

THE LIFE-CYCLE OF *DROMICIMYOBIA DROMICIOPS* FAIN, 1973 N. STAT.
(ACARI: PROSTIGMATA: MYOBIIDAE)

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----- ABSTRACT—The life-cycle of *Dromicimyobia dromiciops* Fain, 1973 n. stat. is described and the subgenus *Dromicimyobia* Fain is elevated to the genus rank. -----

Archemyobia (*Dromicimyobia*) *dromiciops* Fain, 1973 was known so far from the nymphal stages. The subgenus *Dromicimyobia* had been separated from the typical subgenus by the presence on legs II-IV of the nymphs of only one claw, instead of two very unequal claws in the typical subgenus. The typical series contained protonymphs, deutonymphs, tritonymphs and a male very poorly sclerotized and still enclosed in the tritonymphal skin.

Fain (1978) redescribed and depicted the holotype tritonymph of that species. Recently, F. S. L. collected new material containing females and males of that species from the typical host, *Dromiciops australis*. In this paper we describe the female, the male and the other nymphal stages of that species. Moreover we think now that the differences between the taxa *Dromicimyobia* and *Archemyobia* are sufficient to justify the elevation of the first taxon to the genus level.

Genus *Dromicimyobia* Fain, 1973 nov. stat.

DEFINITION—In the nymphs the legs II-IV end in a single claw, while in *Archemyobia* these legs bear 2 unequal claws. The adult female differs from that of *Archemyobia* by the more elaborated shape of the clasping organ situated on the internal surface of genu I. In *Dromicimyobia* the internal surface of genu I is completely covered by a longitudinally ridged plate. When approaching the dorsal part of the genu this plate extends longitudinally and becomes free.

This free part of the plate is in contact with a thick triangular plate, bearing transverse ridges and situated on the dorso-internal part of the genu. Apparently this thick plate serves as an elastic buffer to limit the movements of the free part of the internal plate when the hair of the host is pressed between both legs I. In the genus *Archemyobia* the internal surface of genu I bears 2 subequal triangular ridged plates, one interno-dorsal, the other interno-ventral. These structures of the internal surface of genu I serve for clasping the hair of the host, this hair being pressed between both legs I. In the genera of the subfamily Myobiinae (e. g. in *Australomyobia* and *Nectogalobia*) there is no such organ on the internal surface of genu I and the hair of the host is clasped asymmetrically by one leg between the lateral processes situated on genu I and femur I.

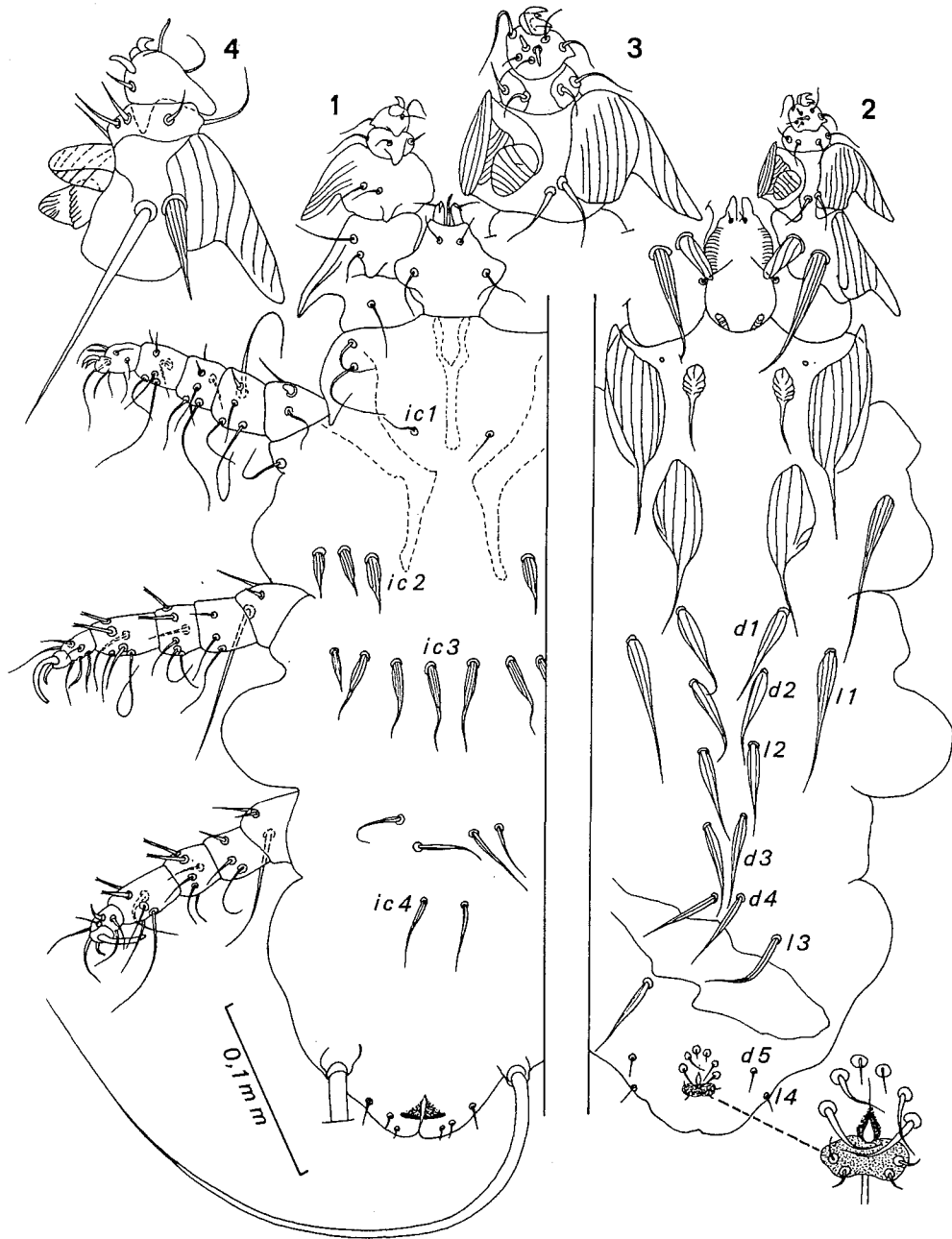
In the males the clasping organ consists of 2 conical ridged spines on the dorso-internal surface of genu I as in genus *Archemyobia*.

