

LIFE AND WORK OF MICHEL EDMOND DE SELYS LONGCHAMPS (1813-1900), THE FOUNDER OF ODONATOLOGY

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The life and times of the great Belgian odonatologist are outlined. The main sources of biographic information are his diaries (1823-1900). In addition to a sketch of his rich life, the information on his family, the castles he lived in, his travels in Europe, his immense natural history collections, on his disciples and on his contacts with contemporary odonatologists is given therein. Selys was a liberal politician, and devoted much of his time and energy to local, provincial and national political levels, as a senator and President of the Belgian Senate. He had a broad interest in natural history that far transcended the study of dragonflies. In odonatology, his work is of a particular importance: he did not only pioneer the field by describing over 700 valid spp., but he consequently used wing venation as the backbone of the taxonomical system of the order. In his Last Will, Selys earmarked a large sum of money in order to stimulate the work of various specialists on the description of his large zoological collections.

INTRODUCTION

The year 2013 marks the bicentennial of the birthday of baron Michel Edmond de Selys Longchamps. Most odonatologists will be familiar with his name, generally shortened as ‘Selys’, in taxonomic descriptions. But who was this man who shaped the classification of Odonata and who described over 700 species and established 134 valid genera within the Odonata? How important was his work for the development of contemporary odonatology? In this paper we provide an outline of his life and work by first providing some biographical background as then details about natural history and odonates.

MATERIAL AND METHODS

Of the utmost importance for this study was Selys' own diary, which he kept from the age of 10, in 1823, to a few weeks before his death, in 1900. This sizeable document has been recently published by CAULIER-MATHY & HAESSENNE-PEREMANS (2008)¹ and we subsequently refer to it as 'Diary' in this paper.

This work is further based on the biography by COEN (1982) and on ten biographies, necrologies, obituaries and miscellaneous studies, viz.: ANONYMOUS (1901), BLASIIUS (1901), CALVERT (1901), DUBOIS (1901), LAMEERE (1902), MARTIN (1901), PLATEAU (1902), RIS (1901), SELYS & SELYS (1901)² and WATERMAN (2005)³. Additionally, we sought information from over 25 of Selys' articles, obituaries for colleagues and many other papers found on the internet as well as digitalized old Dutch newspapers⁴.

Selys' documents and letters are conserved in three archives, which are kept at different locations. The first archive, at the University of Liège, is in the general library, in the room "Marie Delcourt"⁵. A list of its contents has been published (CAULIER-MATHY & HAESSENNE-PEREMANS, 2010). A second archive was moved to the University of Liège in 1959 (YANS, 1961) and is now at the State Archives in Liège⁶. The third archive contains Selys' scientific correspondence and is kept at the Natural History Museum, RBINS, in Brussels⁷.

As a reference to the Odonata species described by Selys we used the species list by SCHORR & PAULSON (2013). While this list is not complete, with some subspecies treated as synonyms and some species described by Hagen in Selys given as if they were authored by Selys (M. Hämäläinen, pers. comm.), there is no better list available at present, however.

Selys wrote more than 300 scientific papers on many zoological subjects besides Odonata, on which he published about 130 studies. During his later life, he also published bibliographical notes on his own work (e.g. SELYS, 1897b); summaries of Selys' odonatological literature are provided also by DUMONT (1967) and BRIDGES (1994).

PARENTS

The family name, 'Selys', was already established in the 17th century when the family lived in Maastricht, The Netherlands (at the time this was Limburg, a region of Europe that encompassed The Netherlands, Belgium, and Germany) (COEN, 1982: 1). One of Selys' ancestors, Michel Selys (who passed away around 1622) called himself "lord of Opoeteren", a village in the Belgian part of Limburg (PLATEAU, 1902). The name Selys is one of the many variants (e.g. Celys, Celis, Sels) derived from Marcellus⁸. Consequently, Selys should be written without the French "accent aigu". Longchamps was incorporated to the family name after the family acquired a title of nobility over this village in the Liège area. Note that the general area where the family lived was situated in a politically sensitive region, with the city of Liège, and part of Limburg, independent and governed for a long time by a Prince-Bishop but allied with Germany, Luxembourg, and France. The French Revolution ended this situation. Michel Laurent de Selys Longchamps (Laurent), Selys' father, a wealthy aristocrat, held important political positions⁹ in Liège but his loyalty changed sides between the Prince-Bishop and the French revolutionaries on more than one occasion. From 1802–1809 he was representing the department of the Ourthe (including the city of Liège) in

the legislative body in Paris, under Napoleon (PLATEAU, 1902). Paris is also the place where he met his wife Marie-Denise Gandolphe, who was a widow¹⁰ with two children. They married on 9 May 1808. A portrait of the couple was painted by Jean-Joseph Ansiaux in 1809¹¹.

After 1809, Selys' father returned to spend most of his time in Liège and at his property in Longchamps in Waremme ('Borgworm' in Flemish). Around 1810, Selys' father built a chateau in early Empire style at Longchamps¹². In England such huge buildings would be called mansions (WASSCHER, 2012); in Belgium the French term 'chateau' (castle) is widely used.

Michel Laurent de Selys' admiration for Napoleon is evident from the west wing of the castle: the billiard room here is an imitation of the tent of Napoleon during his field campaign in Egypt. Nevertheless, Michel's admiration for Napoleon was not sufficient for him to name his son Napoleon, unlike other high ranking officials during that period. At the time of the Belgian Revolution in 1830 (bringing an end to about 15 years of a union with the Netherlands) Michel was one of the twenty-one members of a Committee advising the National Congress on the creation of an independent Belgium¹³.

YOUTH

Michel Edmond de Selys Longchamps ('Edmond') was born in Paris, the capital of Napoleon's Empire, on 25 May 1813 in the Rue Faubourg Saint-Honoré 130 (*Diary*: 1 July 1900)¹⁴. For reference this was just before Napoleon lost the Battle of Leipzig (16-19 October 1813) and at Napoleon's defeat at Waterloo in 1815, Selys was two years old. Born in the French Empire of Napoleon, Selys thus became a citizen of the United Kingdom of the Netherlands (roughly the Netherlands, Belgium, and the Grand Duchy of Luxembourg) despite remaining in Paris.

Selys had one sister, Amanda, four years older than him, and two half-sisters, Coralie and Laura Smits, thirteen and seven years older than him, respectively. His maternal grandmother also lived in Paris. As his father worked in Liège, Selys' spent his first nine years in Paris surrounded only by women. In 1816 (i.e. 3 years old), he made his first visit to Longchamps and saw his father for the first time (MICHEELS, 1914-1920: 192).

Selys begins writing a diary at the age of 10 (Fig. 1), on 27 August 1823, saying that he arrived from Paris. In the following months he visits Longchamps but leaves for Paris on the 8 September 1825 to live there for most of the next two years¹⁵. He returned to Longchamps before 1 July 1827¹⁶ (*Diary*: 25 December 1840; MICHEELS, 1914-1920: 192).

Notes on Selys' education started in September 1823, with music lessons by Théodore Coumanne. His private tutor Adolphe Hoffmann¹⁷, a lawyer, commenced his instruction in Paris (PLATEAU, 1902). Another tutor, sometime before



Fig. 1. Engraving of Edmond, aged 10, in 1823 [from CAULIER-MATHY & HAESSEN-PEREMANS, 2008].

Marc became Professor of Zoology at the Free University of Brussels and was admired by his francophone colleagues for his excellent command of the English language (BRIEN, 1965).

From 1827 onwards, Selys' liberal parents allowed him to read whatever he liked and he never formally attended school or university (COEN, 1982: 21), though he took some courses at Liège University. In an unpublished document Selys complained at the age of 26 about his education and wrote "I am not responsible for my bad education" (SELYS 1841: 1). Nonetheless, numerous people and books influenced him. At first it was Henri Stephens (1799-1889), in 1828 a gardener at Liège University (PORTUGAELS, 2012), who sold him 'Système naturel' on 18 June 1829 and helped him later to arrange his herbarium according to Linné. This probably marks the start of his systematic work on Natural History.

1828, was Tirelle de Modine, a teacher in Italian language (*Diary*: 7 April 1848). At the time the common language of diplomacy was French, but it is uncertain whether Selys ever acquired more than a passive knowledge of that language. A rather amusing entry in the diary refers to a visit by Mr and Mrs Kirby to Selys, where he states that he could not understand their English and they spoke not a single word of French! Yet, in 1849 he employed a governess, Miss Marie Claire Cook, as an English tutor for his children. She subsequently became like a member of the family, and remained closely associated with the Selys' daughter Caroline, his son Walthère, and certainly his grandson Marc (see below).

