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## *Phrudoneura* (Diptera: Dolichopodidae) from Australia and Melanesia

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### Abstract

The genus *Phrudoneura* Meuffels & Grootaert (Diptera: Dolichopodidae) from Australia, New Guinea, the Solomon Islands, and New Caledonia is revised, and four new species are described. *Phrudoneura collessi* **sp. nov.** occurs in tropical and subtropical Australia, and is named in honour of the Australian Dipterist, Don Colless. *Phrudoneura popondetta* **sp. nov.** is from lowland Papua New Guinea, and *P. abbreviata* Meuffels & Grootaert, originally described from Papua New Guinea, is now recorded from tropical Australia and the Solomon Islands. The previously described fauna of New Caledonia of five species is reviewed and two new species are described, *P. adusta* and *P. hibernalis*. All species are keyed and illustrated. *Phrudoneura* is not placed in any established subfamily but is regarded as *incertae sedis*, perhaps having closest affinity with the Sympycninae.

**Key words:** Diptera, Dolichopodidae, *Phrudoneura*, Australia, New Caledonia, New Guinea, Solomon Islands, Donald Colless

### Introduction

Males of the genus *Phrudoneura* are easily recognized in having a distinctly shorted vein M that ends in the membrane about half the distance between the dm-cu crossvein and the wing apex (e.g., Fig. 5d). Females, on the other hand, maintain a conservative facies with vein M extending to join the costa near the wing apex. Meuffels and Grootaert (1987) first described the genus (as a subgenus of *Sympycnus*) based on a single species, *P. abbreviata*, from Papua New Guinea. They subsequently described five additional species from New Caledonia (Meuffels & Grootaert 2002), based on collections at the MNHN. Since that time, a large quantity of New Caledonian material has accumulated, from intensive Malaise trapping by Evert Schlinger and associates (INHS, 1998–2001), trapping by G. Monteith & C. Burwell (QMB 2004–2005), and the collections of Max Moulds (AMS) and Bradley Sinclair (CNC). These, in addition to older collections from the BPBM and other institutions, were examined and are reviewed here.

Since this material provided two new species as well as new distributional records, the entire New Caledonian fauna is reviewed, with an updated key and habitus photos provided for all species. As well, additional new species from Australia and Papua New Guinea are described.

The new Australian species described here is dedicated to the memory of Don Colless. I first met Don in 1980 when, as a graduate student, I visited the ANIC to view its Dolichopodidae holdings. Don was most hospitable and said he was glad somebody wanted to work on the Australian Dolichopodidae because nobody had really looked at them since the time of Octave Parent (a productive Belgian worker who worked on the world fauna from the 1920s to 1940s), and that the ANIC had many drawers of unsorted material. Indeed, there were at least 20 drawers packed full of unsorted specimens, almost all beautifully mounted on minuten pins (characteristically with the head facing up). Most of these had been prepared by Don in the field from freshly caught material. There was abundant material from the Australia tropics gathered on numerous ANIC expeditions to northern Queensland and the Northern Territory, almost all undescribed and exciting to see. I also met his assistant Zenta Liepa, who was instrumental in building the wonderful ANIC Diptera collection. I saw Don on numerous subsequent occasions and I was always impressed by his extensive knowledge of the Australian Diptera fauna as a whole. He had a deep interest in systematic theory and was an unrepentant pheneticist. Don enjoyed taking contrarian stances, especially