

The Odonata of the Azores

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Abstract: Previous records of Odonata occurring in the Azores are recapitulated and new results of an excursion undertaken in 1988 are placed on record. A summary, in tabular form, of their distribution in the archipelago is added.

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Introduction

The Azores are forming an archipelago ranging over 360 km and consisting of nine islands which can be divided into three groups: the eastern islands São Miguel and Santa Maria, the central islands Terceira, Pico, Faial, São Jorge and Graciosa, and the western islands Flores and Corvo. The Azores have a dominantly European fauna. As for the dragonflies, three of the four indigenous species are also found in Europe, viz. *Anax imperator* Leach, *Sympetrum fonscolombii* (Selys) and *Ischnura pumilio* (Charpentier). The fourth species, *Anomalagrion hastatum* (Say), belongs to the American fauna (Davies & Tobin, 1984). This is surprising since the occurrence of an African species would be more obvious. Navás (1933) was the first who reported the occurrence of Odonata in the Azores. The given dragonflies are the three above mentioned species which also occur in Europe. The presence of *Anomalagrion hastatum* in the archipelago was published by Valle in 1940 but the species was wrongly identified and referred to *Ischnura senegalensis* Rambur, probably due to the lack of a male in the odonate material assembled. Also Gardner (1960) considered his material of this American species (also consisting of females only) as belonging to *Ischnura senegalensis*.

In the summer of 1988 I went to the Azores for Odonata collecting. My investigations were restricted to the islands São Miguel, São Jorge and Pico. The results obtained during this trip are published herewith. The majority of the odonate material collected has been deposited

in the National Museum of Natural History, Leiden.

Conspectus of material collected

Anax imperator

Pico: Lagoa do Caiado, July 23, 1 ♂; Lagoa do Capitão, July 24, 2 ♂. At an excursion on July 26 a damaged female was found against the radiator of the taxi during a stop in São Antonio.

The popular names on Pico (and probably also on the other islands) for *Anax imperator* are “fura ôlhos” [= eyes stingers] and “caga ôlhos” [= blindness causers].

On São Miguel (July 18 and 28) several males and ovipositing females were observed at the Lagoa Azul (Sete Cidades) while on São Jorge (July 20) I saw specimens hunting at Velas and near Norte Grande.

Sympetrum fonscolombii

São Miguel: Sete Cidades, Lagoa Verde, July 28, 5 ♂, 1 ♀ (teneral). The species was also encountered at the Lagoa das Furnas but on that site the insects appeared to be very shy probably due to the frequent presence of tourists.

Pico: Lagoa do Caiado, July 23, 1 ♂, 2 ♀ (1 in cop.); Lagoa do Capitão, July 24, 6 ♂, 1 ♀ (in cop.).

In 1985 Gardner described the subspecies *Sympetrum fonscolombii azorensis* from 1 ♂

Table 1. Odonata recorded from the Azores.

	São Miguel	Santa Maria	Terceira	Pico	Faial	São Jorge	Graciosa	Flores	Corvo
<i>Anax imperator</i>	X		X	X	X	X		X	
<i>Sympetrum fonscolombii</i>	X	X	X	X	X	X	X	X	X
<i>Ischnura pumilio</i>	X	X	X	X	X			X	
<i>Anomalagrion hastatum</i>	X	X	X	X	X	X		X	

and 2 ♀ taken on Pico. The distinction is based only on differences in the extent of the black markings. The colour pattern varies in my Azorian specimens. Some of them have the black markings weakly developed and a body pattern that greatly approaches that of certain examples from the European continent but others have the black markings as much extended as in the male holotype of this subspecies. I have studied Gardner's type specimens in the British Museum of Natural History (19 November 1991). The female allotype has the black markings much more pronounced than in the male holotype and the three females that I have collected, and this applies especially to the dark markings of the head. But still I would consider Gardner's type specimens no more than individuals with a marked melanism, and in my opinion they do not merit subspecific rank.

Ischnura pumilio

São Miguel: Sete Cidades, Lagoa Azul, July 18, 5 ♂, 2 ♀ (1 in cop.); 28 July, 26 ♂, 1 ♀ (in cop.).

Pico: Lagoa do Caiado, July 23, 30 ♂, 9 ♀ (4 in cop.); July 26, 22 ♂, 3 ♀ (1 in cop.); Lagoa do Capitão, July 24, 4♂, 1 ♀ (in cop.).

The specimens are smaller and more delicate than those of the European continent. One pair has been deposited in the collection of the University of Ghent.

Anomalagrion hastatum

This species is probably a parthenogenetically reproducing species on the Azores as hypo-

thesized by Belle & Van Tol (1990). The many collected females, all on Pico, have already been placed on record in that paper. The status of this species, originally referred to *Ischnura senegalensis* by Valle (1940), also has been expounded in detail in the same paper.

Remark. The Zygoptera from the Canary Islands wrongly identified with *Ischnura senegalensis* by Valle (1955) do not belong to *Anomalagrion hastatum*. They are referable to *Ischnura saharensis* Aguesse as pointed out by Hämäläinen (1986).

Distribution

The distribution of the Odonata in the Azores is given in table 1. The species *Anomalagrion hastatum* is new for the island Pico. Only one species, viz. *Sympetrum fonscolombii*, is reported from Graciosa and Corvo but, seen the distribution of the other species on the diverse (widely separated) islands, the occurrence of the four dragonfly species on each island of the archipelago is highly probable.

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