CHATEAUS

In 1810, Selys' father bought and partly rebuilt a second chateau¹⁸ in Liège (on the Mont Saint Martin, with postal address Boulevard de la Sauvenière 34) (Fig. 2). It was a 'hotel' dating from the 15th century¹⁹. From the family of the mother of Selys the family inherited a third chateau at Colonster²⁰, south of Liège. In 2013, this was in use by the University of Liège. The Colonster chateau was inherited by his sister Amanda and was not as often visited as the two previous ones and the latter. The chateau at Halloy near Ciney that had belonged to his father-in-law, was the third place where Selys frequently lived (Fig. 2). His Odonata collections were first at Longchamps and later moved to the Liège chateau.

As with many aristocrats around Liège at that time, Selys spent his summers mostly in the countryside at Longchamps and the winters in Liège (CALVERT, 1901; CAULIER-MATHY & HAESSENNE-PEREMANS, 2008: xxiv). Selys often stayed in a rented accommodation in Brussels because of his work in the Senate; e.g. "Agreed to rent at the hotel de France for 3 francs a day, a room for four months in wintertime" (*Diary*: 10 November 1877). Later it was apparent that

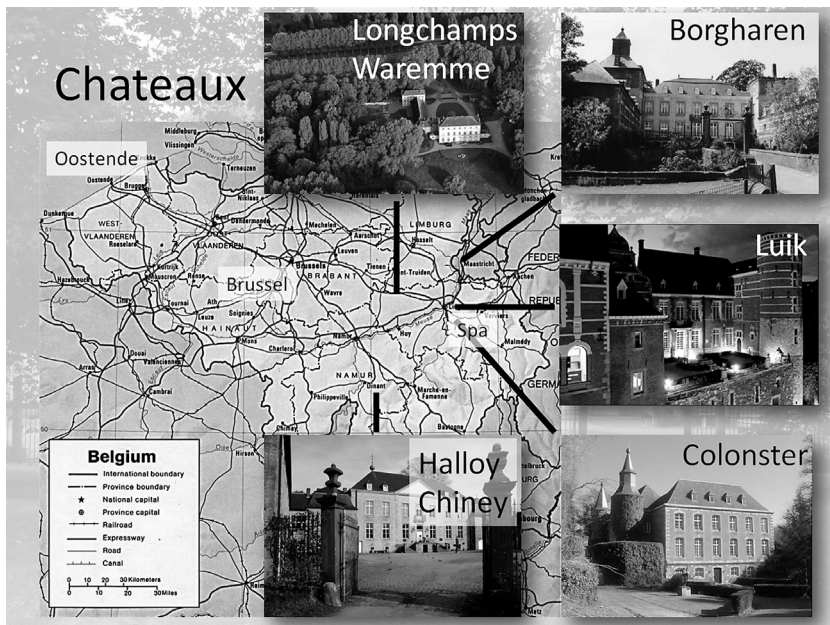


Fig. 2. Castles related to Selys, clockwise: L o n g c h a m p s at Waremme, the summer residence; – B o r g h a r e n (property of his son Raphaël); – M o n t S a i n t M a r t i n, winter residence (here was stored the Odonate collection during the last decades of his life); – C o l o n s t e r, S of Liège (inherited by his sister); – H a l l o y at Ciney (inherited by Selys from his father-in-law). – Brussels, where he often dwelled as senator; – Ostende and Spa, where he often spend holiday.

Selys did not like staying in Brussels because of “the precautions for my health on account of the frequent residence in Brussels during the bad season in winter” (CALVERT, 1901: 33). When in Belgium Selys visited places like Spa and Oostende, but was fondest of the direct surroundings of Longchamps and Liège. Sites that were frequently visited included the Kempen, Limburg (now eastern Belgium), a region rich in water bodies and thus comprised a large number of Selys’ collecting localities²¹.

FAMILY

Selys married Sophie d’Omalius d’Halloy, daughter of the famous Belgian geologist Jean Baptiste d’Omalius d’Halloy, in 1838. They had four children: Caroline in 1839, Raphaël in 1841, Walthère in 1846 and Marguerite in 1848. Selys ensured that the family obtained the inheritable title of ‘baron’ from Leopold II on 31 July 1867 (COEN, 1982: 26-28), but himself avoided the title for most of his life, even stipulating in his marriage contract that he would not use it (WATERMAN, 2005).

Life expectancy²² was 50 in wealthy families like that of the Selys. Selys’ father died in 1837 aged 78, a year before his marriage, and his sister Amanda died in 1838 aged 29 while Selys and Sophie were on their honeymoon in Italy. Selys’ greatest loss occurred, however, when his youngest daughter Marguerite died aged



Fig. 3. Edm. de Selys Longchamps and his family on his 80th birthday 25 May 1893. Selys in the first row left, next to him Raphaël (with mustache), Walthère (with large beard) in the last row right; – [From CAULIER-MATHY & HAESSENNE-PEREMANS, 2008].

four of meningitis in 1852 (WATERMAN, 2005; HÄMÄLÄINEN, 2013). His wife Sophie died of cancer relatively young, aged 51, in 1869 and his youth friend Michel Ghaye died not much later at the age of 59, in 1872 (SELYS, 1872b). Selys himself lived to the age of 87. In his family, only his father in law, Jean d'Omalus d'Hallo, with 92 years survived to an older age.

In his diary, Selys mentions his three surviving children equally often. His oldest child, his daughter Caroline, married a baron and a future senator. His oldest son Raphaël (see Fig. 3), became an officer of the cavalry and after 1875 an amateur photographer of considerable talent, whose pictures would later be published in a book (DE NAEYER, 1999; see e.g. Fig. 8); he married a French baroness and they lived in a chateau at Borgharen, North of Maastricht in The Netherlands (Fig. 2). Raphaël and his family inherited the chateaus at Longchamps and Liège. Selys' younger son, Walthère (later sometimes referred to as Walter), struggled with the towering personality of his father and was a bit of a rebel. Walthère (see Fig. 3) liked biology but eventually studied law in Liège. He also travelled in Brazil and la Plata in Argentina in 1872-1873 with the zoologists Eduard van Beneden and Eugene van Volxem on a commission from the Belgian Government (W. DE SELYS, 1875) and collected Odonata, of which a few were named after him (HÄMÄLÄINEN, 2013). Although this trip may have been an important act of self-confirmation for the son (the father never left the European continent), there was an intense correspondence between Walthère and his father. In 1875, however, Walthère wrote a letter to his father in which he confessed that he had made Philomène Joséphine, the cook at Longchamps, pregnant (WATERMAN, 2005). Selys was very upset about this (*Diary*: 22 February 1875). Walthère and Philomène left Longchamps and co-habited, unmarried, in Paris and later Genève, Switzerland. Apparently Selys kept pressuring his rebel son to end this situation. The couple finally got married on 13 October 1881 in Paris, but the union was backdated by 10 years, as if it took place on 13 October 1871. Indeed, their oldest son Marc (though born 30 June 1875, was never mentioned in Selys' diary before the marriage). Note that Marc would later study biology under August Lameere in Brussels and become a well-known Zoology Professor at the same institution. Marc's expertise was in the marine phyla Phoronidea and Tunicata (BRIEN, 1965). Walthère and his relatives inherited the chateau at Halloy; later Walthère became a senator like his father.

TRAVELLING EUROPE

Selys liked to travel. His longest voyage was his honeymoon trip (from 1 March to 10 August 1838) that brought him and Sophie as far South as Naples (Fig. 4). On this trip he visited the collections of small mammals in Paris, Lyon, Strasbourg, Frankfurt am Main, Rome, Pisa, Milan, Genève (COEN, 1982: 103). His furthest voyage was to Sweden (from 31 July 1874 to 24 August 1874) where he attended

a Congress of Anthropology and Archeology in Stockholm. The northernmost town he visited was Uppsala where he made a pilgrimage for Linnaeus and visited Linnaeus' tomb and his small estate Hammarby. The easternmost place Selys visited was Budapest, for a Congress of Statistics (voyage from 9 August to 19 September 1876). On this trip he visited collections at Strasbourg, Munich, Vienna, Budapest, Augsburg, Stuttgart and Darmstadt (COEN, 1982). In Vienna Selys stayed from 20 to 31 August and worked for several days with Friedrich Brauer. The southwestern most place visited was Biarritz, in 1858, and the northwestern-most site visited was Loch Katrine near Stirling (EVANS, 1905). This latter trip took place during the second half of June and July 1845, when visiting Scotland for the collections of Robert Greville and James Wilson at Edinburgh; later, he gave a presentation at Oxford²³ (SELYS, 1846). Selys visited London several times, including a trip to the collection of dragonflies of Linnaeus at the Linnaean Society on Soho square (*Diary*: 1 August 1851).

