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The lithobiomorph centipedes of the Canary Islands (Chilopoda)

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Eleven species of *Lithobius* and three of *Lamyctes* are recorded from the Canary Islands, *Lithobius comsimilis* Eason, sp. n., *L. canariensis* Eason, sp. n. and *Lamyctes mauriesi* Demange, 1981, for the first time. These three species are described. Several species are resorted as new for one or more island. A key is provided for the identification of all the species recorded.

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Introduction

Eason (1985) gave a survey of the lithobiomorph centipedes of the Macaronesian islands, including the Canary Islands, as known at that time. Since then, a considerable Canarian material has been accumulated, primarily as a result of the junior author's field-work. This material forms the basis of the present paper. In addition to describing two new species and recording a species new to the archipelago, we give additional records of several other species, including the first lithobiomorphs ever recorded from Fuerteventura and El Hierro. A key to Canarian lithobiomorph centipedes is also presented.

Where not specified, the studied material derives from the junior author's field-work on Tenerife (March 1987, with M. Báez, and January 1989, with A. Enghoff), La Palma (March 1987, with M. Báez), La Gomera (February 1989), El Hierro (January 1989, with A. Enghoff), Gran Canaria (December 1989 - January 1990, with M. Báez), and Fuerteventura (January 1990, with M. Báez). Additional material has been received from R. D. Kime (Linkebeek, Belgium), A. Enghoff and J. Rabøl (Copenhagen, Denmark) and J. Wunderlich (Straubenhardt, Germany). We wish to thank these gentlemen for their help.

All material is kept in the Zoological Museum, University of Copenhagen, unless otherwise stated.

Synonyms are generally not given; please refer to Eason (1985).

The distribution of the species on the Canary Islands is shown in Fig. 1 and Table 4.

Family LITHOBIIDAE

Lithobius pilicornis Newport, 1844

Material. - TENERIFE: Monte de las Mercedes, Agua García, Palo Blanco. Monte del Agua. LA PALMA: Cumbre Nueva.

New to La Palma.

Lithobius lusitanus Verhoeff, 1925

Material. - LA PALMA: Cubo de la Galga, Los Tilos, Cumbre Nueva. EL HIERRO: E of hlercadel. 1360 m.

New to El Hierro.

Lithobius lapidicola Meinert, 1872

No new records.

Lithobius melanops Newport, 1845

Material. - TENERIFE: Monte de las Mercedes, Agua García.

Lithobius obscurus Meinert, 1872

No new records.

