Introduction

Everyone knows the common ladybirds of gardens and childhood stories. Yet they are but a very few of the wide diversity of species assigned to the beetle family Coccinellidae. The family name Coccinellidae probably derives from the diminutive of the Latinized Greek word *Kokkos*, a seed or berry, in reference to the rounded and convex shape of the beetles. However, other authorities give the Latin *Coccinus* — scarlet colour, as the root of the name (Froggatt 1903).

The tenth edition of the 'Systema Naturae' by Linnaeus (1758) was the beginning of zoological nomenclature and marked the origin of a rich history of Coccinellidae systematics. Linnaeus started it by recognising the genus *Coccinella* along with 36 species in the 'ordo' Coleoptera. The first major work on beetle classification was that of Pierre A. Latreille in numerous publications between 1796–1825 (Lawrence, Ślipiński & Pakaluk 1995). In 1804 Latreille recognised Coccinellidae as a distinct family under the name 'Tridigités', referring to their apparently 3-segmented tarsi. In this family, he included three genera: *Coccinella* (including *Scymnus* as a group of species), *Eumorphus* and *Endomychus*. Three years later, Latreille (1807) used the family name Coccinellidae for a similar grouping of genera and this name is used in nomenclature as the first available family group name for Coccinellidae. But Latreille did not stop there! In a later publication (Latreille 1825) he again renamed the group, this time as the 'Aphididiphagi' in which he divided endomychids and coccinellids into separate families.

Latreille's beetle classification, based on number of tarsal segments, was generally accepted with little change for almost a century until three major papers appeared in a space of three years: Lameere (1900), Kolbe (1901) and Ganglbauer (1899, 1903). In spite of differences in many details, the important step was a recognition that Coccinellidae are a part of large assemblage of beetle families — called of Clavicornia or Diversicornia — and are not a separate suborder (Siphohophora) as suggested by Verhoeff (1895) on the basis of the structure of the male genitalia.

The foundations of a modern, phylogeny-based, beetle classification were laid by Roy A. Crowson. Following Crowson's 1955 publication, Coccinellidae have been classified in the superfamily Cucujoidea which, along with five other families, form the series Cucujiformia, the largest lineage among the polyphagan beetles (Lawrence & Newton 1995). Cucujoidea is a large and heterogenous group of beetles with 32 recognised families (Leschen, Lawrence & Ślipiński 2006), and of questionable monophyly. Crowson (1955, 1960) advocated an informal grouping of families related to Cerylonidae, termed the 'Cerylonid series' that included presumed closely related and relatively advanced Cerylonidae, Coccinellidae, Corylophidae, Alexiidae, Endomychidae and Latridiidae. This group was further discussed and analysed by Sen Gupta and Crowson (1973), Pal and Lawrence (1986), Ślipiński (1990) and Ślipiński and Pakaluk (1992). Most of the subsequent workers on Coccinellidae systematics followed this placement, perceiving Endomychidae as the most obvious candidate for sister group. However, Sasaji (unpublished paper, cited in Sasaji 1971) made a careful comparison of characters among the cerylonid series and concluded that, in spite of apparent morphological differences, Coccinellidae are probably more closely related to Corylophidae than to Endomychidae. Both concepts were tested and confirmed as possible scenarios during the study on the phylogeny of Endomychidae by Tomaszewska (2000, 2005). The most striking morphological similarities between Coccinellidae and Endomychidae are among the Eupsilobiinae (Pakaluk & Ślipiński 1990) — the long penis and coccinellid like tegmen, and Mycetaeinae (Tomaszewska 2000) which share the distinct pronotum with sublateral carina and without subbasal impressions, the hidden