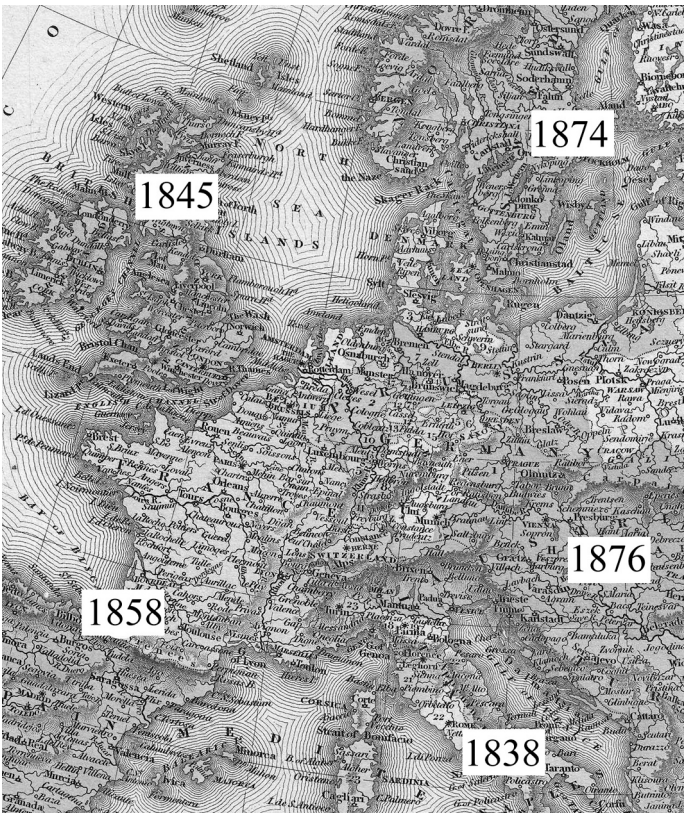


Fig. 4. Map of central Europe, with (dated) outer corners of his travels.

POLITICAL CARRIER AND HIGH CONNECTIONS

On 6 February 1843 Selys became a communal councilor of Waremmé (COEN, 1982: 38) and was later a provincial councilor. For a short time, he was also a member of the Chamber of Representatives for Waremmé. He attended the first Belgian Liberal Congress in 1846 and, as a liberal, was sent to the national Senate in 1855, to represent the district (“arrondissement”, in French) of Waremmé. He maintained this office until a few months before his death in 1900. The Senate elected him Vice-president in 1879; in 1880 he was appointed President for four years (Fig. 5b). In his letters to Phillip Calvert, Selys frequently referred to the great amount of time consumed by his senatorial duties (CALVERT, 1901) and RIS (1901: 367) wrote that political work took a large share of his working time. Selys was a multi-millionaire by descent; he was a landowner who collected goods and rent from the farms on his land. As a member of the Senate, Selys was a nobleman amongst many other noblemen. To be eligible to join the Senate, one had to pay 1000 florins which meant that (at around 1830) only about 4000 persons in Belgium could be elected senator (WIKIPEDIA, 2012). Note that senators were not paid for their work.

Selys was a republican, like his father, and was disappointed when the newly-created Belgian state did not choose to be a republic. It took him a long time to accept the King as his sovereign. Shortly after the February Revolution in 1848, Selys went to “sniff the revolutionary air” in Paris (WATERMAN, 2005). On 15 May he wrote in his diary: “After 4 hours in the sun we could not enter the Assemblée [in the Palais de Bourbon]. Bought entrée tickets earlier that morning. The tribunes were invaded by 150,000 people who arrived from over the bridge”. It was a workers protest and Louis Blanc and Alexandre Albert closed the general meeting and started a new government. That day Selys was in a place where world history was written.

A few weeks later, on 26 June 1848, the Belgian King, Leopold I, opened the Parliament. Selys wrote “Everyone applauded except me!”. On 5 July 1848 Selys refused to dine with the King: “I will not haunt the court”. A day later someone from the royal palace warned Selys they considered him to be too much of a republican. However, things eventually cooled down and Selys ended up in good terms with the royal family, and often dined with Leopold I and later with his son Leopold II. Selys occasionally dined with the Dutch King William III (‘Guillaume III’).

In January 1866, Selys was sent on a special diplomatic and royal mission. After the death of Leopold I on 10 December 1865, he was asked to return his Italian decorations to King Victor Emmanuel of Italy (BRIEN, 1968). On 14 and 18 January 1866 he dined with Victor Emmanuel in Florence, then the capital of Italy. They talked “about hunting, natural history and public works” (*Diary*: 18 January 1866). He took advantage of this visit to Italy to visit six Italian bird collections (SELYS, 1870b).

WHAT WAS SELYS LIKE?

COEN (1982) puts on the cover of his book on Selys a Jesuit dictum: ‘Fortiter in re, suaviter in modo’: gentle in manners, strong in deeds. Indeed, he seems to have been an amiable man. Leonie de Waha said about her uncle Selys: “he loves



Fig. 5. Some portraits of Edm. de Selys Longchamps: (a) lithography from circa 1843 [from CAULIER-MATHY & HAESSENNE-PEREMANS, 2008]; – (b) President of the Senate, painting after photograph, see *Diary* 30 March 1881; (c) – undated portrait [from COEN, 1982]; – (d) portrait from circa 1883 [from COEN, 1982]. The respectively age of Selys was ca 30, 67, 75 and 70 years.

the world, gaiety, children and dancing” (PORTUGAELS, 2012).

LAMEERE (1902: 5), the influential Zoology Professor at the Free University of Brussels, described his first meeting with Selys at an assembly of the Belgian Entomological Society on 7 February 1880; at the time Lameere was 15 and Selys was 66. “Great and solid, he was at the same time old and pleasantly young. His long hair hung over his ears on his collar and gave him an appearance as if he was from another century. I would have thought him to have stepped out of an old Dutch painting. When he began to talk to give an advice on the household of the society, his words made me guess that it was him”. Interestingly, this long hairstyle was likely a deliberate choice of image; for example, on a painting of the members of the Senate in 1888 (COEN, 1982: 185), one sees many moustaches, beards and whiskers, but no such long hair. Selys had long hair on a lithography dated back to when he was perhaps thirty (Fig. 5a). What LAMEERE (1902) suggested might be true: in appearance, he looked like his ancestor François de Selys (1626-1681; COEN, 1982: 6) on a painting that in 2012 still hangs on one of the walls of the Longchamps chateau.

Unassuming, simple in his habits, Selys went to bed early and did not drink wine until the age of forty, and even then only in moderation (WATERMAN, 2005). On the other side, Rudolf Blasius wrote that while he was on a visit to Selys’ home at Longchamps (12 August 1884), the servants at dinner were in great livery. Selys himself was very hospitable: he would have had Blasius and his wife stay for more than a day. The winter before, the ornithologist Henry Tristram even stayed for several weeks, lodging in a room on the second floor of Longchamps (BLASIUS; 1901: 368).

Selys was an active man, who liked to hunt, was a good horse rider and learnt to ride a bicycle after his eightieth birthday²⁴. But his diary indicates that he liked to smoke cigarettes and cigars and also to gamble. Selys often went to theater (visits 127 times mentioned), concerts (120 visits²⁵) and he loved opera (131 visits²⁶) (CAULIER-MATHY & HAESSENNE-PEREMANS, 2008: 1689-1695). He visited many zoological museums but also enjoyed museums of archeology, anthropology, culture and geology.

FRIENDS

At Longchamps, since 1823 he had a youth friend, Michel Ghaye (SELYS, 1872b). Unlike Selys, Ghaye went to school but they sometimes took lessons together in the evening (*Diary*: 11 October 1829). Later Ghaye became his ‘confidence man’ (LAMEERE, 1902: 4). From 1842 onwards, Selys and Ghaye published yearly on the phenology (‘the timing of periodic phenomena’) of plants and animals (e.g. SELYS, 1848), in the period 1842-1872 (animals), in the period 1849-1873 on 21th March, 21th April and 21th October (plants) (SELYS, 1897b; CAULIER-MATHY & HAESSENNE-PEREMANS, 2010: item 84). They were

stimulated to do so by Adolphe Quetelet, the “father of statistics” and Professor at the University of Gent, and they published on zoological statistics in Belgium in ANONYMOUS (1852); see BRACKE (2008).

Though Selys had many contemporary entomological friends in the Belgian Entomological Society, none of these specialized in the Odonata. Some collected Odonata for Selys, for example Martin Robyns (entomologist and colleague in the Senate, who captured at Geel, Northern Belgium, the holotype of *Soma-tochlora flavomaculata*, described by Vander Linden in 1825). Baron Joseph de Villenfagne de Vogelsanck²⁷, Ernest Candèze (1828-1898), Jules Putzeys (1809-1882), Camille van Volxem (1848-1875) and Edgard Claes (1856-1895) were other Belgian entomological friends; Adrien Maurissen from The Netherlands should also be cited here.

