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# *Calopteryx virgo* (Linnaeus), The Beautiful Demoiselle – a species with royal connections

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## Summary

The names, both common and scientific, given to the damselfly species *Calopteryx virgo* in Sweden and England in the 18<sup>th</sup> or early 19<sup>th</sup> century are discussed. All are somehow linked to royalty, either originating from Carl Linnaeus' early admiration of the young princess Louisa Ulrika, or from the similarity of the dark-blue wing colour of male *C. virgo* to the plumage of a kingfisher or the Windsor uniform.

## Introduction

Males of the striking *Calopteryx virgo* (Beautiful Demoiselle) are gorgeous insects, presenting a dazzling sight as they flutter and dance in sunny patches over clear, sandy-bottomed forest streams. Little wonder that this beautiful species (Plate 1) was the first odonate to be given common names. This occurred both in Sweden and in England as early as in the 18<sup>th</sup> century. Interestingly, these names were all linked to royalty in one way or another. Also, the scientific species epithet, *virgo* (Latin for 'virgin'), of this damselfly may have its origin in its author's early admiration of a Prussian princess, whose name is also immortalized in synonymous scientific names given both to *Calopteryx virgo* and also to the related *Calopteryx splendens* (Banded Demoiselle).

## **Nomenclatorial consequences of the admiration of Carl Linnaeus (Carl von Linné) for Louisa Ulrika, the Princess of Prussia**

In the summer of 1744, great excitement gripped high and middle-class society in Sweden. On the 17<sup>th</sup> of July the Swedish Crown Prince Adolf Fredrik was married *per procura* (i.e. with the groom absent) to Louisa Ulrika (Lovisa Ulrika in Swedish), Princess of Prussia in Berlin (Plate 2). A few weeks later the beautiful and accomplished, 24 year-old princess arrived in Sweden to meet



**Plate 1.** *Calopteryx virgo* (Beautiful Demoiselle) male as illustrated in Charpentier (1840).

her groom. Among those caught up in the fever of the occasion was the 37 year-old Carl Linnaeus, professor of medicine at Uppsala University (Plate 3). At that time, he was writing the manuscript of *Fauna svecica*, a synopsis of the 1357 animal species known to him from Sweden, published in 1746 (Linnaeus, 1746). He had not yet developed his system of binomial nomenclature, but each species was provided with a diagnosis of at most a dozen Latin words following the genus name. In addition, in the species accounts of 43 invertebrates (mostly butterflies and moths), Linnaeus also provided a so-called 'vulgar' name (the vulgo) intended for everyday use. Two types of dragonfly were dubbed 'Lovisa' and 'Ulrica' (Plate 4) in honour of the Princess. These 'species' represent respectively the male and female of *Calopteryx virgo* (Beautiful Demoiselle). This dedication was the first of its kind to an individual person in the animal names used by Linnaeus. It is noteworthy that, rather than selecting a butterfly species for his dedication, he chose this gorgeous and delicately charming demoiselle damselfly, which perhaps best embodies those qualities he admired in the princess.



**Plate 2.** Princess Louisa Ulrica of Prussia.



**Plate 3.** Carl Linnaeus as a young man.

757. **LIBELLULA** corpore cæruleo nitido; alis viridi-cærulefcentibus: apice fufcis: margine immaculatis.

*Raj. inf. p. 50. n. 10.* Libella media, corpore cæruleo, alis fere totis ex cæruleo nigricantibus.

*Vulgo* Lovifa.

Habitat ad Fluvios.

*DESCR.* Magnitudo, figura, color, locus & omnia, ut in præcedenti, ted alæ, quæ etiam puncto marginali carent, nigro-cærulefcentes: apice pallide fufcæ. *cauda* unguiculata.

758. **LIBELLULA** corpore viridi-cæruleo; alis subfufcis: puncto marginali albo.

*Raj. inf. 51. n. 12.* Libella media, corpore viridi, alis fulvefcentibus maculis parvis albis prope extremum angulum.

