Annotated bibliography of odonatological literature from continental Portugal, Madeira, and the Azores (Odonata)

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Abstract

An annotated bibliography of odonatological literature from Portugal is presented, comprising 144 references from the years 1797 to 2005.

Resumo

Neste trabalho é apresentada para Portugal uma lista bibliográfica odonatológica, constituída por 144 referências, com datas compreendidas entre 1797 e 2005.

Zusammenfassung

Es wird eine kommentierte Auflistung des Schrifttums zu den Libellen Portugals vorgelegt, die 144 Arbeiten aus den Jahren 1797 bis 2005 umfasst.

Introduction

Portugal is one of the most poorly investigated countries in western and central Europe regarding Odonata. This is a most astonishing fact as Portugal constitutes a ”hot spot“ between western palaearctic and palaeotropical faunas, making it – from a faunistic point of view – one of the most interesting European regions. Influxes of afrotropical species that today are regarded as regular part of the European fauna, as Diplacodes lefebvrii or Brachythemis leucosticta, have been recorded in Portugal for the very first time on the continent (ANON. 1910, MOURA 1960). Other potential palaeotropical candidates to become future members on the checklist of European Odonata – e.g., Platycnemis subdilatata or Trithemis kirbyi ardens – will probably establish their first bridgeheads within Europe in Portugal or neighbouring Andalusia, if ever. On the other hand, it
is currently still unclear whether the westernmost distribution ranges of some palaeartic species extend to Portugal or not – examples are *Ischnura elegans*, *Gomphus vulgatissimus* or *Sympetrum vulgatum ibericum*. Consequently, the Portuguese fauna still holds a satisfactory amount of potential surprises to stimulate the exploratory urge of odonatologists.

By providing an up-to-date, commented bibliography of odonatological literature from Portugal, our goal was to support future research on Odonata in the country as an according documentation constitutes an essential basic for this task. We tried to gather all available primary literature references on Odonata from continental Portugal and the archipelagoes of Madeira and the Azores, which politically belong to Portugal. Besides, we also took a number of studies into consideration, which do not provide primary references, but that we regard as important for odonatology in Portugal. However, to keep things as simple as possible, we decided not to include any reference that provides only not meaningful or unusable data. This concerned chiefly a number of studies providing only Odonata families or genera on checklists of invertebrate macrozoobenthos organisms. Regarding "grey" literature, i.e., unpublished diploma theses or research reports, we tried to include every reference that we were able to trace. In this context we would highly appreciate any information on relevant literature that is not included in the bibliography.

Acronyms of museum collections used in the comments:

- BMNH: Natural History Museum, London, United Kingdom
- DSFL: Direcção Geral dos Serviços Florestais e Aquícolas, Lisbon, Portugal
- MZCP: Museu Zoológico da Universidade de Coimbra, Coimbra, Portugal
- ZMHB: Museum für Naturkunde, Humboldt-Universität, Berlin, Germany
- ZSMC: Zoologische Staatssammlung München, Munich, Germany

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Bibliography

Continental Portugal


AGUIAR C. & S. AGUIAR (1985a) Estudos Odonatológicos em Portugal. Odonatos Português. Odonatos Africanos em Portugal. *Boletim da Sociedade Portuguesa de Entomologia* 4, Suplemento 1 [Actas do II Congresso Ibérico de Entomologia]: 245-267 — [A review on the previous Portuguese Odonata literature with a checklist of dragonflies recorded from Portugal, including some highly questionable spp. as *Cordulia aenea* and *Leucorrhinia dubia*, and an appendix with five spp. in need of confirmation is provided. New records of six spp. and their distribution maps for Portugal are given.]

AGUIAR C. & S. AGUIAR (1985b) Paragomphus genei (Sel.), Hemianax ephippiger (Burm.) and Trithemis annulata (P. de Beauv.) in Portugal (Anisoptera: Gomphidae, Aeshnidae, Libellulidae). *Notulae Odonatologicae* 2: 82-83 — [Brief review of hitherto known and some new records of *Anax ephippiger*, *P. genei* and *T. annulata* from Portugal.]

AGUIAR S. (1989) As nossas libélulas. *Quercus* 2: 24-26 — [The first Portuguese record of *Zygonyx torridus* from Serra de Monchique, and records of seven additional spp.]