TYPE SPECIES—*Archemyobia* (*Dromicimyobia*) *dromiciops* Fain, 1973.

Dromicimyobia dromiciops (Fain, 1973)

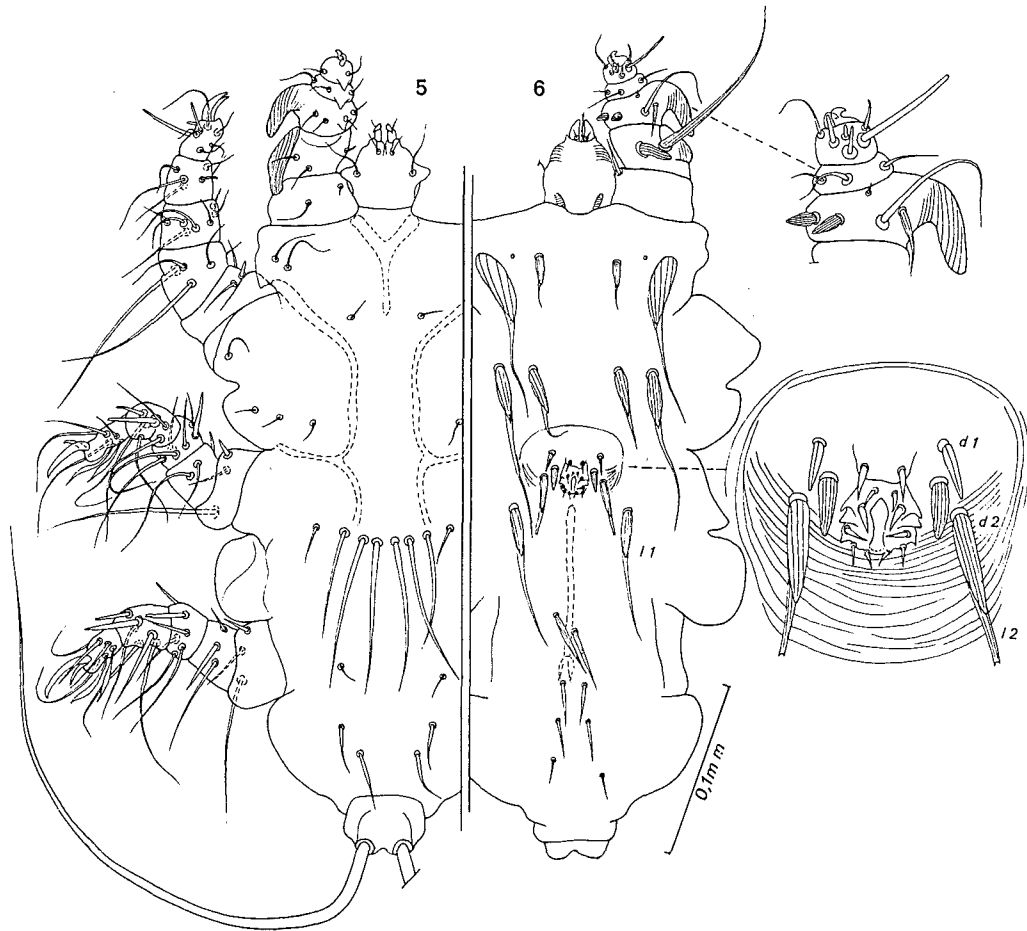
FEMALE (Figs. 1-3)—Total length 501 μ m, maximum width 240 μ m. DORSUM—Setae *v i* much smaller than *v e*. Setae *sc i* resembling *v e* and much larger than *sc e*.