*Vulgo* Ulrica.

Habitat ad Fluvios.

*DESCR.* Mediæ eft magnitudinis. *Corpus* viridi-sericeum, nitidum, minime cæruleum. *Pedes* nigri. *Alæ* subfufcæ puncto marginali albicante oblongo; *Cauda* inermis.

Hæc præcedentis fæmina. *De Geer.*

**Plate 4.** The names Lovisa and Ulrica introduced in Linnaeus' *Fauna svecica* (1746).

In the second edition of *Fauna svecica* (Linnaeus, 1761) the names 'Lovisa' and 'Ulrica', along with the other 'vulgo' names, were omitted, since they had become redundant with the development of a universal Latinised binomial nomenclature, which Linnaeus used for all organisms in his 10<sup>th</sup> edition of *Systema naturæ* (Linnaeus, 1758), which now serves as the starting point for zoological nomenclature. In this publication, Linnaeus gave the binomial name *Libellula virgo* for the four 'forms' of the demoiselle damselflies which he had earlier recognized as separate species. However, his four forms included two distinct species, presently known as *Calopteryx virgo* and *C. splendens* (Banded Demoiselle). It is likely that the choice of the species epithet *virgo* was (at least partly) influenced by Linnaeus' early admiration for Louisa Ulrika, who had meanwhile (on 25 March 1751) become Queen consort of Sweden. This view is supported by the fact that in the 6<sup>th</sup> edition of *Systema naturæ* (Linnaeus, 1748), soon after the vulgo names honouring the princess had been introduced, Linnaeus applied the Swedish name 'Jungfrur' (= virgins) for the '*Libellula*' forms which he later recognised as a single species *Libellula virgo*.

It might have been that the scientific name of the Banded Demoiselle was also honoured by being connected to Louisa Ulrika. In 1785, the French chemist Antoine François de Fourcroy (who was ennobled as the Comte de Fourcroy on the very day he died on 16 December 1809) introduced the name *Libellula ludovicea* (Fourcroy, 1785) for the same demoiselle species which the English entomologist and illustrator Moses Harris had described as *Libellula splendens* [= *Calopteryx splendens*] five years earlier in 1780 (Harris, 1776-1780).

Ludovica is the Latin counterpart of the name Louisa. Rather confusingly, in 1836, the English entomologist James Francis Stephens (Stephens, 1835-1837), described a species as *Calepteryx* [the original spelling of the genus name] *ludoviciana*, which, however, is just a synonym of *Calopteryx virgo*. Similarly, as with the epithet *ludovicea*, *ludoviciana* also relates in a convoluted way, to the Linnean vulgar name 'Lovisa'. For further details of the origin of these two names, see the recent publication (Hämäläinen & Fliedner (2022) on the etymology of the scientific names of demoiselle damselflies (Calopterygidae) of the world.

## King's-fisher and King George – early English common names for the Demoiselles

In his book *An exposition of English insects* (Harris, 1776-1780), Moses Harris provided two of his new species, *Libellula splendens* [= *Calopteryx splendens*] and *Libellula splendeo* [= *Calopteryx virgo*] with an English name 'King's-fisher'. Harris wrote in his *splendeo* [*virgo*] account (published in 1780): "These and the former, on account of their brilliancy and richness of colours, are vulgarly called King's-fishers. They frequent little rivulets, or ditches of running water, that are over-shaded with bushes by bank-sides."

It is uncertain whether Harris himself coined this name or if it was already in use. In any case the striking blue glimpses of the fluttering males of these insects resemble the blue iridescence of *Alcedo atthis* (kingfisher) which share the same habitats. It is unclear why this colourful bird became known as the 'kingfisher' (originally King's fisher), but it has been speculated (Richter, undated website) that it may reflect the blue and orange colours in the tomb effigies of the English 12<sup>th</sup> century kings Henry II and Richard I at the Fontevraud Royal Abbey in France.