ANON. (1910) Nevroptero de Portugal novo para a Europa da fam. Libellulidae. *Brotéria, Série Zoológica* 9: 90 — [The first records of *Diplacodes lefebvrii* from Europe: 1♀ taken in June 1904 near Setúbal, and 1♂, leg. Silvano, on 01-IX-1906 at Valle da Commenda near Setúbal. This note, written in Portuguese, was published at the end of an article by L. Navás in Spanish language, thus probably written by another, anonymous author.]

BONESS M. (2000) Massenflug der Schabrackenlibelle Hemianax ephippiger Burmeister an der Küste der Algarve (Portugal) (Insecta, Odonata). *Atalanta* 31: 585 — [Observation of thousands migrating *Anax ephippiger* on cliffs near Ferragudo, Algarve, on 16-X-1999. The possibility of an influx from Africa or Spain is shortly discussed. However, as the few sampled specimens all were not fully mature males, an Iberian origin of the flock has to be taken into account, too.]


CHARPENTIER T. DE (1825) Horae entomologicae, adjecis tabulis novem coloratis. A. Gosohorsky, Wratislaviae — [On p. 8, the original description of Lestes virens is given, based on types from Portugal in coll. ZMHB: «Agrion virens (Mus. Berol.) .... Habitat in Lusitania»]


COMPTE SÄRT A. (1965) Distribución, ecología y biocenosis de los Odonatos ibéricos. Publicaciones del Instituto de Biología Aplicada, Barcelona 39: 33-64 — [The distribution of 20 spp. in Portugal is explicitly mentioned in the text, and is mapped for nine spp.]

CONESA GARCÍA M.A. (1985) Aportaciones a la biología de Diplacodes lefebvrei (Rambur, 1842) (Odon., Anisop., Libellulidae) en la Península Ibérica. Boletín de la Asociación Española de Entomología 9: 321-330 — [The distribution of D. lefebvrei on the Iberian peninsula is mapped according to literature citations. However, the reference for one locality indicated in the Algarve cannot be traced, because – to our knowledge – the first published record of the sp. from the Algarve has to be attributed to Jones (1996), although Seabra (1938a) already recommended to search for the sp. in that region.]

Cortes R.M.V. & A. Monzón (1991) Biological assessment of water quality in Northern Portugal using a method combining species tolerance and diversity along the longitudinal axis. *Linnética* 7: 123-132 — [Lists larval records of *Pyrrhosoma nymphula*, *Ophiogomphus cecilia*, *Boyeria irene*, and *Cordulegaster bidentata* from the Douro Basin, referred to as «Indicator taxa for B.I.N.P.» (Biotic Index for Northern Portugal). However, the record of *C. bidentata* is a misidentification most likely pertaining to *C. boltonii*, calling the classification of *O. cecilia* into question, too.]

Cortes R.M.V., K. de Tjarda & M.A.S. Graça (1986) Estudio de un río de montaña de una zona granítica del norte de Portugal. *Linnética* 2: 197-204 — [Larval records of eight spp. from River Olo in the Douro Basin including *Ophiogomphus cecilia*, which is regarded as evidence for the occurrence of the sp. in northern Portugal (e.g., Schorr 1996). However, considering other doubtful larval records or obvious misidentifications in macrozoobenthos studies from Portugal (Graça et al. 1989, Cortes & Monzón 1991, Cortes 1992, Coimbra et al. 1996), in our eyes this opinion is pending confirmation by imaginal records (cf. Suhluling & Müller 1996: 213).]


ERICHSON W.F. (1838) Bericht über die Leistungen in der Entomologie während des Jahres 1837. Archiv für Naturgeschichte 4 (2): 187-264 — [The first secure note on «Libellula nitens» (= Oxygastra curtisii) to occur in Portugal is given on p. 236: «...L. nitens (eine neue ausgezeichnete Art, die auch in Portugal vorkommt)...» (verbatim)]


FERREIRA S. & J.M. GROSSO-SILVA (2003) Confirmação da presença de Brachytron pratense (Müller, 1764) (Odonata, Aeshnidae) em Portugal continental. Boletín de la Sociedad Entomologica Aragonesa 33: 272 — [Confirmation of the occurrence of B. pratense in Portugal by two new records from Barrinha de Esmoriz, Ovar district, and Esteiro de Salreu, Aveiro district. These constitute the first records for Portugal since SEABRA (1937b), whose record in some cases failed to be noticed in odonatological literature.]