ODONATOLOGICAL FRIENDS

Selys’ best odonatological friend was Hermann Hagen (Tab. I). After they had both published papers on European Odonata in 1840, they started a correspond-

Table I
Friends, colleagues and disciples from Edmond de Selys Longchamps, interpreted mainly from the number of references in CAULIER-MATHY & HAESSENNE-PEREMANS (2008)

Name	Residence	Life-span	First contact	Number of page references in Diary
friends				
Hermann Hagen	Königsberg, Berlin (Germany), Cambridge (USA)	1817-1893	1841	98**
Robert Mac Lachlan	Lewisham (UK)	1837-1904	1855	106**
colleagues				
Herman Albarda	Leeuwarden (Netherlands)	1828-1898	1875	24*
Friedrich Brauer	Vienna (Austria)	1832-1904	1876	12*
Ferdinand Karsch	Berlin (Germany)	1853-1936	1891	8
William Kirby	Dublin, London (UK)	1844-1912	1883	4*
disciples				
Guillaume Séverin	Brussels (Belgium)	1862-1938	1888	72**
Friedrich Ris	Rheinau (Switzerland)	1867-1921	1885	54**
Friedrich Förster	Schopfheim (Germany)	1864-1918	1896	35**
René Martin	Le Blanc, Indre (France)	1846-1925	1893	32**
Philip Calvert	Philadelphia (USA)	1871–1961	1893	13*

*They met in person once or twice; – ** They met in person several times

ence in 1841 and they met in spring 1843 in Paris (CALVERT, 1901). They worked together on a European “Revue des odonates” (1850) and two large monographs on Calopterygidae and Gomphidae, published in 1854 and 1858 (Tab. II). After the monographs Hagen often added descriptions to the work of Selys until 1886. In 1867 Hagen came over for a long visit to Selys and his collection in Liège²⁸. How close they were can be illustrated by the last day of his visit: “My last morning with Hagen. He left at 15:45 for Cologne. I hugged him at the station. His last work, the train was ready to leave, had been the translation of the text of *Arvicola campestris* by Blasius”²⁹ (*Diary*: 17 September 1867). This was just before Hagen emigrated from Königsberg (now Kaliningrad, then part of Germany) to Cambridge³⁰ in the USA. After this separation they continued their close friendship, though they never again met in person.

His second best friend in odonatology was Robert McLachlan, a British entomologist and pioneer in the study of the world fauna of Trichoptera and Neuroptera. On the last group in northern Asia they published together in SELYS & McLACHLAN (1872). They first met on 23 July 1855 in Ostend, a town on the Belgian coast, and saw each other from time to time. At such occasions, they went on joint excursions e.g. to the Hautes Fagnes in Belgium. In his testament, Selys formulated the wish that Robert McLachlan should finish the description of his large odonate collection, and reserved a generous financial compensation for this. McLachlan, however, turned down the offer (see below).

Table II

The mayor work of Edm. de Selys Longchamps: monographs with H. Hagen (2) and synopses (26)

Title	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eight
Synopsis des calopterygines	1853	1859	1869	1873	1873	1879		
Monographie des calopterygines	1854							
Synopsis des gomphines	1854	1859	1869	1873	1873	1873	1878	
Monographie des gomphines	1858							
Synopsis des agrionines	1860	1860	1862	1862	1863	1865	1876	1877
Synopsis des cordulines	1871	1874	1878					
Synopsis des aeschnines	1883							
Revision du synopsis des agrionines	1886							

ODONATOLOGICAL COLLEAGUES

Perhaps surprisingly, contact with three important odonatologists in the 19th century, Hermann Burmeister, Pierre Rambur and Toussaint de Charpentier, as minimal. Burmeister is mentioned in the diary only once. Selys tried to visit a museum with the types of Hermann Burmeister in 1880, after a visit to Wilhelm Schlütter, who lived at Halle, but he found the museum closed (*Diary*: 28 September 1880). There are no records mentioning correspondence between Selys and Pierre Rambur, the most important contemporary French odonate specialist³¹; likewise, Rambur never mentioned any correspondence with Selys (RAMBUR, 1842: xvi-xvii). Similarly no correspondence with Toussaint de Charpentier is mentioned by Selys, either. The two European odonatologists that Selys corresponded with and met at least once were Herman Albarda and Friedrich Brauer (see Tab. I).

ODONATOLOGICAL DISCIPLES

In the last twelve years of his life Selys had several odonatological students, with the most important being Guillaume Severin who was very close to Selys. Severin was born as Wilhelm Peter Robert Severin on 25 August 1862 in The Hague (ANONYMOUS, 1862; BOONE & DE RUITER, 1994), where his Dutch (but originally German) father was a court photographer. On 26 February 1888, Severin³² is first mentioned in the diary of Selys "Mr Severin, a young entomologist, came to see my collection". Selys was 75, Severin 26. Severin would become an 'aide-naturaliste' at the Royal Museum in Brussels in December 1890 and was promoted in 1899 to the post of curator of the Department of Arthropods (MISKHEL, 2011). He would paint the larger part of the plates from the odonate collection of Selys, the Anisoptera. Other odonatological disciples included Friedrich Förster³³, Friedrich Ris, René Martin, Philip Calvert and Ferdinand Karsch (see Tab. I).

THE FRENCH CONNECTION

Being born in Paris, that city was also the most frequently visited non-Belgian travel destination of Selys. Every now and then he went there and often he brought back birds, dragonflies and other insects he bought there. For example, in 1858 he wrote: "Bought Neuroptera from Veracruz [Mexico] at Emile Sallé, rue Guy Lambrosse 13; bought a *rustica* from Mr Pivot, a *pusilla* from Mr Lefèvre [both *Emberiza* birds, respectively Rustic and Little Bunting], and pins from Mr Evans." (*Diary*: 14 October 1858). On some days he mentioned to have bought items from five different salesmen. He sometimes visited the Entomological Society of Paris (Fig. 6), e.g. on 26 June 1867.

On his honeymoon in 1838, he first visited the collections at Paris and Lyon after which he went to southern France where at Aix-en-Provence he twice (11 March and 12 March) met Etienne Boyer the Fonscolombe (who was 70 and Selys 24 years old). Boyer the Fonscolombe had just published a monograph on the Odonata in the surroundings of his hometown (BOYER DE FONSCOLOMBE, 1837)³⁴. In 1840 Selys dedicated a new *Sympetrum* to him: *S. fonscolombii*. In 1858 he went on a long excursion to the Southwest of the country in the surroundings of Biarritz (SELYS, 1858).

THE DUTCH CONNECTION

After Selys had published on the faunistics of the vertebrates of Belgium in 1841, he decided it would be necessary to visit collections in The Netherlands and the North of France (SELYS, 1883: 82). On 8 May 1841 he left Antwerp by stagecoach for The Netherlands, a trip that at that time still took several days to complete. On 10 May he arrived at Leiden and made a walk with Willem de Haan (the describer of *Lindenia*, 1826). The next day he met Coenraad Temminck and Herman Schlegel at the Leiden Museum, both very honourable ornithologists and mammalogists. He did not mention visiting the Odonata collection that year, but he collected dragonflies himself at Leiden, Amsterdam, Haarlem and Utrecht. On 21 April 1851 Selys once again traveled from Antwerp to The Netherlands. The next day in Leiden he noticed that the friendship between Schlegel and the 27 years older Temminck had ended³⁵. On 24 April 1851 he counted in the Leiden collection a total of 840 odonates referable to 350 species. Selys visited the Leiden collection on another four occasions: in September 1864, August 1879 (when he made a summary catalogue



Fig. 6. Edm. de Selys Longchamps as a member of Entomological Society of France, his first known photograph (probably 1855; see *Diary* 17 April 1855). – [From internet, at <http://gallica.bnf.fr/ark:/12148/btv1b84329382/f19.item>]

of the collection), in July 1885 and in 1895 at the third and very successful International Congress of Zoology. On the last occasion he presented a paper 'Le progrès dans la connaissance des odonates' (SELYS, 1895).

Herman Albarda, a Friesian lawyer, entomologist and birdwatcher, was a Dutch colleague, with whom Selys corresponded between 1875 and 1895. They met at least once: in 1878 Selys went to Liège to see Albarda (*Diary*: 25 August 1878). Albarda sent species from the Far East to Selys (e.g. Beijing, China; *Diary*: 12 August 1886) and described some himself³⁶.

Selys had a large influence on the Dutch Odonata faunistic literature in the second half of the nineteenth century. It is very likely that the publications by Selys were used as examples by the Dutch for writing their odonate faunistics (HERKLOTS, 1852; SNELLEN VAN VOLLENHOVEN, 1866). These authors both saw Selys two years before their publication in Leiden, respectively in 1850 and in 1864 (*Diary*, 22 April 1850 and 29 September 1864).

Since his eldest son, Raphaël de Selys Longchamps, became owner by marriage of the castle at Borgworm, just North of Maastricht in The Netherlands ('Haren' in the diary), Selys often visited this southern part of The Netherlands after 1886.

