

The Taxonomy and Distribution of the Spider Genus *Phryganoporus* Simon (Araneae: Amaurobioidea: Desidae)

MICHAEL R. GRAY

Australian Museum, 6 College Street, Sydney NSW 2010, Australia
mikeg@austmus.gov.au

ABSTRACT. The widely distributed Australian desid spider genus, *Phryganoporus* Simon, is taxonomically reviewed and validated. *Phryganoporus nigrinus* is removed from synonymy with *P. candidus*, while *Amaurobius gausapatus*, *P. g. occidentalis* and *P. tubicola* are synonyms of *P. candidus*. The species recognised here belong to two clades, [*P. candidus* (L. Koch), *Phryganoporus vandiemeni* (Gray) n.comb.] and [*P. nigrinus* Simon, *P. davidleei* n.sp., *P. melanopygus* n.sp.]. These clades are distinguished by the possession of a divided or entire cribellum and genitalic characters. Distribution maps and notes on relationships are given.

GRAY, MICHAEL R., 2002. The taxonomy and distribution of the spider genus *Phryganoporus* Simon (Araneae: Amaurobioidea: Desidae). *Records of the Australian Museum* 54(3): 275–292.

Spiders of the genus *Phryganoporus* are cribellate web builders that are distributed throughout Australia. They build webs on low vegetation and their abundant white hair cover probably helps reduce body heating, particularly for spiders occupying exposed webs in semi-arid to arid regions.

While the species described here are typically solitary, one species, *P. candidus*, has a life cycle that is associated with both communal and solitary webs. *Phryganoporus candidus* has long been known for its communal “nest” building behaviour (Main, 1971). In past years the webbing of these spiders upon fruit tree foliage in the Riverina area of New South Wales was a cause of severe foliage matting, leaf fall and withering of limbs. Downes (1993 [*Badumna candida*] and 1994a,b [*Phryganoporus candidus*]) has made a detailed study of the biology of *P. candidus* in southern Queensland. He classifies the species as a periodic-social group in which spiders disperse from the parental nest as subadult females and adult males. Most webs were founded in late summer by solitary subadult females. By October–November, at the peak of colony growth, each nest had about 100 spiders, along with an associated arthropod fauna of

opportunistic scavengers and predators. Most non-territorial, communal interaction (collective nest construction and cleaning, prey capture and feeding) took place between individuals below the subadult stage. Such communal interaction is probably a consequence of pheromone mediated sibling tolerance and is not regarded as true cooperative behaviour. Subadults males and females are less tolerant of each other. The faster maturing females dispersed over summer, most as subadults. Adult males did not appear in the nest until most of the females had dispersed. By March, the old nests were largely unoccupied.

Simon (1908) erected the genus *Phryganoporus* and included the following species from southern and western Australia: *Amaurobius gausapatus* Simon, 1906, *P. gausapatus occidentalis* Simon, 1908, *P. nigrinus* Simon, 1908 (all for female specimens) and *P. tubicola* Simon, 1908 (a male specimen). Roewer (1954) placed *Amaurobius candidus* L. Koch, 1872 (from Queensland) into *Ixeuticus* Dalmas and Hickman (1967) followed this transfer. Lehtinen (1967) synonymised *Ixeuticus* with *Badumna* Thorell but maintained *Phryganoporus* into which he placed