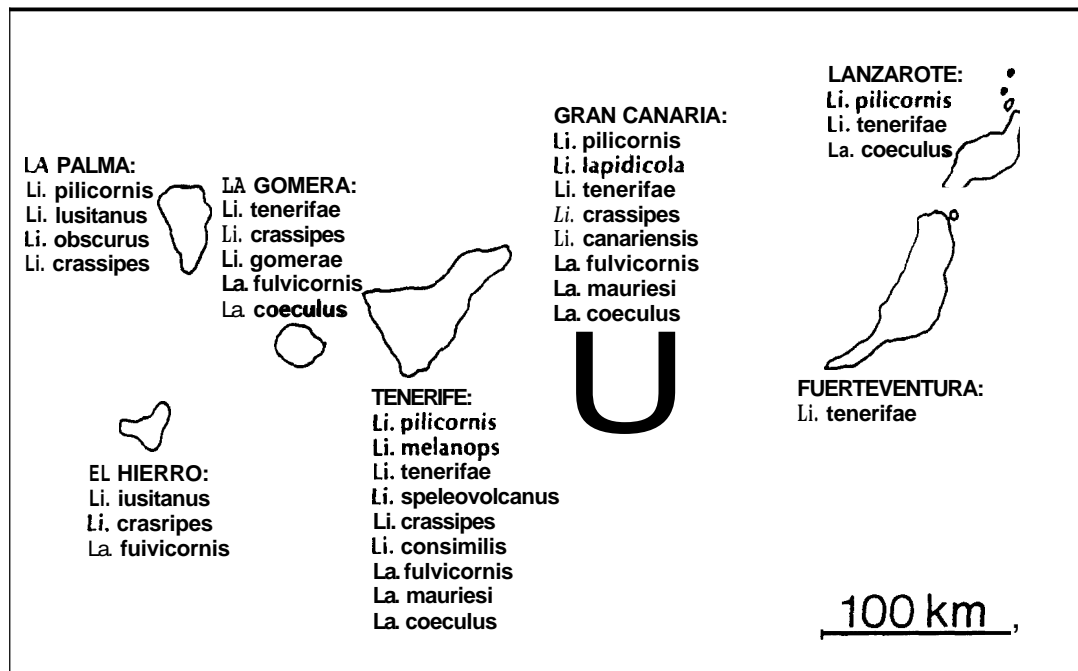


Fig. 1. Map of the Canary Islands, showing the distribution of lithobiomorph species.

***Lithobius tenerifae* Latzel, 1895**

Material. - LANZAROTE: Haria, v.1989, J. Wunderlich. FUERTEVENTURA: Barranco del Ciervo - Morro de Cavedero N of Morro Jable (Jandia), NE of Betancuria, Morro de la Cruz N of Betancuria, Montaña Muda at La Matilla. GRAN CANARIA: Roque Nublo, xi.1985, A. Enghoff; Barranco de Agaets, xii.1985, A. Enghoff; Barranco de Guayadeque, San Bartolomorné, Pinar de Tamadaba, Pinar de Pajonales, Cortijo de Tirajama. TENERIFE: Masca, Barranco de las Cuevas. LA GOMERA: Busque del Cedro, 3 km W of San Sebastian, Igualeto S of Garajonay, Alto Garajonay, Ermita de las Nieves

New to Lanzarote and Fuerteventura.

***Lithobius (Monotarsobius) speleovolcanus* Serra, 1984**

Recorded from a tirther cave on Tenerife: Cueva Felipe Reventon, by Zapparoli (1990).

***Lithobius (Monotarsobius) crassipes* L. Koch, 1862**

Material. - GRAN CANARIA: W of Artenara. LA PALMA: Roque de los Muchachos, 2300 m. LA GOMERA:

Bosque del Cedro. EL HIERRO: 900 m W of Los Palos Blancos. El Fayal.

New to Gran Canaria, La Palma and El Hierro. All the adults from these three islands have more numerous coxal pores and more profuse anterior spinulation than the usual European form of the species, and the males are without setae on the second genital sternite and have a distinct dorsal sulcus on 15th tibiae. They are therefore like those from Madeira and La Gomera mentioned by Eason (1985).

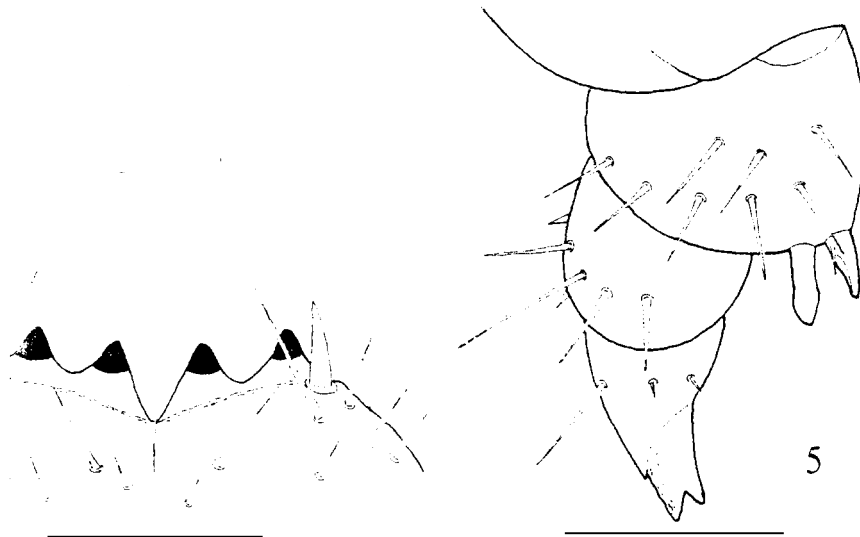
***Lithobius (Monotarsobius) gomerae* Eason, 1985**

No new records.