GIRARD A.A. (1891) Liste des Odonates du Portugal et note critique sur les Onychogomphus Genei, Selys et Hagenii, Selys. Revista de Ciencias Naturaes e Sociaes 2 (5): 26-45 — [Checklist of 48 spp. recorded from Portugal, including an extensive literature review and a description of Paragomphus genei from Portugal, based on 11♂ and 6♀ collected at Rio Sorraya near Coruche. This reference has hitherto usually been cited in odonatological literature erroneously as «Revista da Sociedade Carlos Ribeiro», which is the name of the publisher. The date of publication also gives cause to confusion: publication details given in this study are «Ce 10 Septembre 1890», although the actual year of first publication was obviously 1891 when a pre-print of this study was published separately as an «extrait», which is acknowledged by us as well as usually in odonatological literature (e.g., SEABRA 1937b, 1942, AGUIAR & AGUIAR 1985a, JÖDICKE 1997b). However, the according issue of the journal was only published in 1893, referred to by, e.g., NAVÁS (1924).]

GÖTZ W.H.J. (1923) Mitteilung über einige geographische Variationen bei Odonaten. Mitteilungen der Münchner Entomologischen Gesellschaft 13: 36-37 — [Description of «Agrion splendens pfeifferi», based on 1♂ in coll. ZSMC, leg. 1884 by M. Korb near Faro (Algarve). This taxon was synonymised by VON ROSEN (1991) with Calopteryx xanthostoma.]
GRAÇA M.A.S., D.M. FONSECA & S.T. CASTRO (1989) The distribution of macro-invertebrate communities in two Portuguese rivers. *Freshwater Biology* 22: 297-308 — [Larval records of 11 spp. are provided from Rivers Soure and Alva, central Portugal. As *Platycnemis pennipes* is a misidentification, the records of *Gomphus vulgatissimus* and *Ophiogomphus cecilia* on this list must be called into question, too (cf. the comment to CORTES et al. 1986).]

GRAND D. (1996) *Coenagrion mercuriale* (Charpentier, 1840). In: VAN HELSDINGEN P.J., L. WILLEMSE & M.C.D. SPEIGHT (eds): Background information on invertebrates of the Habitats Directive and the Bern Convention. Part II – Mantodea, Odonata, Orthoptera and Arachnida. *Nature and Environment* 80: 245-253 — [«Portugal: *C. mercuriale* is mentioned regularly at least on distribution maps, but ... it is almost impossible to find useful references. Still, ... the species most certainly occurs in brooks in the coastal region as is the case in adjacent Galicia; status unknown.» (verbatim)]


HAGEN H.A. (1866) Die Neuropteren Spaniens nach Ed. Pictet's Synopsis des Neuroptères d'Espagne. Genève 1865. 8 tab. 14 col. und Dr. Staudingers Mittheilungen. *Entomologische Zeitung, Stettin* 27: 281-302 — [Contains a synopsis of 45 Odonata spp. known to occur in Iberia, of which 16 are listed explicitly for Portugal. From today's point of view, the statements on *Platycnemis pennipes* (according to Selys) and *Erythromma najas* (referring to specimens in coll. ZMHB, obviously collected by J.C. Hoffmannsegg: «*A. najas* Hansem. (Mus. Berol.)») must be regarded as erroneous.]

HARTUNG M. (1985) *Orthetrum trinacria* (Sel.) as a part of the dragonfly fauna in southern Spain (Anisoptera: Libellulidae). *Notulae Odonatologicae* 2: 101-102 — [A record of *Trithemis annulata*, 1♂ 2♀, collected 18-IX-1980 at Barragem de Santa Clara, Odemira province, is provided.]

HARTUNG M. (1993) What is the true *Lestes virens virens* (Charpentier, 1825)? Abstracts and Papers of the XII International Symposium of Odonatology, Osaka: 11-12 — [The type specimen of *L. virens* in coll. ZMHB (cf. Charpentier 1825), collected by J.C. Hoffmannsegg in «Lusitania», was compared with other specimens collected in Iberia. All specimens from Portugal and Andalusia had a whitish-yellow bicoloured pterostigma in common, contrary to those from Central Spain with an unicoloured yellow ptero-
stigma. It is concluded that the "bicoloured“ form represents the true nominotypic ssp., whereas the "unicoloured“ Mediterranean form should be given a new name to delimit it from the northern ssp. L. v. vestalis. Contrary to this opinion, in his analysis of the case JÖDICKE (1997a: 78f.) concludes from the facts that the nominotypic ssp. shows a bicoloured pterostigma in the southwestern parts of its range, and a unicoloured pterostigma in northern Spain and southern France.]

