4 are circum-subantarctic in distribution. Again, we have here a repetition of the pattern found among the fauna of Heard and Kerguelen. It is perhaps worthy of note that, with regard to the 3 eastern subantarctic forms, *Antarctozetes crozetensis* has a much more restricted distribution, having been recorded previously only from Kerguelen, than *Macquarioppia striata* and *Halozetes crozetensis*, which are known from Kerguelen, Heard and Macquarie.

In view of the statements by Jeannel (1965) and Dreux (1966a, b) (see also Gressitt 1970) that the islands of the Crozet group, Heard, Kerguelen and Marion may be regarded as a local zoogeographical province, it is of interest to establish the degree of similarity between the cryptostigmatid fauna of Crozet and that of Heard and Kerguelen which has recently been studied (Wallwork 1970b). Six species of Cryptostigmata have been recorded from Heard Island, 5 of which (*M. striata*, *G. intermedia longiseta*, *Alask. antarcticus*, *H. crozetensis* and *H. belgicae*) occur on the Crozets. Of the 5 species recorded from Kerguelen, 3 (*M. striata*, *H. crozetensis* and *Antarct. crozetensis*) are present on the Crozets. Thus, it is evident that there is a considerable amount of faunal similarity between the Crozets, Heard and Kerguelen. Combining the faunal lists from all 3 of these localities provides a total of 10 species:

- Macquarioppia striata* Wallw.
- Oppia crozetensis* (Richters)
- Globoppia intermedia* Hammer *longiseta* Wallw.
- Podacarus auberti* Grandj.

Alaskozetes antarcticus (Mich.) *grandjeani* Dalenius
Halozetes crozetensis (Richters)
Halozetes belgicae (Mich.)
Halozetes marinus (Lohmann)
Ceratozetes gausi (Richters)
Antarctozetes crozetensis (Richters)

Only 2 of the species on this list, *C. gausi* and *A. crozetensis*, are restricted in their distribution to the Crozet-Heard-Kerguelen area. Two others (*M. striata* and *H. crozetensis*) are common to Crozet, Heard, Kerguelen and Macquarie, but do not occur elsewhere in the subantarctic, while the majority (*H. belgicae*, *P. auberti*, *A. antarcticus*, *O. crozetensis*, *G. intermedia* and *H. marinus*) are widely distributed from South Georgia in the west, through the Crozet, Heard and Kerguelen groups, to Macquarie in the east. Consequently, it is difficult to sustain the idea of a distinct zoogeographical province for the Crozet, Heard and Kerguelen groups on this kind of evidence. It is interesting to note that 3 of the species showing a circum-subantarctic distribution have produced different subspecies in the western and eastern parts of subantarctica. *Alaskozetes antarcticus* is represented by the subspecies *grandjeani* on Macquarie and Heard, the subspecies *intermedius* on South Georgia, Bouvet and South Sandwich Islands, and the nominate subspecies in the Peninsula region. Since material of this species was not available in the Crozet collections, it is not possible to say which subspecies is represented. Similarly, *Podacarus auberti*, represented by the nominate form on Kerguelen, Heard and Macquarie, and the subspecies *occidentalis* on South Georgia, has not been recorded from the Crozet Islands. *Halozetes belgicae* occurs as the nominate form in the Peninsula region, the subspecies *longisetae* on South Sandwich Islands, and the subspecies *brevipilis* on Macquarie. The species has also been recorded from Heard Island (Dalenius & Wilson 1958), but it is not known which subspecies is represented. It might be expected that the species would occur on Crozet as the eastern subspecies *brevipilis*, but it appears that the single specimen examined in the present work shows a greater similarity to the nominate form. It must be noted, however, that the specimen also shows some features reminiscent of *brevipilis*, and possibly represents a condition intermediate between western and eastern forms, indicating some degree of evolutionary divergence from both.

REFERENCES

- André, M. 1947. Croisière du Bougainville aux îles Australes Françaises. XVII. Acariens. *Mem. Mus. Nat. Hist., Paris* (NS) 20: 65-100.
- Balogh, J. 1961. Identification keys of world oribatid (Acari) families and genera. *Acta Zool.* 7: 243-344.
- Dalenius, P. & O. Wilson. 1958. On the soil fauna of the Antarctic and of the Subantarctic Islands. The Oribatidae (Acari). *Arkiv Zool.*, ser. 2, 11 (23): 393-425.
- Dreux, Ph. 1966a. L'Archipel Crozet et son exploration scientifique. *Com. Nat. Fr. Rech. Ant.* 15: 29-34.
- 1966b. La faune entomologique de l'Archipel Crozet et son endemisme. *Com. Nat. Fr. Rech. Ant.* 15: 35-55.
- Gressitt, J. L. 1970. Subantarctic entomology and biogeography. *Pacif. Ins. Monogr.* 23: 295-374.

- Hammer, M.** 1962. Investigations on the oribatid fauna of the Andes Mountains. IV. Patagonia. *Biol. Skr. Dan. Vid. Selsk.* 13, 3: 37 p.
1967. Investigations on the oribatid fauna of New Zealand. Part II. *Biol. Skr. Dan. Vid. Selsk.* 15: 64 p.
1970. A few oribatid mites from Easter Island. *Pacif. Ins.* 12 (2): 279-89.
- Jeannel, R.** 1965. Biogeographie des terres australes de l'Océan Indien. *Rev. Fr. Ent.* 31: 321-417.
- Richters, F.** 1907. Die Fauna der Moosrasen des Gauss-Bergs und einiger südlicher Inseln. In *Deutsche Südpolar Exped., 1901-1903*, 9: 261-302.
- Wallwork, J. A.** 1963. The Oribatei (Acari) of Macquarie Island. *Pacif. Ins.* 5 (4): 721-69.
- 1970a. Acarina : Cryptostigmata of South Georgia. *Pacif. Ins. Monogr.* 23: 161-78.
- 1970b. Acarina : Cryptostigmata of Heard and Kerguelen. *Pacif. Ins. Monogr.* 23: 179-82.