



Proposal of *Fiersiphontina* gen. nov., redescription of *Fiersiphontina sensillata* comb. nov., and new data on the distribution of *Spiniferaphonte* (Copepoda, Harpacticoida, Laophontidae)

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Abstract

The taxonomic position and original description of *Laophontina sensillata* Wells & Rao, 1987 are reviewed based on specimens collected from the interstitial fauna of littoral coral sands of several islands of the Philippines and New Caledonia, and the species is designated as the type species of *Fiersiphontina* gen. nov. The new genus is proposed based on the total loss of sexual dimorphism in the P3 and P4 exopods, and the sexual dimorphism in P2 exopod. *Fiersiphontina* is highly adapted to the littoral interstitial habitat of coral sandy beaches, and is related to *Laophontina* Norman & T. Scott, 1905, *Wellsiphontina* Fiers, 1991 and *Spiniferaphonte* Gheerardyn & Fiers, 2007. The shared characteristics that indicate a strong affinity of *Fiersiphontina* to *Spiniferaphonte* are the robust, dorsally bent, and strongly sclerotised caudal seta V and the morphology of the genital field. The phylogenetic relationship of *Spiniferaphonte* and *Fiersiphontina* is also suggested by the analysis of the last ontogenetic phases of the species of the two genera. We re-describe here the adults of both sexes, describe the last three copepodid stages of *Fiersiphontina sensillata* (Wells & Rao, 1987) comb. nov., and provide notes on the biogeography of the four related genera, and on the ecology of *Fiersiphontina* and *Spiniferaphonte*.

Key words: Eastern Pacific, new genus, marine interstitial, coral degradation zone

Introduction

During surveys of the littoral and continental interstitial fauna of several islands in the Philippines and New Caledonia spanning several years, we collected several specimens which we identified as *Laophontina sensillata* Wells & Rao, 1987. The genus *Laophontina* Norman & T. Scott, 1905 was revised and redefined by Fiers (1991), who maintained four species from the Mediterranean and East Atlantic, and allocated other species to the genera *Galapalaophonte* Mielke, 1981, *Wellsiphontina* Fiers, 1991, *Amerolaophontina* Fiers, 1991 and *Mexicolaophonte* Cottarelli, 1977. Unfortunately, *Laophontina sensillata* was not included in the list of revised taxa. This species was collected in the Andaman and Nicobar Islands by Wells & Rao (1987), and from Sulawesi by Mielke (1997); the latter attributed his specimens to *Laophonte sensillata* (meaning *Laophontina sensillata*, *lapsus calami* in Mielke 1997, p. 228) with reservation, without apparently taking into account Fiers's (1991) genus revision. After a comprehensive examination of the published data and of the specimens of *L. sensillata* in our collection (having been unable to obtain a loan of the type material), we propose to allocate *Laophontina sensillata* to *Fiersiphontina* gen. nov. The new genus is established based on characters proposed and discussed in the revision of the genus *Laophontina* by Fiers (1991), and on the total loss of sexual dimorphism in P3 and P4 exopods present in *F. sensillata* (Wells & Rao, 1987) comb. nov. (as already reported by Wells & Rao, op. cit. p 191) but not in other species of *Laophontina*. The adults of both sexes are re-described based on our specimens from several locations; in addition, a description of the last three copepodid stages of *F. sensillata* improve our understanding of the ontogenetic development of the characteristic features of the genus.