COMMERCIAL CONNECTIONS

While Selys collected as much material as he could, he also received collections from various sources (including his son Walter, see earlier) and purchased the larger part of his dragonfly collection, which depended on whatever specialized merchants had to offer. He had a special connection with Henry Bates, who travelled and explored Brazil from 1848 to 1859 for commercial collecting. On 9 August 1851 he first saw a new genus related to *Euphaea*³⁷ with Samuel Stevens captured at Ega, "which he got from Mr Bates (from the Amazon)". The British commercial naturalist Samuel Stevens is mentioned 16 times in the diary. The next time Selys mentioned Bates was on 23 January 1865: "At the customs authorities I picked up 500 dragonflies of the Amazon collected by Bates"³⁸. In 1871 at London, he had breakfast with 21 people, where the name Bates is underlined (*Diary*: 1 July 1871), showing that he was special to Selys.

With Alfred Wallace the relationship was less close. Wallace started collecting around Belem in Brazil together with Bates, but returned to England earlier; on his return on 9 August 1852 his ship caught fire and all of his specimens were lost. Many Odonata Wallace collected later in the Malay Archipelago were bought by Selys.

The German merchants most frequently mentioned in the diary are Hans Fruhstorfer ("Birthday party 85 years. Showed my big collection to Fruhstorfer with whom I spent two hours"; *Diary*: 25 May 1898). Another German seller whom he often mentioned was Otto Staudinger; whom he visited on 22 September 1880 at

Dresden in his villa Diana, with its splendid collection (*Diary*). He was an associate of Staudinger together with Ernst Heyne. These three (or their collections) are mentioned in his diary respectively 37, 19 and 23 times.

SELYS AS NATURALIST AND SCIENTIST

Selys' natural observations started at the age of 11. He shot an *Emberiza citrinella* (a Yellow bunting, bird), and caught butterflies and a damselfly for the first time (*Diary*, resp. 24 February, 10 July, 13 July 1824). On this last date he also mentions that baron Ferdinand [baron de Borchgrave d'Altena, his brother-in-law] had given him two months before this date a *depressa* [*Libellula depressa*] and a *virgo* [*Calopteryx virgo*] which Selys tried to feed. Soon after, he began to study the insect book of Latreille (*Diary*: 26 July 1824).

On the age of 15 Selys wrote his first article: a catalogue of non-winged insects, Neuroptera (including Odonata) and butterflies. While this was later published in the '*Dictionnaire géographique de la province de Liège*' (SELYS, 1831), virtually all names used in this article, including the 'new species', are wrong, and thus Selys still had a lot to learn. With his first mammal species descriptions in 1836, Selys begins his scientific career³⁹.

Though he is widely considered an autodidact, Selys became an erudite naturalist: "Duty called him into political service, and he fulfilled it with great devotion and success, but the study of nature was his passion" (WATERMAN, 2005). We know him as a devoted odonatologist but his interests extended to the Belgian fauna more generally to mammals, birds, trees and meteorological phenomena (CALVERT, 1901). Selys studied the animals of the interior and fresh water, and his contemporary and friend Pierre Van Beneden studied marine and coastal-terrestrial fauna (PLATEAU, 1902: 77; COEN, 1982: 104).

Table III

Some genera and species named after Edm. de Selys Longchamps, which are considered valid in 2013.

– [Species-group names in Odonata are not listed; for these see BRIDGES, 1994]

Plants: *Selysia* Cogniaux, 1881; Odonata: *Selysioneura* Förster, 1900 and *Selysiothemis* Ris, 1897
Ascalaphidae: *Colobopter* *selysi* van der Weele, 1903, *Ameropter* *selysi* (Van der Weele, 1909) and *Proctarrelab* *selysi* van der Weele, 1909; *Plecoptera*: *Marthamea selysii* (Pictet, 1841); *Trichoptera*: *Sericostoma selysi* Pictet, 1865, *Glyptotaelius selysii* McLachlan, 1869 and *Hydropsyche selysi* Ulmer, 1907; *Formicidae*: *Formica selysi* Bondroit, 1918; *Mecoptera*: *Bittacus selysi* Esben-Petersen, 1917; *Megaloptera*: *Neurhermes selysi* (van der Weele, 1909); *Myrmeleontidae*: *Palpares selysi* Esben-Petersen, 1926; *Coleoptera*: *Platypus selysi* Chapuis, 1865 and *Tiracerus selysi* (Schaufuss, 1880); *Arachnidae*: *Corinna selysi* (Bertkau, 1880); *Fossil molusc*: *Fusiturris selysi* (De Koninck, 1837); *Psocoptera*: *Hemipsocus selysi* Banks, 1918; *Lepidoptera*: *Aglais selysi* Donckier de Douceel 1881 and *Celaenorhinus selysi* Berger, 1955; *Orthoptera*: *Discotettix selysi* Bolivar, 1887; *Fossil bird*: *Vanellus selysi* Van Beneden, 1871; *Mammals*: a *Myotis* subgenus *Selysius* Bonaparte, 1841, occurring in southeast Asia and Australia, is now treated as junior synonym of *Myotis* (WILSON & REEDER, 2005).

Selys was interested in and he was a member of many different scientific organizations: anthropological, economic, geographical, geological, human rights, malacological, medical, statistical etc. (CAULIER-MATHY & HAESSENNE-PEREMANS; 2008: 1656-1658). He was a founding member (and served several terms as the President) of the Société Entomologique de Belgique in 1856. He was also active in the 'Académie royale des Sciences de Belgique', and was an honorary member of almost all European entomological societies.

Less expected might be his membership of the Botanical Society, 'Société royale de Botanique de Belgique'. Alfred Cogniaux, President of this Society, named a plant genus from Central and South America after him as *Selysia* Cogniaux, 1881, one of the 125 genera of the Cucurbitacea (COGNIAUX, 1881) (Tab. III).

HIS COLLECTIONS

As a teenager, Selys already had a cabinet with e.g. eggs of Buzzard (*Buteo buteo*), Golden Oriole (*Oriolus oriolus*), some minerals (*Diary*: 9 July 1824), a butterfly collection (*Diary*: 9 March 1828) and a herbarium (*Diary*: 17 October 1829). He enlarged his collections by collecting himself, getting additions from friends and family, and last but not least by commercial purchases. He continuously kept arranging his collections: "Together with Mr Stephens I have arranged my herbarium in the way of Jussieu." (*Diary*: 17 October 1829). And "I started with the rearrangements of my libellules after Brauer. ... They are now in 46 cases and 4 with *Cordulia* in 3 weeks." (*Diary*: January 1873).

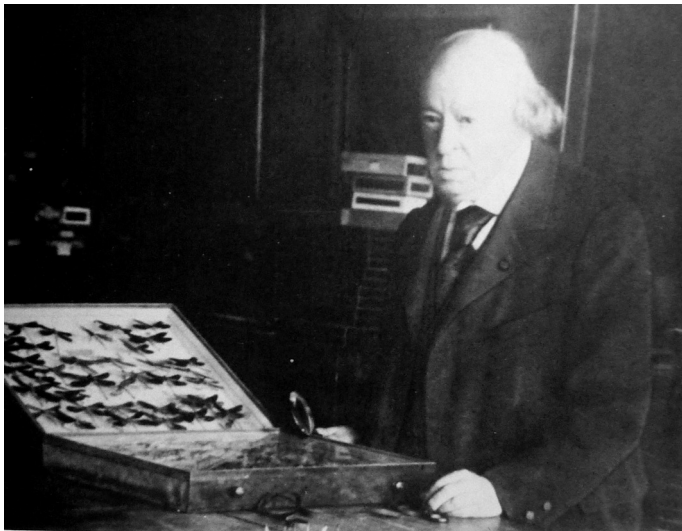


Fig. 7. Edm. de Selys Longchamps with a Calopterygidae cabinet [From COEN, 1982]

CALVERT (1901) wrote: in the *Revue* in 1850, “Selys had given notice of his intention to extend his researches to the exotic forms. He had already acquired the collections of Latreille, Rambur, Audinet-Serville and Guérin-Meneville with this end in view”⁴⁰. Other collections acquired, and not mentioned on other places, where at least parts of those from Toussaint de Charpentier and Wilhelm Schneider⁴¹. Selys writes in 1858 he softened the dragonflies of both collections (*Diary*: 23 May 1858).

Selys’ collections⁴² (Fig. 7) became so large that he constructed an extra building to house them: it is the grey building right of the entrance (as his great-great granddaughter told the first author on a visit to the castle on 15 August 2012). The collections were visited not only by experts, but also by students from Waremmе. His friend Charles Lucian Bonaparte (2nd Prince of Canino and Musignano and a nephew of Napoleon I, II and III) named his collections the ‘Museum Selysianum’ (BONAPARTE, 1850).

In 1895, having just returned from the Third International Congress of Zoology in Leiden on 23 September, he counted 1530 odonate species in his collection at Liège. At that time he lacked approximately 280 described known species. Kirby in 1889 (= probably KIRBY, 1890) said he knew 1830 types, Calvert at the end of 1892 knew 1982 types (*Diary*: 27 September 1895). In 1905 his collection contained 1854 out of the 2100 species known at the time (SEVERIN, 1905).