Somewhat later, the bluish winged *Calopteryx virgo* acquired another English vernacular name 'King George'. This name was an allusion to the dark-blue 'Windsor uniform' favoured by King George III (1738-1820), the colour of which resembled that of the male wings of this damselfly (Plate 5). This style of dress



**Plate 5.** King George III wearing the 'Windsor uniform'.

was introduced in 1777 and it was intended to be worn at Windsor only, but later the king wore it regularly in casual everyday use. Due to this, cartoonists such as James Gillray started to illustrate the king in this costume, making him instantly recognisable. This damselfly name may have originated in the 1790s or 1800s.

In his anonymously published *An illustrated handbook of British dragonflies* (Harcourt-Bath, 1890), William Harcourt-Bath wrote: "In France *C. virgo* and *splendens* have received the name of 'Demoiselles' or young ladies, while in our own country they are often called 'King George's' and 'Kingfishers' in allusion to their brilliancy and richness of colour." In 1900, in the introduction of his seminal book *British Dragonflies* (Odonata), William John Lucas wrote: "Such is the home of the gorgeous blue-winged 'Demoiselle' or 'King George' (*Calopteryx virgo*), without doubt the most resplendent of our Dragonflies, if not of all British insects. Handsome enough it looks in the cabinet; but to be seen at its best it must be watched as it flutters along the streams in the patches of



sunlight that filter through the foliage, and in which its colours vie with those of the kingfisher, whose lovely haunts it shares.” (Lucas, 1900). A few years later, in his well-known ‘country-side’ book *Hampshire days*, William Henry Hudson wrote on the dragonflies: “Is it not amazing that these familiar, large, showy, and striking-looking insects have no common specific names with us? The one exception known to me is the small beautiful *virgo* just spoken of, and this is called in books ‘Demoiselle’ and ‘King George’, but whether these names are used by the people anywhere or not, I am unable to say.” (Hudson, 1903).

I am not sure whether Lucas, (who did not provide common English names for other dragonfly species), was the first British author to call *Calopteryx virgo* a ‘demoiselle’. Later, Cynthia Longfield, who coined “popular” names for each species in her book *The Dragonflies of the British Isles* (Longfield, 1937) called *C. virgo* ‘The Demoiselle Agrion’, whereas *C. splendens* was called ‘The Banded Agrion’. None of Longfield’s names combining English words with a name in another language have survived, but many of her purely English common names became established and are used today. Before Longfield, an unknown person had already coined common names for all British dragonfly species, which were used in the cabinet labels in the insect collections of the Grosvenor Museum at Chester (Gabb, 1988). The two demoiselle species were labelled ‘Steel-blue Demoiselle’ (*C. virgo*) and ‘Blue-banded Demoiselle’ (*C. splendens*).

However, as pointed out by Norman Moore (Corbet, Longfield & Moore, 1960), none of the common English species names in use today are real vernacular ‘naturalist’s’ names: “Only one species of British dragonfly has acquired a naturalist’s name. It is *Agrion* [= *Calopteryx*] *virgo* which is sometimes called ‘King George’ – presumably a flattering but delightfully unsuitable allusion to George III. The French name ‘Demoiselle’ has largely replaced ‘King George’ in recent times, and also the other vernacular name of ‘Kingfisher’ mentioned by Harris in 1782.”

It remains to be determined when and where the amusing and witty insect name ‘King George’ was first introduced, and how widely it was used. The author has not been able to find any references to it from the major entomological books published in Britain in the first half of the 19<sup>th</sup> century. Neither does a Google search for ‘King George’ in connection with various dragonfly related terms help. The author hopes that some readers of this note can provide further information on the use of this ‘royal’ name.

## Acknowledgements

Albert Orr improved the English expression of the manuscript. Darren Mann



informed me of the online article of Joannes Richter, and Stephen Brooks made comments on the manuscript. I am grateful to all of them.

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*Received 29 November 2023; revised and accepted 12 December 2023.*