

A case of tarsal trichotomy in Siphonaptera

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ABSTRACT. — A description is given of a ternary schizomelic hind tarsus of a specimen of the South American Rhopalopsyllid flea *Polygenis bohlsi jordani* (da Costa Lima).

Most cases of teratology in fleas relate to genitalia, the abnormalities often being a result of a reaction during ontogenesis to the presence of entomophilic nematode parasites. Other instances of anomaly are often of a traumatic nature and are usually discernible as dents (especially in the head capsule) or crooked setae. Legs are very rarely malformed or otherwise abnormal. Claassens (1967) described dented leg segments in a male *Ceratophyllus gallinae* (Schrank), Sanjean & Travis (1955) drew attention to an eight-legged specimen of *Orchopeas howardi howardi* (Baker) and Schwan & Dobkin (1980) deal with a five-legged female of *Oropsylla (Thrassis) fatus* (Jordan). There are no literature data on tarsal furcation. This is an abnormality which I have been on the look-out for during nearly forty years. Recently, when examining a small collection of unlabelled Rhopalopsyllid fleas from north-eastern Brazil, I was therefore greatly pleased and gratified to come across a male specimen of *Polygenis bohlsi jordani* (da Costa Lima) (slide marked 02080) with the very abnormal tarsal condition I ever hoped to see. The tibia of the right-hand side hind leg is somewhat shortened and broadened (Fig. 2, cf. Fig. 1). The first tarsomere is laterally considerably broadened and, judging from its vestiture, would appear to be a conglomeration of two units. The same is true for the second tarsomere which, moreover, is distinctly bifurcate apically, each prong bearing seemingly reasonably normal tarsomeres III - V. That is indeed true for the secondary single branch (the left-hand one in Fig. 2). It would seem to be more or less true for tarsomeres III and IV of the right-hand branch but here the apical setation of the third tarsomere suggests that this unit is actually an amalgamation of two tarsomeres. Tarsomere IV appears to be single. The distitarsomere of that secondary double branch clearly consists of two units joined on their inner sides so that it carries four sets (instead of the normal two) of four lateral plantar setae. The ungues, too, are each obviously conglomerations of pairs. Although superficially a dichotomous tarsus, it thus is actually a trichotomous one.

Balazuc (1948) described similar anomalies in beetles and found that ternary schizomely (trichotomy) is commoner than a binary one (dichotomy). He also stated that homodynamic branches (when they are similar, joined or not) are commoner than heterodynamic ones. Will a flea with a tarsus displaying the binary heterodynamic form of schizomely ever be found?

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Figs. 1, 2. *Polygenis bohlsi jordani* (da Costa Lima), ♂. (1) Hind tibia (apex) and tarsus, normal, (2) hind tibia (apex) and trichotomous tarsus.