HARTUNG M. (1996) Odonata from the Iberian Peninsula with a description of Calopteryx haemorrhoidalis almogravensis ssp. n. from Portugal. Advances in Odonatology, Supplement 1: 53-59 — [Records of 11 spp. from the Odemira province are given. The newly described ssp. C. h. almogravensis was synonymised in our eyes by JAHN (1996a) in the same issue with C. haemorrhoidalis, pertaining only to dwarf forms of the latter due to the cool coastal climate.]

HEYNE K.-H. (1989) Massenhafte Wanderung der Frühen Heidelibelle (Sympetrum fonscolombei, Selys 1840) in Portugal. Dendrocopos 16: 126-127 — [Observation of several 10,000 migrating Sympetrum fonscolombei at Cabo de São Vicente, the southeastern tip of Iberia in the Algarve, on 01-X-1988 and consecutive days.]


JÖDICKE R. (1997b) Die Verbreitung von Sympetrum sinaiticum tarraconense Jödicke (Odonata, Anisoptera: Libellulidae). Opuscula Zoologica Fluminensia 155: 1-7 — [Museum material of potential S. sinaiticum in coll. MZCP was checked. One specimen labelled as Sympetrum decoloratum from Coimbra was in fact S. meridionale, and two specimens labelled as S. vulgatum, from Mata de Leira and Coimbra, turned out to be S. fonscolombii. The existence of S. vulgatum (ssp. ibericum) in Portugal is called into question.]

Libellula 24 (1/2) 2005: 109-128


LIEFTINCK M.A. (1965) Macromia splendens (Pictet, 1843) in Europe, with notes on its habits, larva, and distribution (Odonata). *Tijdschrift voor Entomologie* 108: 41-60 — [The known records of *M. splendens* of that time, including two from Portugal near Coimbra, are mapped and discussed. One of those records pertains to 1σ in coll. DSFL, leg. by A.F. de Seabra in June 1922, which is thoroughly portrayed.]


LONGFIELD C. (1937) The dragonflies of the British Isles. Wayside and Woodland Series, Frederick Warne & Co., London — [Mentions *Oxygastra curtisii* as «of limited distribution in west Europe, being only really plentiful in Spain and Portugal» (p. 112), which was called into question by several authors later in the 20th century. Under consideration of the known distribution of the sp. at that time it remains unclear why this statement was given.]


MALKMUS R. (2002a) Die Verbreitung der Libellen Portugals, Madeiras und der Azoren. *Nachrichten des Naturwissenschaftlichen Museums der Stadt Aschaffenburg* 106: 117-143 — [Provides distribution maps of 63 spp. from continental Portugal. It has to be noted that actual references for many mapped recording sites cannot be traced (e.g., *Ophiogomphus cecilia* in Serra da Estrela), and that there are taxonomical mistakes (*Orthetrum coerulescens anceps*) as well as questionable spp. (*Sympetrum vulgatum*) on the list.]


McLachlan R. (1880) Notes on the entomology of Portugal. II. Pseudo-Neuroptera (in part) & Neuroptera-Planipennia. The Entomologist's Monthly Magazine 17: 103-108 — [Fifteen spp. collected by A.E. Eaton in May and June 1880 are mentioned, including the first Iberian record of Gomphus graslinii: «One , Cea, 1692 feet, 8th June». The actual identity of that site, which was sometimes without success in odonatological literature (e.g., Compte Sart 1965, Jahn 1996b), is to our knowledge Seia in the Serra da Estrela.]


Navás L. (1907) Neurópteros de España y Portugal (Continuado). Brotéria, Série Zoológica 6: 43-100 — [Literature citations and new records for Portugal of 16 spp.]
NAVÁS L. (1908) Neurópteros de España y Portugal. *Brotéria, Serie Zoologica* 7: 5-131 — [In the section "Adiciones y Correcciones" (p. 113), all Portuguese records of *Sympetrum vulgatum* are indicated as pertaining to *S. striolatum*.]

NAVÁS L. (1924) Sinopsis de los Paraneurópteros (Odonatos) de la península ibérica. *Memorias de la Sociedad Entomologica de España* 1: 1-69 — [Fifteen spp. are explicitly reported from Portugal. However, exact locality names are only added to spp. that are not considered as common by the author, explaining the small number of spp. indicated for Portugal. The undated record of *Macromia splendens* from «Poigres (Portugal)» (referring in fact to Poiares, Beira Litoral; cf. LIEFTINCK 1965: 56) is the first published record of the sp. from the country.]