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Figs. 1-3: *Dromicimyobia dromiciops* Fain—1, female in ventral view; 2, female in dorsal view; 3, female, terminal segments of leg I, dorsally. Fig. 4: *Archemyobia dimidiata* Fain—terminal segments of leg I, dorsally.

All other setae much narrower, inflated in their basal half and progressively attenuated apically. Lengths of setae *l1*, *d1*, *d2*, *l2*, *d3*, *d4*, *l3*, are 85 μ m, 52 μ m, 50 μ m, 50 μ m, 48 μ m, 45 μ m, 45 μ m. The *d5* and *l4* are very thin, 12 and 9 μ m long respectively. Genital lobes absent. Genital and anal setae thin and short. VENTER—*ic1* very small; *ic2* and 2 coxal II setae situated on a transverse row, are striated, thick and abruptly and very finely attenuated apically; *ic3* as *ic2* but longer, form a transverse row with the 3 coxal III setae; *ic4* and 2 coxal setae thin. LEGS—Tarsi II with 2 rather thick subequal claws; tarsi III-IV with 2 very unequal claws.

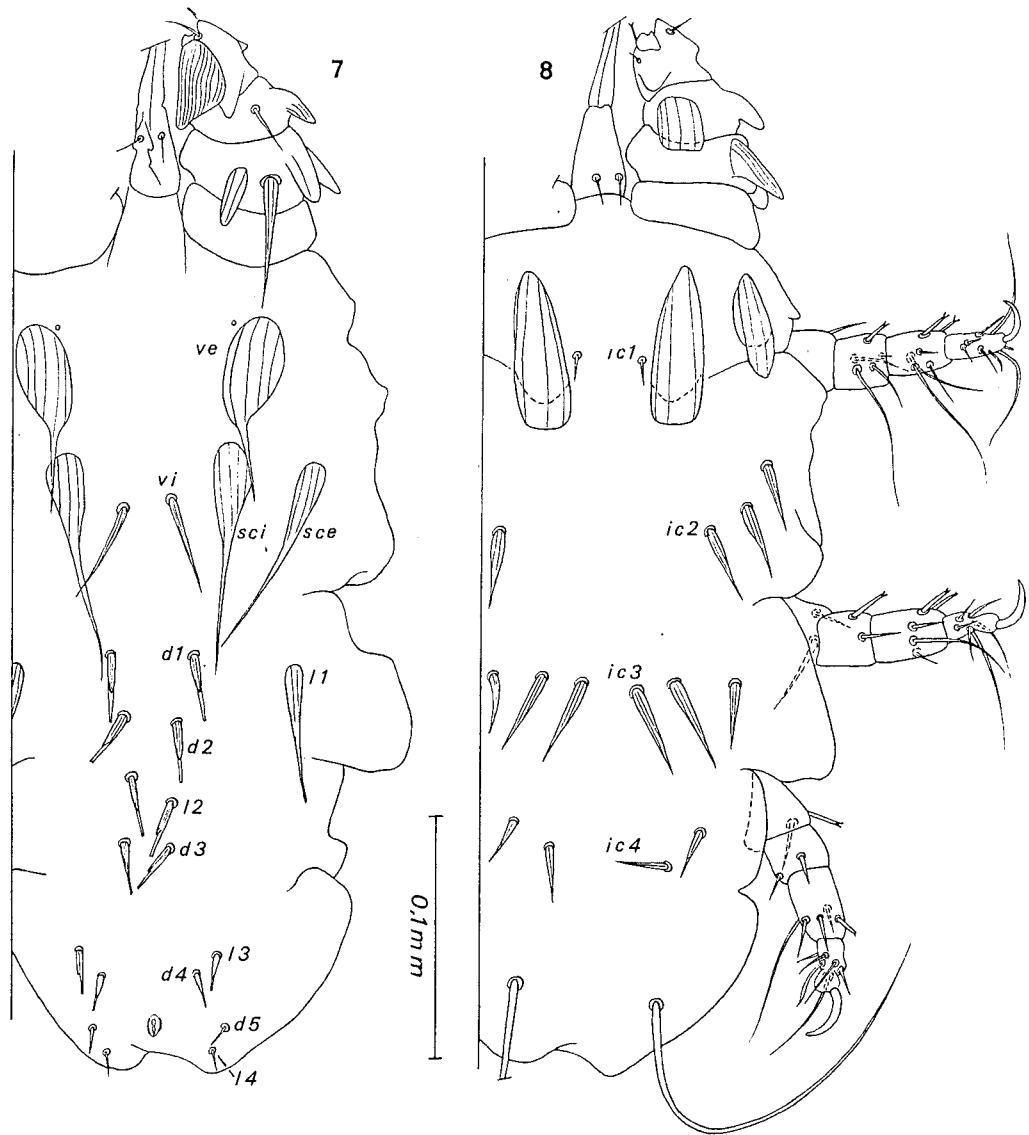


Figs. 5-6: *Dromicimyobia dromiciops* —5, male in ventral view; 6, male in dorsal view.

CHAETOTAXY OF LEGS—Coxae I-IV 2-3-3-2, trochanters II-IV 3-3-3, femora II-IV 5-3-3, genua II-IV 7-6-6, tibiae II-IV 6-6-6, tarsi II-IV 7-6-6.

MALE (Figs. 5-6)—We describe here a male specimen from the typical host from Malleo, Chile. Total length 405 μ m, width 205 μ m. DORSUM—Setae *vi* much smaller than *sc e*. Setae *vi*, *ve*, *sci*, *sc e* and *l 2*, striated and toothed. Genital