Shortly before 1905, the Selysian Odonata collection was moved from Liège to RBINS in Brussels (SEVERIN, 1905). The other collections were moved from Longchamps to RBINS in 1932 (ANONYMOUS, 1932). A butterfly collection was transferred to Brussels only in the 1970s, still in an impeccable state.

DESCRIBING ODONATA

Selys described several insects⁴³ beside odonates and several vertebrates⁴⁴. But Selys was the first true Odonata taxonomist and his work and large collection has been crucial for the later development of odonatology. Most essential was perhaps his insight in the importance of wing venation as an essential tool in taxonomy, and this remains valid in spite of the recent discovery of a number of wing vein homoplasies. Note that this idea was not entirely novel as BURMEISTER (1839) used wing venation too and Selys was also influenced by a publication by VAN DER HOEVEN (1828) that introduced the difference of the triangle direction

Table IV
Number of described odonate genera and species
(SEVERIN, 1919)

Year	Author	Genera	Species
1767	Linnaeus	1	20
1793	Fabricius	3	65
1839	Burmeister	6	159
1842	Rambur	33	350
1871	de Selys Longchamps	190	1357
1879	McLachlan		1700
1890	Kirby	313	1900
1891	Calvert	321	1922

as difference between the genera *Aeshna* en *Libellula* (SELYS, 1840: 20, 192).

According to CALVERT (1901), the literature written by Selys can be divided into three groups. The first group deals almost exclusively with European species and embraces the years from 1831 to 1851. The results of this are summarized in his chief work of this period, '*Revue des odonates ou libellules d'Europe*' which he wrote with Hagen in 1850. The second period is that of the monographic revision of the Odonata of the world, from 1853 to 1886 (see Tab. II). In SELYS & HAGEN (1854) the authors wrote in the preface: "It is in our thoughts only the commencement of a History of the Odonata, that we hope to bring to an end in a few years. Our project is to publish successively, under the form of monographs, the five or six subfamilies that constitute the Odonata, and of which we already know about a thousand species." In the end they published only two monographs⁴⁵, although Selys published by himself 26 issues of studies he called 'synopsis' (Tab. II). These were meant to "consist of the synoptical tables which he prepared for his own use whilst working upon a monograph of the Calopteryginae [...]. Each is intended in fact as a sort of prodrome to the larger work, and contains in a semi-tabular form, short characters of all divisions, genera and species which will be described more fully in the latter" (ANONYMOUS, 1854). The third group of Selys' dragonfly publications are chiefly faunal papers⁴⁶, and while they began as early as 1857, they did not occupy much of his working time, nor were they extensive until 1878-1879. Asia was relatively well covered by these papers but Africa less well so.



Fig. 8. Edm. de Selys Longchamps (right from the centre, aged 75) entering a coach 1888; [Photograph by Raphaël de Selys Longchamps, from DE NAIJER, 1999]

Selys' work contains no reference to evolution in the Odonata (CAULIER-MATHY & HAESSENNE-PEREMANS, 2008: xli), although he bought the French translation of Darwin's *Evolution by natural selection* in 1862 (*Diary*: 22 September 1862) and he was present at the appointment of Charles Darwin as an associated member of the 'Academie royale de Belgique' in 1870 (*Diary*: 15 December 1870).

DRAWING ODONATA

In most of his publications on Odonata, Selys does not provide figures. This is intriguing as Selys wrote in an article on barklice Psocidae: "Mr McLachlan said, it is very desirable that such drawings should be published, because we know by experience how difficult it is for a student, commencing his studies of the Psocidae, to follow description of the peculiarities presented by neuration [nervation], without the aid of figures" (SELYS, 1872a). Such considerations apply to odonates. Why then did Selys include so few illustrations in his publications? RAMBUR (1842: iii) was very critical about the drawings in one of Selys' early papers (SELYS 1840) and wrote: "In 1840 de Selys published a monographic work on the European libellulidées [...] and gave figures that are little accurate and less appropriate than those from de Charpentier". While Selys continued to use a few figures in some subsequent articles (e.g. SELYS, 1843) these comments likely affected him. His later publications contain drawings by Hagen (SELYS & HAGEN, 1854; 1858) or Severin (SELYS, 1889). An additional reason for a lack of illustrations, may be that he described species from collections he visited while travelling around Europe. However, as few of these could be accessed by further loans he had to hurry to complete the descriptions and probably was afraid of making mistakes in illustrations (SELYS, 1874).

Before his marriage with Sophie in 1838, she took a course for aquarelle painting (*Diary*: July-August 1837: 181). After her death in 1869 Selys started to draw aquarelles of Coenagrionidae although before that date he sometimes drew birds (e.g. hybrid-birds; *Diary*: 3 April 1867). One of the first known watercolours, dated 6 November 1874⁴⁷, painted at Halloy, is of *Agrion caerulescens* Fonscolombe, 1838 (now: *Coenagrion caerulescens*). The existence of these watercolours was known (e.g. CALVERT (1939) and one of us (HJD) but they were traced to RBINS, the natural history museum in Brussels, by Matti Hämäläinen (HÄMÄLÄINEN, 2009; WASSCHER, 2012). LAMEERE (1902: 12), wrote about the intentions Selys had in mind with the plates: "[Selys] had a dream to publish one day a great iconographic work on odonates". These plates have proven to be a very valuable addition to the Selys collection, particularly when holotypes have been broken or lost (HÄMÄLÄINEN, 2009; BOTA-SIERRA, 2012; WASSCHER & VAN 'T BOSCH, 2013).

TAXONOMIST

Selys was born in the year in which DE CANDOLLE (1813) introduced the words ‘taxonomy’ and ‘priority’⁴⁸ into biology. In 1842 SELYS (1842; iv) asked himself “Recognizing the right of priority seems the only way to understand each other and prevent that zoology soon becomes a chaos, a true Babel, as long as it is fixed at 1760, the period of the establishment of the binary nomenclature by Linné and of the publication of Brisson’s book for all the genera not adopted by Linné” (see DAYRAT, 2010). The first realistic code of zoological nomenclature was presented by STRICKLAND (1843) whom Selys probably knew quite well since Hugh Strickland and his wife visited in 1845 the collection at Longchamps (*Diary*: 30 September 1845). Thus, we may assume Selys was familiar with the first Code of Zoological Nomenclature⁴⁹.

On the first International Congress of Zoology in 1889 in Paris, the Code of Zoological Nomenclature was discussed. One of the participants in the discussions was Selys “I took much part in the discussions The matter of the priority will be discussed in three years time” (*Diary*: 10 August 1889). According to DAYRAT (2010) Selys “suggested that any rule adopted by the Congress should simply be regarded as some kind of advice, not as a law that would have authority over zoologists”. Others suggested “It was a good place and was the ideal opportunity to agree on common rules”⁵⁰.

ENVIRONMENTAL POLLUTION

Selys’ life began in an era of horse and wind power, with travelling taking place largely by stagecoach and/or ship. Nonetheless in 1838 there was a train connection between Waremmes and Brussels, and Selys made use of steamships, bicycles and cars as they became available during his lifetime. Many of the problems associated with increasing human population and industrial development were recognized by Selys. For example in 1882 he wrote about the problems of water pollution of small rivers (SELYS, 1882). Three years before his death, he gave a lecture at the Académie Royale on the subject of ‘Le déclin d’une faunule’, which was published in SELYS (1897a) (text see COEN, 1982: 115-119). This paper is a complaint on the destructiveness of ‘modern’ agricultural techniques and degradation of nature. He saw a decline of the fauna at a world level as well as locally: in the Hesbaye (in the surroundings of Longchamps) he saw species and their numbers collapse, he observed the pollution of the brook ‘Le Geer’ by industry and was worried about all this. Indeed, nature in this part of Belgium has suffered. While many parts of the civilized world were still in a pristine state, he saw happening, in the 19th century, in his very backyard, what the future would bring to large parts of the industrial world.

In the same year, he celebrated his 84 birthday with 19-20 people at the table.

There his friends McLachlan and Candèze informed him that the President of the Entomological Society of France had announced erroneously his death and praised him (*Diary*: 25 May 1897). But though nature was in decline, Selys himself was still going strong.

HIS LAST YEAR

Just before his 86th birthday, on 7 May 1900, Selys left the Senate in an emotional ceremony⁵¹ (LAMEERE, 1902: 5). His resignation, he wrote to an American correspondent, was due to “my age; the precautions for my health [...]; the desire to live in my family for the few years that remain to me; and above all to enjoy a little liberty which will permit me to work at my odonates, on which I am very much behindhand on account of the Senate” (letter of 8 June 1900) (CALVERT, 1901).