OCHARAN LARONDO F.J. (1988) Composición de la odonatofauna Ibérica. *Revista de Biología de la Universidad de Oviedo* 6: 83-93 — [A commented checklist of 71 spp. regarded as occurring in the Iberian peninsula. It has to be noted that the doubtful spp. *Erythromma najas*, *Ophiogomphus cecilia* and *Cordulia aenea* are not included.]

OWEN D.F. (1958) Dragonfly migration in south-west Portugal, autumn 1957. *The Entomologist* 91: 91-95 — [Records of migrating *Anax parthenope*, *Crocothemis erythraea*, and *Sympetrum fonscolombii* at Cabo de São Vicente, the southeastern tip of Iberia in the Algarve, and of *Lestes viridis* from Serra de Monchique. Additionally, an unpublished observation by J.F. Monk and R.E. Moreau of «several million» migrating *S. fonscolombii* near Sagres, Cabo de São Vicente, on 27-IX-1956 is provided.]


Seabra A.F. de (1937a) Notas entomológicas. Memórias e Estudos do Museu Zoológico da Universidade de Coimbra 101: 1-12 — [Records of Diplacodes lefebvrii from Leirosa, July 1926, and Macromia splendens from Soure, June 1922. Although the spp. are referred to as new for the Portuguese fauna, both had been reported from there previously (cf. Anon. 1910, Navãs 1924)]

Seabra A.F. de (1937b) Notas sôbre os Odonatos de Portugal. Memórias e Estudos do Museu Zoológico da Universidade de Coimbra 104: 1-14 — [Review of the Portuguese Odonata records known at that time. Thirteen spp. are recorded for the first time from Portugal, and a checklist of Odonata spp. kept in coll. MZCP is given.]

Seabra A.F. de (1938a) «Diplacodes Lefebvrei Ramb.» em Portugal. Memórias e Estudos do Museu Zoológico da Universidade de Coimbra 109: 1-2 — [This note corrects the erroneous information on the first record of D. lefebvrrii from Portugal claimed by Seabra (1937a), and gives credit to Anon. (1910).]


SELYS LONGCHAMPS E. DE (1887) Odonates de l'Asie mineure et revision de ceux des autres parties de la faune dite Européenne. *Annales de la Société Entomologique de Belgique* 31:1-85 — [Lestes *macrostigma* and *Paragomphus genei* are mentioned explicitly from Portugal.]

SELYS LONGCHAMPS E. DE & H.A. HAGEN (1850) Revue des Odonates ou Libellules d'Europe. *Mémoires de la Société Royale des Sciences de Liège* 6: i-xxii, 1-408, pls 1-11 — [Seventeen spp. are given for Portugal on a checklist, and four more in the text. From today's point of view, the statements on *Platycnemis pennipes* and *Erythromma najas* (both referring to specimens collected by J.C. Hoffmannsegg) as occurring in Portugal have to be regarded as erroneous.]

graphy on European and mediterranean Gomphidae, with distribution maps for all taxa. The possible occurrence of Ophiogomphus cecilia in Portugal is thoroughly discussed (p. 213): Larval records by Cortes et al. (1986) are called into question, but the existence of 1♂ in coll. Navás (cf. Seabra 1937b) is acknowledged as the hitherto only secure record from Iberia.]
Vandelli D. (1797) Floræ, et Faunæ Lusitanicæ Specimen. Memorias da Academia Real das Ciencias de Lisboa 1: 37-79 — [The first reference regarding Odonata from Portugal, reporting the occurrence of «Libellula vulgata» (= Sympetrum, sp. unclear), «Libellula cancellata» (= Orthetrum cancellatum), «Libellula aenea» (sp. unclear) and «Libellula virgo β. δ.» (= Calopteryx spp.) in the country. According to Aguiar & Aguiar (1985a), these spp. were classified by C. Linnaeus, and the term "libélula" was introduced to Portuguese language by this study.]
The Azores and Madeira

ANON. ["A Young Traveller“, most likely G. Miller, Jr.] (1815) The traveller’s guide to Madeira. G. Miller & Son, Haddington — [According to McLACHLAN (1882) and GARDNER (1963) the first reference to mention Odonata in Madeira: «there are several kinds, and the largest sort 3 inches long» (verbatim).]