***Lithobius (Monotarsobius) consimilis* Eason, sp. n.**

(Figs 2-5)

Type material. - Holotype: ♂, TENERIFE, Teno, Punta del Fraile, W of tunnel, N slope, under stones at roadside, 240 m, 29.i.1989, leg. A. & H. Enghoff. Paratype: 1 ♀, same data as for holotype.



Figs 2-5. *Lithobius consimilis* sp. n.: (2) right ocelli and organ of Tömösváry (TO), ♂; (3) dental margin of prosternum, ventral; (4) right ocelli and organ of Tömösváry (TO), ♀; (5) right female gonopod, ventral. Scales 0.1 mm.

Additional material. - 1 ♀, Fontaleza, under stone, vi.1990, leg. J. Wunderlich.

Etymology. - From the Latin, *consimilis*, parallel, referring to the sides of the trunk.

Diagnosis. - 6.5-7.2 mm long, 20 antennal articles, 7-9 ocelli with posterior ocellus small, 2+2 prosternal teeth, tergites without projections, first to 13th tarsal articulations fused, 15th accessory apical claws absent, male posterior legs unmodified, female gonopod with two spurs and a tridentate claw.

Description

Male holotype. - Color: pale red. Size: 6.5 mm long, 0.75 mm broad at T.8, 10 and 12.

Head: smooth; 0.71 mm broad, slightly longer than broad, as broad as T.3; projection of lateral marginal interruptions distinct; posterior marginal ridge without median thickening; posterior border very slightly convex. Antennae: 2.3 mm long; 20 articles, as long as broad or very slightly elongate, terminal article one and a half times longer than broad. Ocelli: seven on each side; posterior ocellus smaller than posterosuperior; organ of Tömösváry slightly larger than an adjacent ocellus (Fig. 2).

Prosternum: with 2+2 teeth, the line of their apices slightly recurved; porodont about twice as

stout as a large seta; lateral to the porodont the free border slopes obliquely caudad with barely a trace of convexity (Fig. 3). Tergites: T.1 almost smooth, narrower than T.3, somewhat trapeziform with posterior border straight; other large tergites moderately wrinkled; posterior borders of i. 3 and 5 very slightly, those of T.8, 10 and 12 moderately and that of T.14 slightly emarginate; posterior angles of large tergites evenly rounded, those of T.9, 11 and 13 without projections; T.8, 10 and 12 all of much the same breadth and T.5 almost as broad. Intermediate tergite: posterior border slightly emarginate. Coxal pores: circular; 3,3,3,2; separated from each other by their own diameter or more.

Anterior legs: tarsal articulations of first to 13th fused; accessory apical claws and sensory spurs both about one-third as long as principal claws. 14th leg: slightly swollen in all articles but not modified; accessory apical claw and sensory spur as on anterior legs. 15th leg: 2.6 mm long; slightly swollen but not modified; without accessory apical claw or any obvious sensory spur. Glandular pores: concentrated on 14th and 15th legs only.

Genitalia: first genital sternite with seven setae on one side and eight on the other; second genital sternite without setae; gonopod a simple bud with one seta.

Spinulation: see Table 1.

Table 1. Spinulation of *Lirhobius consimilis* sp. n., ♂ holotype. Letters in brackets indicate spines present on one side only.

	Ventral				Dorsal			
	tr	P	F	T	C	P	F	T
3-4	-	-	m	m	-	p	a	a
5-6	-	-	m	m	-	p	ap	a
7-8	-	-	am	m	-	p	ap	a
9-10	-	-	am	m	-	mp	ap	a
11	-	-	amp	m	-	mp	ap	a
12	-	m	amp	m	-	mp	ap	ap
13	-	m	amp	am	-	mp	ap	ap
14	-	mp	amp	am	-	amp	p	ap
15	(m)	mp	amp	am	-	amp	p	p
16	in	amp	am(p)	(a)m	a	amp	p	-
17	m	amp	m	-	a	amp	-	-

Table 2. Spinulation of *Lithobius consimilis* sp. n., ♀ from Fontaieza.