In June he attended an ornithological congress in Paris, being present at all meetings and other activities. He visited the world exhibition as well. Back at Longchamps he was very tired and did not work⁵² each day as he normally did (BLASIUS, 1901). His last letter was on 5 November 1900 to Williamson (GLOYD, 1983). In this, Selys wrote about Förster as being young, zealous, which was likely to start later a warm friendship between the two. On 4 December he left Longchamps for Liège to make a better treatment possible and on 8 December he went in a state of coma. He died on 11 December 1900 at 6:00 in the morning, at the age of 87 (BLASIUS, 1901: 363).

The funeral started on 14 December at his chateau in Liège, where seven honorable men spoke. The funeral procession went under a military salute to the St-Croix church next door, where a service was held and after that proceeded to the railway station of Guillemin⁵³. From here the train with his coffin left to Waremme under a second military salute. The next day he was interred in the family mausoleum on the local graveyard, the ground of which Selys had donated to the village of Waremme around 1850 (BLASIUS, 1901: 364). The Selys family mausoleum (see COEN, 1982: 198; WASSCHER, 2012) looks as if it was lifted from the graveyard Père Lachaise in Paris (for which the ground was donated by Napoleon I to the city of Paris). Likewise, the two ‘SL’ (de Selys Longchamps) marks that Selys had arranged above the front door of his chateau at Longchamps is nearly a copy of the ‘SL’ (‘Saint Louis’) mark in the ‘Dome des Invalides’ (now the mausoleum of Napoleon), are both nods to Paris, where he was born 87 years earlier.

DESCRIPTION OF THE COLLECTION OF SELYS

The testament of Selys contained the explicit wish that others should complete the description of his large collection. Clearly, Selys had in mind one of his

Table V

Titles of the Catalogue of Edmond de Selys Longchamps (*Catalogue systématique et descriptif des collections zoologiques du baron Edmond de Selys Longchamps*; see, e.g. TRIEMPONT, 2005), including the not published parts (see e.g. SEVERIN, 1919)

Publ.date	Fasc.No.	Author and subject
	1	Introduction
1913	2	BURR, M.: <i>Orthoptères</i> . 35 pp.
1912	3(1)	ENDERLEIN, G.: <i>Embiidinen</i> . 121 pp., 75 figs, 4 pls
1915	3(2-3)	ENDERLEIN, G.: <i>Copeognatha</i> . 55 pp., 10 figs, 5 pls DESNEUX, J. : Isoptera. 10 pp.
1912	4(1)	KLAPALEK, F.: <i>Plécoptères</i> . I. fam. Perlodidae (monographische Revision). 66 pp., 58 figs
1923	4(2)	KLAPALEK, F.: <i>Plécoptères</i> . II. fam. Perlidae (monographische Revision). 193 pp., 61 figs
1910	5(1)	VAN DER WEELDE, H. W. : <i>Megaloptera</i> (monographic revision). 93 pp., 70 figs, 4 pls
1921	5(2)	ESBEN-PETERSEN, P.: <i>Mecoptera</i> (monographic revision). 172 pp., 188 figs, 2 pls
1907	6(1)	ULMER, G.: <i>Trichopteren</i> . 102 pp., 132 figs, 4 pls
1907	6(2)	ULMER, G.: <i>Trichopteren</i> (Monographie der Macronematinae). 121 pp., 119 figs, 6 col. pls
	7	<i>Macronematines</i>
1908	8	VAN DER WEELDE, H. W.: <i>Ascalaphiden</i> (monographisch bearbeitet). 326 pp., 254 figs, 2 pls
1909	9	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 1-120, figs 1-89, col. pl. 1
1909	10	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 121-244, figs 90-152, col. pl. 2
1910	11	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 254-384, figs 153-232, col. pl. 3
1911	12	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 385-528, figs 233-317, col. pl. 4
1911	13	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 529-700, figs 318-407, col. pl. 5
1912	14	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 701-836, figs 408-491, col. pl. 6
1913	15	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 837-964, figs 492-555, col. pl. 7
1913	16(1)	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 965-1042, figs 556-604, col. pl. 8
1916	16(2)	RIS, F.: <i>Libellulinen</i> (monographisch bearbeitet). pp. 1043-1278, figs 605-692.
1906	17	MARTIN, R.: <i>Cordulines</i> . 4 pp., 99 figs, 3 pls
1908	18	MARTIN, R.: <i>Aeschnines</i> . pp. 1-84, figs, 1-77, col. pls 1-2.
1909	19	MARTIN, R.: <i>Aeschnines</i> . pp. 85-156, figs 78-156, col. pls 3-4.
1909	20	MARTIN, R.: <i>Aeschnines</i> . pp. 157-223, figs 157-219, col. pl. 5-6.
1953	21	FRASER, F.C.: <i>Gomphidae</i> . 36 pp., 11 figs
	22	<i>Gomphines</i> (not published)
	23	<i>Gomphines</i> (not published)
	24	<i>Caloptérygines</i> (written by R. MARTIN in 1912, but never published)
	25	<i>Caloptérygines</i> (idem.)
	26	<i>Agrionines</i> (not published)
	27	<i>Agrionines</i> (not published)
	28	<i>Agrionines</i> (not published)
	29	<i>Agrionines</i> (not published)
	30	<i>Lepidoptères</i> (not published)
1910	31	FRAIPONT, J.: <i>Oiseaux</i> . 130 pp., 2 col. pls
1907	32(1)	FRAIPONT, J.: <i>Mammifères</i> . 38 pp.
1907	32(2)	FRAIPONT, J.: <i>Reptiles et amphibiens</i> . 10 pp.
1907	32(3)	FRAIPONT, J.: <i>Poissons</i> . 27 pp.
	33	<i>Vertébres de Belgique</i> (not published)

best odonatological friends, Robert McLachlan. The latter responded to Walthère, Selys' son (20 May, 1901): "To my utter surprise I found he had left me a considerable sum of money in return for which I was to work out the collections. This was utterly and totally impossible and I at once renounced all right to the money. From what I know of the collections I don't think any of the parties quite realize what they have undertaken to do ..." (CALVERT, 1927: 199).

Walthère de Selys wrote on 22 March 1901 to Calvert, offering an alternative solution: "In view of the persistent refusal of Mr McLachlan, a refusal founded, unhappily, on the state of his health (invincible insomnia), Dr Ris has been willing to accept the scientific direction of the work to be done for the publication of a methodical (and iconographic?) catalogue, with diagnoses of the new forms, of the collection of Odonata left by my father. My father, by his will, has imposed upon me, in spite of my incompetence, the heavy burden of the administrative direction (if I can so call it). Independently of my nephew Maurice, still an absolute novice in this branch and whose role in consequence can at first be only secondary, we believe we can count for the present in the number of collaborators of the projected work, René Martin and [Friedrich] Förster. If the Atlantic had not separated you from us we would not have been wanting in calling upon your collaboration also" (CALVERT, 1927). Guillaume Severin became after 1900 the "one who assumed the task of obtaining collaborators for the '*Catalogue des collections zoologiques de Edmond de Selys Longchamps*' and overseeing the publication of this valuable summary" (CALVERT, 1939).

The most important curator for Selys' Odonata became the Swiss Dr Friedrich Ris (1867-1931) director of a psychiatric clinic in Rheinau, Switzerland. He did the coordination and wrote on the libellulinen (Tab. V), about which Selys had not published a synopsis or monograph as they were too complicated. In addi-

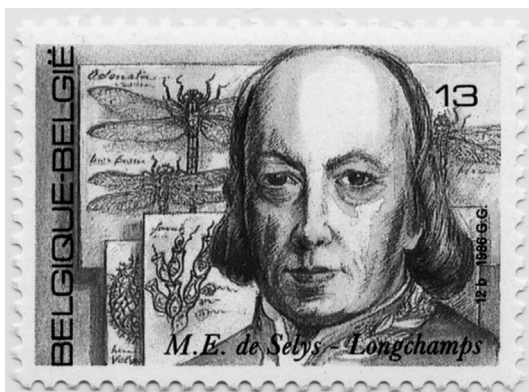


Fig. 9. Belgian postage stamp issued in Belgium on 29 September 1986; and the Selys' signature.

tion René Martin (1846-1925) wrote on the cordulines (published in 1908). In December 1904 Martin wrote to Calvert that the revision of the aeschnines was approaching completion, which was published in 1908-1909. In 1912 Martin submitted a manuscript on calopterygines series, but it was never published even though financial accounts indicated that it was actually written and presented to be printed (financial report of the Catalogue committee in 1912, vols xxiv-xxv; see SEVERIN, 1912). Furthermore, Matti Hämäläinen (pers. comm.) saw in 2012 labels of three unpublished manuscript names among Martin’s Indochinese calopterygoid species in his former collection in Muséum national d’Histoire naturelle in Paris, which are still undescribed.