orifice and setae *d 1*, *d 2* and *l 2* migrated in front of *l 1*. Aedeagus straight, 90 μ m long. VENTER—Setae *ic 1*, *ic 2* and *ic 4* very small, *ic 4* long (60-70 μ m). Behind setae there are 2 pairs of neotrichial setae. Coxal setae (I-IV): 2-3-3-0. Legs II-IV (number of setae): trochanters 3-3-3; femora 5-3-3; genua 7-6-6; tibiae 6-6-6; tarsi 7-6-6. Leg II thicker than legs III-IV and with 2 thick subequal claws; tarsi III-IV with very unequal claws. By the great development of leg I the male appears to be slightly heteromorphic.

TRITONYMPHS (Figs. 7-8)—The holotype is 380 μ m long (idiosoma) and 180 μ m wide. An inflated specimen is 495 μ m long and 258 μ m wide. DORSUM—Setae *vi* thin, toothed, striated and situated approximately at the same level as *sci* and *sc e*, the latter as well as *ve* enlarged and striated in their anterior part and with a long and very thin posterior part. Setae *l 1*, slightly enlarged anteriorly. Other setae much narrower. Setae *d 1* to *d 4* and *l 2* and *l 3* toothed. VENTER—*ic 1* very thin and short, *ic 2* to *ic 4* enlarged and striated basally. The 2 pairs of coxal I setae are very large, truncate posteriorly and striated. Coxae II to IV with 2-2-1 setae. Legs I symmetrical. Legs II-IV with only 4 free segments. Tarsi II-IV with only one long curved claw. Chaetotaxy of legs II-IV—First free segment (? trochanter) 1-2-2; second free segment (? genu-femur) 4-2-2; third free segment (? tibiae) 6-5-4 (or 5); tarsi 7-6-6.