	Ventral				Dorsal				
	C	tr	P	F	T	C	P	F	T
3-4	-	-	-	m	m	-	p	a	a
5-6	-	-	-	am	m	-	p	ap	a
7-8	-	-	p	am	m	-	p	a	p
9-10	-	-	p	am	m	-	mp	ap	a
11	-	-	p	amp	m	-	mp	ap	ap
12	-	-	-	amp	m	-	mp	ap	ap
13	-	-	p	amp	am	-	mp	ap	ap
14	-	-	p	amp	am	-	amp	ap	ap
15	-	-	p	amp	am	-	amp	p	ap
16	-	-	mp	amp	am	a	amp	p	ap
17	-	-	mp	amp	am	a	amp	p	p
18	-	m	arnp	amp	m	a	amp	p	-
19	-	m	amp	m	-	a	amp	-	-

Female paratype. - Differing from the holotype in the following characters:

Size: 7.2 mm long, 0.82 mm broad. Head: as broad as T.5. Antenna: terminal article twice as long as broad. Ocelli: eight on each side (Fig. 4). Tergites: posterior borders of T.8, 10 and 12 only slightly emarginate. Coxal pores: 3,4,4,3. 15th legs: missing. Gonopod: with two spurs, the lateral one slightly expanded distally and the medial one smaller with a small lateral basal spine; claw with lateral and medial denticles distinct (Fig. 5); dorsolateral setae short and very slightly stouter than the general setae, two on the second article but none on the third. Spinulation: not tabulated owing to many missing legs.

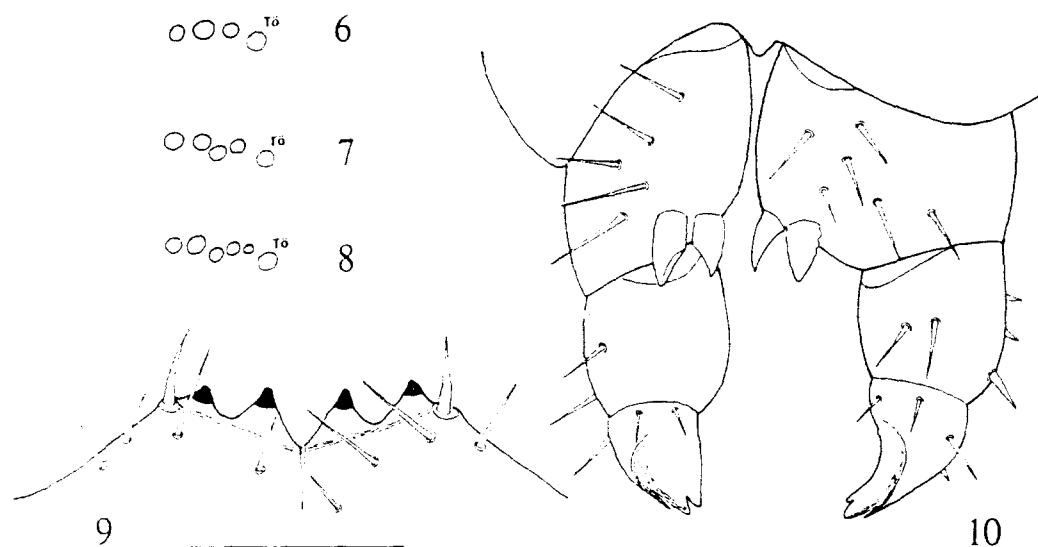
Female from Fontaieza. - Differing from the paratype in having nine ocelli on each side, fewer coxal pores (2,3,3,3), the lateral spine of the gonopod absent or indistinct, more dorsolateral setae (four on

the second article, one on the third), and more profuse anterior spinulation (Table 2).