BÁEZ M. (1985) Las libelulas de las Islas Canarias. Enciclopedia Canaria 28. Aula de Cultura del Excmo. Cabildo Insular de Tenerife, Santa Cruz — [In a comparative checklist of Odonata from Macaronesia (p. 39), five spp. are mentioned as occurring in Madeira, and four in the Azores. The statement on «Ischnura senegalensis» pertains to I. hastata in the Azores, and in Madeira most likely to I. hastata or I. saharensis.]


BELLE J. & J. VAN TOL (1990) Anomalagrion hastatum (Say), an American damselfly indigenous to the Azores (Odonata, Coenagrionidae). Tijdschrift voor Entomologie 133: 143-147 — [First notification on the true identity of Ischnura hastata from Pico, formerly misidentified as I. senegalensis (cf. VALLE 1940, GARDNER 1960).]


BOWDICH T.E. (1825) Excursions in Madeira and Porto Santo, during the autumn of 1823, while on his third voyage to Africa. George B. Whittaker, London — [p. 169: reference to an «Aeschna approaching grandis, and greatly resembling the species figured by Roesel, t.2, Insect. Aquat. tab. ii fig. 1» (= Anax imperator), which is the first Odonata sp. reported from Madeira.]


BRAUER F. (1901) Über die von Prof. Simony auf den Canaren gefundenen Neuroptera und Pseudoneuroptera (Odonata, Corrodentia et Ephemeridae). Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien,
Mathematisch-Naturwissenschaftliche Classe, Abtheilung I, 109 [1900]: 464-477 — [Lists the published six taxa of Odonata of that time from Madeira by Hagen (1865) and McLachlan (1882), in comparison to the Odonata of the Canary Islands.]


Cordero Rivera A., M.O. Lorenzo Carballa, C. Utzeri & V. Vieira (2005b) Parthenogenetic Ischnura hastata (Say), widespread in the Azores (Zygoptera: Coenagrionidae). Odonatologica 34: 1-9 — [An extensive study on the distribution of parthenogenetic populations of I. hastata in the Azores. In addition, new records of I. pumilio and Anax imperator are provided.]

Drouet H. (1861) Eléments de la faune Açoréenne. J.B. Baillière et Fils, Paris — [Obviously the first reference to mention the occurrence of Odonata in the Azores (p. 90): «Parmi les névroptères, quelques libellules, vivant soit dans les lieux cultivés autour des habitations, soit près des lacs dans les montagnes, ont frappé mon attention; mais je n’en ai pas capturé et je ne saurais dire à quels genres elles se rapportent.» (verbatim)]


Gardner A.E. (1959) Aspects of the fauna and flora of the Azores XII. (a) Odonata. Annals and Magazine of Natural History 13: 791-792 — [Lists records of Ischnura pumilio, Anax imperator and Sympetrum fonscolombii from Faial and Pico. Sympetrum fonscolombii is described as new ssp. S. f. azorensis, which was not regarded as valid by later authors (e.g., Belle 1992).]


GUERNE J. de (1888) Excursions zoologiques dans les Iles de Fayal et de San Miguel (Açores). Gauthier-Villars et Fils, Paris — [Records of Odonata larvae collected in Caldeira (Faial) are given on p. 67: «Aeschna sp.? Larves; Agrion sp.? Id.» (verbatim). According to CORDERO RIVERA et al. (2005b), the records of zygopteran larvae are probably the first of *Ischnura hastata* from the Azores, as in 2003 a large population of the sp. was found at the same site.]

HAGEN H.A. (1865) The Neuroptera of Madeira. *The Entomologist’s Monthly Magazine* 2: 8-11, 25-28, 59-62, 75-81 — [Lists *Ischnura pumilio*, *Anax imperator*, *Sympetrum fonscolombii* and *S. nigrifemur* as known from Madeira. «I have not seen the *Gomphus* taken by M. Hartung in Madeira, and deposited in the collection of Professor Heer; it is probably *G. simillimus*» (verbatim)]

HARCOURT E.W.V. (1851) A sketch of Madeira; containing information for the traveller, or invalid visitor. John Murray, London — [Mentions on p. 125 «several kinds of Libellula» to occur on the island]

HUGHES S.J., M.T. FURSE, J.H. BLACKBURN & P.H. LANGTON (1998) A checklist of Madeiran freshwater macroinvertebrates. *Boletim do Museu Municipal do Funchal* 50 (284): 5-41 — [Lists «Ischnura senegalensis» (= *I. hastata* in the Azores; in Madeira sp. unclear, most likely *I. hastata* or *I. saharensis*), *I. pumilio*, *Anax imperator* and *Sympetrum fonscolombii* as known from the Azores and Madeira, and *S. nigrifemur* from Madeira only. The record of an unidentified *Gomphus* sp. (cf. HAGEN 1865) is regarded as questionable.]