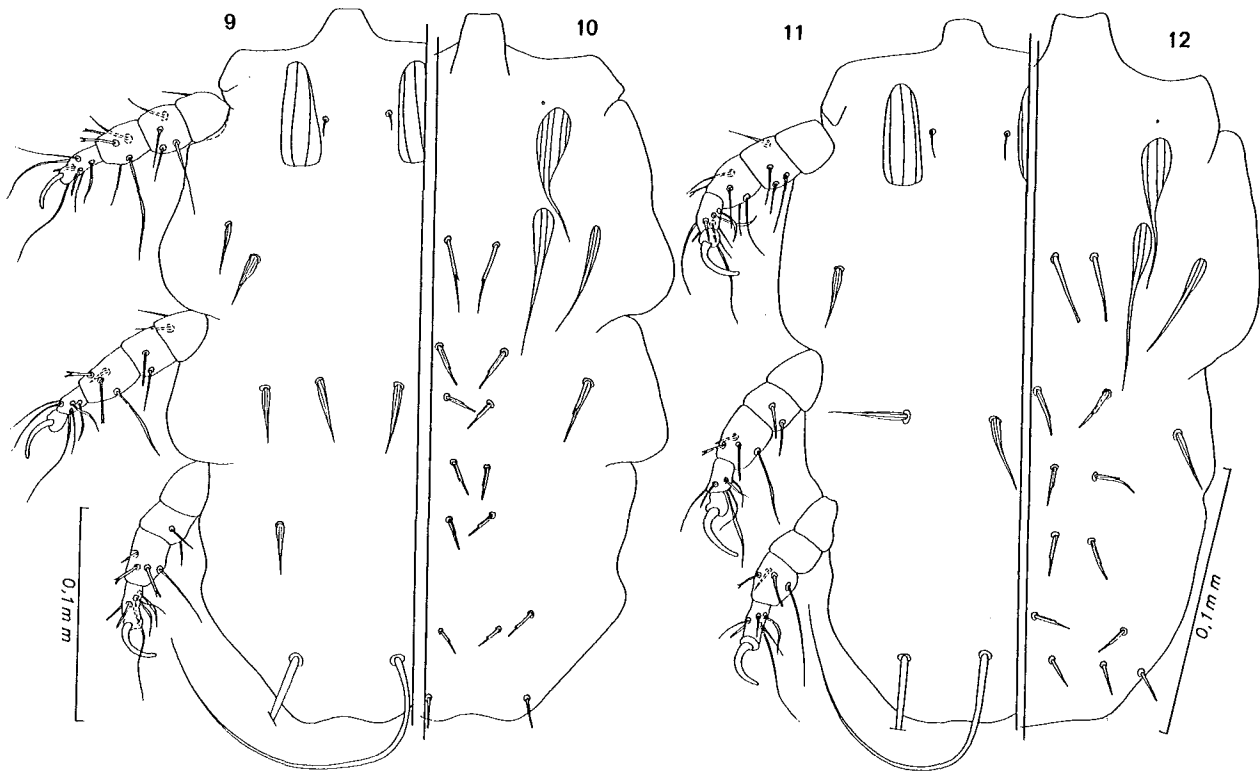


Figs. 7-8: *Dromicimyobia dromiciops* Fain (holotype tritonymph)—7, dorsal view; 8, ventral view.

DEUTONYMPH (Figs. 9-10)—Idiosoma $330\mu\text{m}$ long, $178\mu\text{m}$ wide. Differs from tritonymph by absence of *l 4* and of some coxal setae. The coxae bear only 1-1-1-0 setae. Legs II-III as in tritonymph except for tibiae (5 and 4 setae). Leg IV—absence of setae on segment I, 2 setae on segment II, 4 setae on segment III, and 6 setae on tarsus.

PROTONYMPH (Figs. 11-12)—Idiosoma $240\mu\text{m}$ long, $135\mu\text{m}$ wide. Differs from deutonymph by absence of *d 5*, *ic 4*, coxals II, III and IV and some leg setae. Leg II-IV chaetotaxy: 1st free segment 0-0-0; 2nd segment 4-2-0; 3rd segment 5-4-4; tarsi 7-6-6.

LARVA— $250\mu\text{m}$ long and $120\mu\text{m}$ wide. Differs from protonymph by absence of leg IV, absence of seta coxal I, *ic 2* to *ic 4*, presence of only 6 pairs of setae on hysteronotum, and absence of some setae on legs II and III.



Figs. 9-10: *Dromicimyobia dromiciops* Fain (deutonymph)—9, ventral view; 10, dorsal view. Figs. 11-12: *Dromicimyobia dromiciops* Fain (protonymph)—11, ventral view; 12, dorsal view.

PRELARVA—It is completely membranous except a very small bilobate apical sclerite.

HOST AND LOCALITY—The typical series was found in *Dromiciops australis*, Valdivia, Chili (animal in British Museum (Nat. Hist.) n^o 1924. 2. 5. 1). The mites were fixed in the neck. It comprizes the three types of nymphs, a larva and a male included in a tritonymphal skin. The holotype is a tritonymph. It is deposited in the British Museum (n^o 1974-250) (Coll. A. Fain).

From the same host F. S. L. collected new specimens from two different localities, in Chili: from Peulla (animal collected by Wolfhügel, 20. XII. 1934, and conserved in alcohol in Museum of Berlin n^o 48805) 2 females, 7 tritonymphs (of which 4 in molting stages), 3 deutonymphs and 1 protonymph. From Malleo (animal collected by Sanbern, 633 and in the collection of FMNH Chicago, n^o 22677), 3 females, 3 males, 3 tritonymphs and 2 deutonymphs.

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