Remarks

When considering the affinities of species of subgenus *Monotarobius* Verhoeff, 1905, one must take into account a number of species from the Eastern Hemisphere which Chamberlin placed in other rather illi-defined genera which cannot be distinguished from *Monofarsobius* as currently defined (Eason 1982: 24). *Nipponobius* Chamberlin, 1929, has already been proposed as a synonym of *Monorarobius* (Eason 1976: 123), and *Onebius* Chamberlin, 1926, can only be distinguished from *Nipponobius* by quite insignificant characters. Most of the species assigned to these two genera have, like *Lithobius consimilis*, the posterior ocellus small relative to those of the main mass and three of them agree with *consimilis* in having a simple apical claw on the 15th leg, male posterior legs without conspicuous modification and the female gonopod with two spurs and a tridentate claw. *Nipponobiuscepeus* Chamberlin, 1940, based on a single female taken at Honolulu among vegetables from Japan, can from its very brief description be distinguished from *L. consimilis* by its short antennal articles and reduced spinulation of the legs; and *Onebius moenanus* Chamberlin, 1926, based on a single female from Ocean Island, and *O. pangranganus* Chamberlin, 1944, on a single male from Java, only by their reduced spinulation. Of the species described in *Monotarobius* with a small posterior ocellus and the above characters of *L. consimilis*, *L. (M.) nepalensis* Eason, 1989, from Nepal, known from females only, is much larger than *consimilis* with the claw of the gonopod of characteristic shape (Eason 1989: fig. 56), and *L. (M.) sivasiensis* (Matic, 1983), from Turkey, known from males only, has a much enlarged posterosuperior ocellus and reduced spinulation.

Chamberlin (1926) regarded the absence of a large posterior ocellus in *Onebius* as a generic character but this feature, although more often found in Asiatic than in European species of *Lithobius* (s.l.) is neither generic nor subgeneric and there is no reason for regarding *L. consimilis* as of Asiatic origin: it is probably endemic in Tenerife. Of the *Lirhobius* species already known from Tenerife (Eason 1985), *L. (M.) crassipes* (see above) is close to *L. consimilis* and an occasional specimen may have a relatively small posterior ocellus. But *L.*



Figs 6-10. *Lithobius canariensis* sp. n.: (6-8) right ocelli and organ of Tömösváry (TI) dental margin of prosternum, ventral; (10) female gonopods, ventral. Scales 0.1 mm.

crassipes is a larger species with a faint but distinct 13th tarsal articulation, the male 15th tibia swollen often with a shallow dorsal sulcus, and a fusiform trunk with T.5 and 10 much broader than T.5 and 12 (Eason 1964).

Lithobius (Monotarsobius) canariensis

Eason, sp. n.

(Figs 6-10)

Type material. Holotype: ♂, GRANCANARIA, Barranco de Veneguera, just below main road, level ground with lush vegetation: *Euphorbia*, *Echium*, *Launaea* etc., under stones, 320 m, 29.xii.1989, leg. Al. Báez & H. Enghoff. Paratypes: 3 ♀, same data as for holotype.

Diagnosis. - 5.0-6.0 mm long, 20 antennal articles, 3-5 ocelli in a single horizontal row, 2+2 prosternal teeth, tergites without projections, first to 13th tarsal articulations fused, 15th accessory apical claw absent, male 15th tibia with a feeble dorsal sulcus, female gonopod with two stout spurs and a tridentate claw.

Description

Colour: brown. Size: 5.0-6.0 mm long, 0.58-0.63 mm broad at T.10.

Head: smooth; 0.53-0.58 mm broad, as broad as

long, almost as broad as T.5; lateral marginal interruptions distinct but barely projecting; posterior marginal ridge without median thickening; posterior border straight. Antenna: about one third of body length; 20 articles, mostly as long as broad, terminal article one and a half times longer than broad. Ocelli: three to five on each side, in an irregular horizontal row: posterior ocellus no larger than the others; organ of Tomosváry about the size of the largest ocellus (Figs 6-8).

Prosternum: with 2+2 teeth, the line of their apices very slightly recurved; prodont about twice as stout as a large seta; lateral to the prodont the free border slopes obliquely caudad without convexity (Fig. 9). Tergites: smooth; T.1 narrower than T.3, somewhat rectangular with posterior border straight; posterior border of T.3 straight, that of T.5 very slightly, those of T.8, 10 and 12 slightly and that of T.14 very slightly emarginate; posterior angles of large tergites evenly rounded, those of T.9, 11 and 13 without projections: T.5 and 10 distinctly broader than T.5 and 12 as in most species of *Lithobius*. Intermediate tergite: posterior border moderately emarginate in both sexes. Coxal pores: circular; 2,2,2,2; 2,2,3,2 or 2,3,3,2; separated from each other by more than their own diameter.

