

**Morphometrics in the Genus *Amenia*
and Revisionary Notes on the
Australian Ameniinae (Diptera: Calliphoridae),
With the Description of Eight New Species**

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ABSTRACT. The Ameniinae comprise seven genera, of which six occur in Australia; the largest, *Amenia*, is restricted to this country. Previous studies left some uncertainty about the status of several taxa in *Amenia*, and Part 1 of this study applies morphometric methods to the problem. These analyses show that *Amenia longicornis* comprises two geographically isolated, morphologically distinct forms. One occurs around the head of Spencer's Gulf in South Australia and north as far as Alice Springs; the other is widespread across the Nullarbor Plain. Similar studies of *A. i. imperialis* and close relatives show that *A. i. imperialis* and *A. i. dubitalis* are clearly separable by head shape; also, that two other "forms" of *A. i. imperialis* can be distinguished: one occurring in northwestern Australia and arid areas of New South Wales and Queensland, the other in the vicinity of Cooktown, Queensland. Likewise, the two subspecies of *A. leonina*, *A. l. leonina* and *A. l. albomaculata* are morphometrically separable, but with some sign of intergradation, as well as the existence of distinct "forms" of *A. l. albomaculata* in the New England area of New South Wales and on the Eyre Peninsula, South Australia. Finally, *A. chrysame* is shown to comprise two morphometrically separable "forms", occurring north and south of the 26th parallel.

In Part 2, the subfamily Ameniinae is reviewed, with descriptions of eight new species: two in *Stilbomyella*, four in *Paraplatytropesa*, and two in *Amenia*. The last represent morphometrically recognised siblings of *A. imperialis*. Also, the subspecies of *A. imperialis* are raised to full specific rank, as are those of *A. leonina*; genus *Formosiomima* is relegated to synonymy under *Amenia*; the New Guinean *Platytropesa simulans* is newly recorded from north Queensland; and the known ranges of several other species are extended with new records. In Part 3, phenetic studies are offered to support the existing classification within the subfamily, and its zoogeography and possible evolutionary history are discussed. It seems not unlikely that the Australasian taxa stem from a *Paramenia*-like ancestor, that originated in western New Guinea as sister to the mainly Oriental *Catapicephala*. One or more of its descendant species then entered Australia from the north, dispersing, with further concurrent speciation, in a clockwise fashion around the continent.

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