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## Updates on the taxonomy and nomenclature of Australian *Sarcophaga* (*sensu lato*) (Diptera: Sarcophagidae), with descriptions of two new species

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### Abstract

Two new species, *Sarcophaga* (*Sarcosolomonina*) *collessi* **sp.nov.** and *Sarcophaga* (*Sarcorohdendorfia*) *clavus* **sp.nov.**, both collected in Queensland, Australia, are described, and the following four new synonymies are proposed: *Sarcophaga horti* Blackith and Blackith, 1988 **syn.nov.** of *Sarcophaga bancroftorum* Johnston and Tiegs, 1921; *Sarcophaga fergusonina* Hardy, 1940 **syn.nov.** of *Sarcophaga assimilis* Macquart, 1851; *Sarcophaga brevicornis* Ho, 1934 **syn.nov.** of *Sarcophaga kohla* Johnston and Hardy, 1923a; and *Sarcophaga triplex* Hardy, 1943 **syn.nov.** of *Sarcophaga furcata* Hardy, 1932.

**Key words:** Diptera, Sarcophagidae, Australia, synonymies, new species

### Introduction

The taxonomy and nomenclature of Australian Sarcophagidae (Diptera) are still far from mature. Early authors like F.M. Walker and P.J.M. Macquart described only a very few species with an Australian type locality, and these mostly remained ignored or neglected until recently (Lopes & Kano 1979b; Pape 2008). Early Australian flesh fly taxonomy had an applied profile and may be considered to date either from Skuse's (1891) description of a grasshopper parasite (*Blaesoxipha pachytyli*) or from the "sheep-maggot fly" (*Sarcophaga froggatti*) described by Taylor (1917). Parker (1922) explicitly planned a series of papers describing several Australian species, but he probably saw himself overtaken (and his two new nominal species narrowly antedated) by the very productive Australian flesh fly workers T.H. Johnston, C.W. Tiegs and G.H. Hardy, who in a bout of papers in the early 1920s quickly created a solid taxonomic base (Johnston & Tiegs 1921, 1922; Johnston & Hardy 1923a,b). From the 1950s up until 1990, H. de Souza Lopes undertook the last comprehensive studies on the Australian fauna, producing several taxonomic keys in addition to species descriptions (Lopes 1954, 1958a,b, 1959, 1967, 1985, 1989; Lopes & Albuquerque 1955; Lopes & Kano 1969, 1979a,b). A few supplementary species were added by Cantrell (1986), Verves (1987), Pape (1994) and Pape *et al.* (2000). For many Australian species, detailed morphological descriptions of females are still lacking, and published illustrations of male terminalia vary drastically in quality. Given this partly insufficient documentation, it is not surprising that some species have been described more than once, creating numerous synonymies. Pape (2008) resolved six synonymies for Australasian/Oceanian sarcophagids, and in the current paper we propose another four synonymies for the large genus *Sarcophaga* (*sensu lato*) and describe two species as new to science.

### Material and methods

Holotype and paratype material was collected on separate collection trips undertaken by D.E. Hansen, B.L.