Anterior legs: tarsal articulations of first to 13th fused; accessory apical claws one third and sensory

spurs about three-fifths as long as principal claws. 14th leg: slightly swollen in both sexes; not modified in male; accessory apical claw one third and sensory spur about a quarter as long as principal claw. 15th leg: about one third of body-length; slightly swollen in both sexes; male tibia with a feeble dorsal longitudinal sulcus on its distal two-thirds; without accessory apical claw or any obvious sensory spur. Glandular pores: concentrated on 14th and 15th legs only.

Male genitalia: first genital sternite with six setae on each side; second genital sternite without setae; gonopod a simple bud with one seta.

Female gonopod: with two stout conical spurs, the lateral one sometimes with feeble lateral serration; claw with a sharp narrow lateral denticle and a large medial denticle (Fig. 10); dorsolateral setae short, stouter than the general setae, three on the second article and one on the third.

Spinulation: see Table 3.

Remarks

There are no known species of subgenus *Monotarsobius* possessing all the characters mentioned in the diagnosis of *L. (M.) canariensis*; but three which have all but the male 15th tibial sulcus which is easily overlooked. In *L. (M.) aeruginosus* L. Koch, 1862, and *L. (M.) austriacus* (Verhoeff, 1937), both European, the organ of Tomosváry is always placed below the foremost ocelli and not in front of them, and the 14th accessory apical claw is absent (Eason unpubl.); in addition females of *aeruginosus* have the claw of the gonopod of characteristic shape (Matic 1966: figs 78 E & F) and males of *austriacus* have the spine 15DpP replaced by a small trifid spur (Borek 1969 fig. 2). The third species, *L. (M.) cuklavvus* (Chamberlin, 1958), based on two males from Iraq, is larger than *canariensis* with the

posterior ocellus of the horizontal row enlarged and the anterior one reduced; it also has what Chamberlin (1958) described as an abortive lateral spine on the 15th coxa.

Family HENICOPIDAE

Lamyctes fulvicornis Meinert, 1868

Material. - TENERIFE: Teno Alto, ii.1990, J. Rabøl; Bajamar, San José de los Llanos. LA GOMERA: Ermita de las Nieves. EL HIERRO: Mirador de Jinama, Cruz de los Reyes, E of Mercadel.

New to La Gomera and El Hierro.

Lamyctes mauriesi Demange, 1981

(Figs 11-13)

? *Henicops africana* Porat, 1871: 1140.

? *Henicops albipes* Pocock, 1895: 309.

Lamyctes mauriesi Demange, 1981: 837, figs 8, 9

Material. - TENERIFE: 3 ♀ Playa Paraiso, leaf-litter, 3.i.1988, leg. D. Kime (R. Mus. Hist. Nat. Belg.). GRAN CANARIA: 2 ♀ Barranco del Aguila, near Sioux City, rocky slope, *Euphorbia* etc., under stones, 50 m, 29.xii.1989, leg. M. Báez & H. Enghoff: 1 ♀ small barranco N of S. Agustin, scattered *Euphorbia obtusifolia*, in accumulated litter among boulders, 120 m, 8.i.1990, leg. H. Enghoff.

Description

Colour: pale brown with an area of violet pigmentation surrounding each ocellus. Length: 5.0 to 6.5 mm.

Head: as broad as long, about as broad as T.5. Antenna: a quarter of body-length; 16 articles, the basal two much longer than the others which are as long as broad or transverse, terminal article about twice as long as broad. Ocelli: a single one on each side.

Prosternum: with 2+2 teeth; prodont represented by a small prominence surmounted by a minute spine (Fig. 11). Tergites: smooth; T.1 much narrower than head, slightly narrower than T.5; large tergites with rounded posterior angles and feebly emarginate posterior borders; T.9, 11 and 13 without posterior projections. Coxal pores: circular; 2,3,3,2; 3,3,3,2; 3,3,3,3 or 3,3,3,4; separated from each other by their own diameter or more.

Legs: tarsi slender; tarsal articulations of first to 12th fused; distal tibial projection (see Attems 1909: figs 49, 57 & 61) present on first to 11th although sometimes feeble and blunt on the 11th; 15th two-fifths to almost half body-length, slender, the first

Table 3. Spinulation of *Lithobius canariensis* sp. n. Letters in brackets indicate the variable spines.