LE ROI [O.] (1915) Odonaten aus der algerischen Sahara von der Reise des Freiherrn H. Geyr von Schwenenbourg. Mit einer Übersicht der nordafrikanischen Odonaten-Fauna. *Deutsche Entomologische Zeitschrift* 1915: 609-634 — [Lists the known records of that time of seven Odonata spp. from the Azores and Madeira. Additionally, further investigations on the identity of «Ischnura senegalensis» (sp. unclear, most likely *I. hastata* or *I. saharensis*) specimens from Madeira in coll. Selys, and on a specimen of *Anax imperator mauricanus* from Madeira in coll. McLachlan (cf. McLACHLAN 1882) are recommended. The record of an unidentified *Gomphus* sp. from Madeira (cf. HAGEN 1865) is regarded as doubtful.]

MALMUS R. (2002) Die Verbreitung der Libellen Portugals, Madeiras und der Azoren. *Nachrichten des Naturwissenschaftlichen Museums der Stadt Aschaffenburg* 106: 117-143 — [Lists five spp. as having been recorded in Madeira, two in Porto Santo, one in Selvagem Grande, and four in the Azores. To our knowledge, only the record of *Anax ephippiger* from Madeira (SMIT 1998) is missing on this list.]

MALCHLAN R. (1882) The Neuroptera of Madeira and the Canary Islands. *Journal of the Linnean Society, Zoology* 16: 149-183 — [Lists and discusses records of «Ischnura senegalensis» (sp. unclear, most likely *I. hastata* or *I. saharensis*), *I. pumilio*, *Gomphus* sp., *Anax imperator*, *Sympetrum fonscolombii*, and *S. nigrifemur* from Madeira. A record of *A. i. mauricanus* from Madeira is regarded as doubtful, owing to imperfect identification.]


SAMPAIO A. DA SILVA (1904) Memória sobre a Ilha Terceira. Imprensa Municipal, Angra do Heroísmo — [Mentions «Libellula grandis» and «Libellula puella» as common on Terceira. The former sp. certainly pertains to *Anax imperator*, as a detailed drawing is provided, whereas the identity of the latter sp. remains unclear.]


SELYS LONGCHAMPS E. DE (1887) Odonates de l'Asie Mineure et revision de ceux des autres parties de la faune dite européenne. *Annales de la Société Entomologique de Belgique* 31: 1-85 — [p. 66: Based on the study by McLachlan (1882), six taxa are listed for Madeira. The record of *Anax imperator mauricanus* from Madeira is called into question due to a lack of certainty. «Gomphus sp? - D'après une larve de Madère. Probablement le *G. Lucasii* d'Algérie.» (verbatim)]


SMIT J.T. (1998) De Zoogeografie van de libellen en de zweefvliegen van Madeira (Odonata & Diptera; Syrphidae). Afstudeerscriptie [final study thesis], Hogeschool van Utrecht, vakgroep Biologie — [Lists and discusses six published taxa of Odonata from Madeira. In addition, the first records of *Anax ephippiger* taken on the island at four sites from 27-II-1998 to 17-IV-1998 are provided. As those records comprised up to several hundred individuals at a time (e.g., Ponta de São Lorenço, 25-III-1998), they are discussed as an influx driven by “Leste“ winds.]


VALLE K.J. (1940) Iter entomologicum et botanicum ad insulas Madeiram et Azores anno 1938 a Richard Frey, Ragnar Storå et Carl Cedercreutz factum N:o 5. Odonaten von den Azoren und Madeira. Societas Scientiarum Fennica, Commentationes Biologicae 8: 1-7 — [Lists and discusses records of «*Ischnura senegalensis*» (= *I. hastata*; it is noted that all 62 collected specimens were females), *Anax imperator*, and *Sympetrum fonscolombii* from the Azores, and of *I. pumilio* from Madeira and the Azores, all taken by R. Frey and R. Storå from May to July 1938.]