	Ventral				T	Dorsal			
	C	tr	P	F		C	P	F	T
	-	-	-	-	m	-	-	a	a
	-	-	-	=	m	-	-	a	a
9-10	-	-	-	m	m	-	-	ap	a
11	-	-	-	am	m	-	-	p	ap
12	-	-	-	am	m	-	inp	p	p
13	-	-	lio	am	m	(a)	mp	p	p
14	-	m	mp	am	m	a	mp	p	-
15	-	m	amp	(a)m	(m)	a	mp	-	-



Figs 11-13. *Lamyctes mauriesi* Demange: (11) dental mareinoprosternum, ventral; (12) left 15th leg, ventral; (13) female gonopods, ventral. Scales 0.1 mm (11-13), 1 mm (12).

tarsus seven or eight times longer than broad and much more slender than the tibia (Fig. 12); anterior and posterior accessory apical claws both about two-fifths as long as principal claw on all legs.

Gonopod: usually with two conical spurs but one specimen from Tenerife and the one from Gran Canaria N of S. Agustin have two such spurs on one gonopod and three on the other; claw simple (Fig. 13).

Remarks

Demange (1981) discussed the difficulty of identifying his specimen, a female from Guadeloupe (Less-

er Antilles), with any previously described species of *Lamyctes* owing to the inadequacy of earlier descriptions. He pointed out the similarity between *L. mauriesi* and *L. albipes* (Pocock, 1895) sensu Attems (1907) from Java with which it agrees in having three spurs on each gonopod but differs in having 30 rather than 33 + 34 antennal articles, 2,3,3,3 rather than 2,2,2,2 coxal pores and in the absence of a projection on the 12th tibia. We believe that all these characters are intraspecifically variable. Pocock's original example of a female of *L. albipes* from Java had only 28 antennal articles and two spurs on each gonopod (Pocock 1895), but in view of the variability of the latter character in the

Canarian specimens and the fact that out of 46 females of *L. fulvicornis* from Iceland, 13 had three spurs on one gonopod and two had three on both (Eason 1970), Demange was hardly justified in regarding *albipes* sensu Attems as specifically distinct from *albipes* (Pocock) because of there being three spurs in the former and two in the latter.

We identify the Canarian specimens as *Lamyctes mauriesi* with confidence, while realising that *mauriesi* may well prove to be a junior synonym of *L. albipes* (Pocock). Further, *L. africana* (Porat, 1871), from Porat's very brief description of a female from 'Caffraria' (= South Africa), can only be distinguished from *albipes* by its slightly greater length so that the correct name for this species may be *L. africana* (Porat). Should this be the case the Canarian specimens belong to a wide-spread species chiefly distributed in the tropics and subtropics of both Old and New Worlds.

In Attems' (1928) key to the species of *Lamyctes*, *L. mauriesi* would run to *L. castanea* Attems, 1909, owing to the absence of a tibial projection on the 12th leg; but *L. castanea*, from South Africa, was described as being 13 mm long so it is unlikely to be conspecific with *mauriesi*.

Lamyctes coeculus (Brolemann, 1889)

Lamyctinus coeculus: Eason 1985.

Material. - TENERIFE: Punta del Hidalgo. LA GOMERA: Playa de Hermigua, Ermita de las Nieves.

New to Tenerife and La Gomera.

Key to the Canarian Lithobiomorpha

1. No true spines on any leg but a sharp distal anterior projection on the first 10 or 11 tibiae in the position DaT. 2
- Always with spines on some legs but no tibial projections 4
2. No ocelli *Lamyctes coeculus*
- A single ocellus on each side 3
3. 3+3 prosternal teeth. 15th leg about 1/3 of body-length with first tarsus 4-5 times longer than broad. Usually longer than 8 mm *Lamyctes fulvicornis*
- 2+2 prosternal teeth. 15th leg 2/5 or more of body-length with first tarsus 7-8 times longer than broad. Shorter than 8 mm *Lamyctes mauriesi*
4. No ocelli. Organ of Tömösváry enlarged *Lithobius speleovolcanus*
- At least 3 ocelli on each side. Organ of Tömösváry not enlarged 5
5. 4+4 or more prosternal teeth. A lateral and a medial ventral spine (VamC) on 15th coxa *Lithobius pilicornis*
- 2+2, rarely 2+3 or 3+3, prosternal teeth. Neither lateral nor medial spines on 15th coxa ... 6
6. Antennae of 18-22 articles, usually 20. 7
- Antennae of 24 or more articles 11
7. 15th accessory apical claw present *Lirhobius gomerae*
- 15th accessory apical claw absent ... 8
8. Tarsal articulations present on first 12 legs. 14-21 mm long. *Lithobius tenerifae*
- Tarsal articulations fused on first 12 or 13 legs. Less than 14 mm long 9
9. 3-5 ocelli in a single row on each side *Lirhobius canariensis*
- 6 or more ocelli in 2-3 rows on each side. 10
10. 13th tarsal articulation fused. Male 15th tibia not modified *Lithobius consimilis*
- 13th tarsal articulation present. Male 15th tibia swollen, often with a shallow dorsal sulcus. ... *Lirhobius crassipes*

Table 4. Recorded distribution of Canarian Lithobiomorpha; new records are marked with an asterisk, other records are from Eason (1985) and Serra (1984).

	Fuerte-ventura	Lanzarote	Gran Canaria	Tenerife	La Palma	La Gomera	El Hierro
<i>Lithobius pilicornis</i>		x	x	x	x*		
<i>Lirhobius lusitanus</i>					x		*
<i>Lithobius lapidicola</i>			x				
<i>Lithobius melanops</i>					y		
<i>Lithobius obscurus</i>			x				
<i>Lithobius tenerifae</i>	x*	*					
<i>Lithobius speleovolcanus</i>							
<i>Lithobius crassipes</i>			x*		*		*
<i>Lithobius gomerae</i>							
<i>Lirhobius consimilis</i>				y*			
<i>Lithobius canariensis</i>			x*				
<i>Lamyctes fulvicornis</i>			x			*	*
<i>Lamyctes mauriesi</i>			x*	y*			
<i>Lamyctes coeculus</i>			y	y*		x*	

11. 15th pret femur with one or more supplementary radial spines between DpP and VpP. Male 15th femur with a prominent dorso-distal wart-like outgrowth *Lithobius obscurus*
 - 15th pret femur very rarely with a supplementary spine. Male 15th femur not modified 12
12. 15th accessory apical claw absent
 *Lithobius tenerifae*
 - 15th accessory apical claw present 13
13. With prominent posterior projections on T.9, 11 and 13 *Lithobius melanops*
 - Without tergal projections or with traces of projections on T.3 and small ones on T.11 and 13 14
14. Free margin of prosternum with broad irregular shoulders lateral to porodons. VaT always present on some legs. 15 DaP always present. Usually longer than 9 mm *Lithobius lusitanus*
 - Free margin of prosternum sloping obliquely caudad lateral to porodons. VaT altogether absent. 15 DaP usually absent. Usually shorter than 9 mm *Lithobius lapidicola*

References

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Note added in proof. - After completion of the manuscript, a specimen of the genus *Lamyctes* which does not correspond to any of the three species reported in our paper was found among Canarian material belonging to the Institute of Zoology, University of Rome and kindly placed at our disposal by A. Vigna.

The specimen was collected on La Gornera (Barranco del Agua, forest, 15.iii.1985, A. Vigna leg.) and is tentatively identified to *Lamyctes castanea* Attems, 1909. The original and subsequent descriptions of *L. castanea* are, however, not very good, hence our doubt. The Gorneran specimen agrees in most characters with the specimens of *L. mauriesi* reported from Tenerife and Gran Canaria. It is, however, much larger (body length 10.4 mm as opposed to 5-6.5 mm in *mauriesi*), and the first tarsus of the 15th legs is 15 times as long as broad, as opposed to 7-8 times in *mauriesi*.

There is a possibility that the difference in shape of the tarsi is due to allometry and thus that *L. castanea* = *L. mauriesi* despite the size difference.

It should be noted that whereas *L. mauriesi* was found in the driest parts of Tenerife and Gran Canaria, the Gorneran specimen of *L. castanea* was found in a forest, perhaps a hint that two species are indeed involved.