TILLYARD (1917) wrote about the Catalogue: “The Gomphinae, Lestidae and Agrionidae were unfortunately entrusted to three German authors. Not one of these has so far made any serious attempt to deal with his obligations, accepted now over thirteen years ago.” He was not completely well informed. Two groups were indeed entrusted to Germans: the gomphids to Karl Grünberg and the agrionids to Friedrich Förster. Indeed none of these planned volumes (xxi-xxiii for the gomphines and xxvi-xxix for the agrionids; see SEVERIN, 1912) have been published. Not the Lestidae but the calopterygides were planned to be written by René Martin (see above).

After the First World War (1914-1918) Severin did ask for more people to sign in on the series (SEVERIN, 1919). Finally the last official part of the Catalogue was published in 1923⁵⁴. Most published volumes are still available through RBINS (TRIEMPONT, 2005).

CONCLUSIONS

Besides his odonatological work, Selys was a politician, a zoologist and a naturalist with a very broad range of interests. What probably many odonatologists are not aware of is his interest and taxonomical work on small mammals, birds and many insect groups other than dragonflies. Yet, Selys was the first true Odonata taxonomist and his work and his large collection have been cornerstones for later developments in odonatology. For this he used the wing venation as a fun-

Table VI
Data on new species descriptions by the five most proliphic Odonata taxonomists

Author	Zygoptera	Anisoptera	Total	Synonyms	% Synonyms	Papers
Selys	399	308	707	176	20%	130
M.A. Lieftinck	330	191	521	27	5%	132
F.C. Fraser	178	188	366	141	28%	290
H. Hagen	103	143	266	95	26%	67
F. Ris	138	128	246	41	14%	72

dament of taxonomy. CORBET (1991: 28) stated that the ‘classifying strand [of Odonata study]’ started in 1820 by the Belgian Vander Linden; but in this [subject] Selys was ‘the undisputed odonatological giant’. No person has published more valid new species (just over 700) than Selys did (Tab. VI).

Importantly, his influence in Odonate studies reached beyond his death. The millions invested in the huge project ‘*Collections zoologiques Selys Longchamps*’ made it possible for a next generation within the Odonate community to travel to diverse collections and publish in the spirit of Selys. ‘There are few animal taxa, and fewer groups of insects, whose behaviour and ecology are well enough documented to permit the integrated, taxon-focused treatment attempted in this book’ (CORBET, 1999: 562). All these facts put the taxonomy of the group on a solid footing and provided the base to make Odonata one the best studied animal groups known.

ACKNOWLEDGEMENTS

Many thanks to MATTI HÄMÄLÄINEN and WOLFGANG SCHNEIDER with whom we had a regular correspondence. Librarian ROBERT YOUNG searched the MCZ Archives Cambridge (USA) for the drawings made by Hermann Hagen for the never published Monograph on the agri-onines. CÉCILE OGER from the library of the University of Liège helped the first author on several occasions. So did BASTIAAN KIAUTA, in whose library the first author could study the Selys material on 30 December 2012. TIENEKE DE GROOT and JOHAN VAN ‘T BOSCH commented on a draft version and PHILL WATTS gave many helpful comments on the manuscript.

FOOTNOTES

¹ 407 pages of text and 340 pages of indexes. It can be ordered from the Académie royale de Belgique at uc.moreau@cfwb.be.

² This is often cited as *Nomen nescio* (N.N.) (1901), but it is hereby regarded as most likely to have been compiled by his sons. It is a compilation of newspaper articles and speeches at his funeral; it is present e.g. in the library of Naturalis, Leiden.

³ To be complete: the articles which were not consulted: CAMERANO (1901) and MOURLON (1900).

⁴ To be found on [<http://kranten.kb.nl/>].

⁵ Place Cockerill 1, Liège, visited on 25-10-2012. It had been inherited by his son Walthère de Selys Longchamps, his grandson Edgard de Selys Longchamps and great-grandson Walthère de Selys Longchamps (1915-1987). This archive also contains the papers by the second son of Selys, Walthère de Selys Longchamps, and part of the correspondence on the Catalogue of the collections of Selys, which appeared between 1906 and 1923. About the situation found in Halloy: “The librarian in Liège told me that the papers were piled high in a room of the chateau, in such a deplorable state that they had to literally shovel many of them out” (WATERMAN, 2005).

⁶ Rue Du Chéra 79, Liège. This archive has not been seen by us. It had been inherited through his son Walthère de Selys Longchamps, by his grandson Maurice de Selys Longchamps and his great-grandson Michel de Selys Longchamps. This archive was stored at Longchamps and at Faulx-les-Tombes (the chateau belonging to the family of Michel de Selys Longchamps’ wife, baroness J. de Moffarts d’Houchenée).

⁷ Rue de Vautier 29, Brussels. Benno Hinnekint has looked long ago through this correspondence.

- ⁸ A frequent name among Roman legionnaires.
- ⁹ During his lifetime Laurent de Selys Longchamps served in Liège under four political regimes: the Prince-Bishops, the French domination, the Dutch government and the government of an independent Belgium (DUCHESNE, 1920).
- ¹⁰ Widow of Joseph Smith (1756-1806).
- ¹¹ See WIKIPEDIA (2013), though some say in the left lower corner of the painting of Denise Gandolphe appears “L’an.7”, meaning the year 7 (counting in years of the French Revolution, 1792 is the year ‘1’, so 7 would mean it was painted in 1799).
- ¹² The style originated in and takes its name from the rule of Napoleon I in the First French Empire, were it was intended to idealize Napoleon’s leadership and the French state.
- ¹³ In the elections of 4 June 1831, Laurent was one of the fourteen in favour of the regent, baron Erasme Surlet Chokier (who was a neighbour, living in a chateau at 10 km from Waremmes) as head of state, but it was Leopold I von Saksen Coburg who was chosen as King of the new kingdom of Belgium (DUCHESNE, 1914-1920).
- ¹⁴ This house stood in a green neighbourhood though in the centre of Paris, close to the later erected Arc de Triomphe. In 1880, his birth house was replaced by a large building which is still there (GOOGLE EARTH, 2012).
- ¹⁵ Likewise his parents thought it better for his education to have tutors in Paris rather than in Longchamps.
- ¹⁶ COEN (1982: 19) claims that the family moved in 1826 from Paris to Longchamps (after the death of his grandmother on mothers side). This must be considered incorrect.
- ¹⁷ Hoffmann as a tutor is mentioned for the first time at Longchamps from 4 September to 30 October 1827. His last lessons were given on 10 October 1829, after which Hoffmann left to Paris. He returned a year later for a few weeks to check the receivables of his former pupil.
- ¹⁸ According to CAULIER-MATHY & HAESSENNE-PEREMANS (2008: xxiv) Laurent had two other chateaus, in Flanders at Hasselbroeck (in the village of Jeuk ‘Goyer’ on behalf of his mother the baroness of Bormans de Hasselbroeck) (DUCHESNE, 1914-1920) and in Ordingen (‘Ordange’), respectively 4 and 13 km North of Longchamps.
- ¹⁹ Since September 2011 a five star hotel and a restaurant ‘Le Selys’ opened in this chateau. Though at some distance from the Boulevard de la Sauvenière, it is connected with it.
- ²⁰ It was near the chateau at Colonster that Selys collected a female *Cordulegaster* that he could not identify, but which he would later describe as *C. bidentata* Selys, 1843 (SELYS, 1843: 156) after he obtained a male from elsewhere.
- ²¹ His excursions are described in numerous articles in 1863, 1869, 1870, 1871, 1874, 1877 etc. (COEN, 1982: 104-105).
- ²² Around 1840 in Belgium and The Netherlands mean life expectancy was around 40 years, dropping to about 18 years in the poorest neighbourhoods of Brussels (at around 1830; SMELLINCKX, 2001)
- ²³ Selys planned to visit Belfast in autumn 1844 (THOMPSON, 1849: 283), but this trip did not materialize.
- ²⁴ Likely the bicycle was given him as a present on his 80th birthday on 25 May 1893. First he rode only one minute on the bicycle, while it was a bit heavy (*Diary*: 26 May 1893), a few days later he visited someone in the neighbourhood by bike (*Diary*: 30 May 1893).
- ²⁵ Most often La Marraigne (4 times).
- ²⁶ Most often Faust (19 times), but he was not always enthusiastic about the operas visited: both the Walkure (a 5 hour opera by Wagner; *Diary*: 1 April 1887) and Samson and Delaila by Saint-Saëns (*Diary*: 26 January 1893) he found boring.
- ²⁷ Who is likely the one who recorded the list of four Odonata species at Vogelsanck on 5-25 May 1841 (*Diary*: p. 227-228), while Selys himself was in The Netherlands.
- ²⁸ He arrived on 11th September. Next day they studied myrmelons and ‘Neuroptera non-odonates’. The 13th September they kept on studying the Neuroptera of Belgium, took a glance (‘coup d’oeil’)

at the gomphids and started with the first decade of libellules. The 14th they studied the exotic agrions and took a glance on the second decade of libellules. The 15th they finished the real agrions and took a glance on *Telebasis* and *Cordulia*. The 16th they studied the libellules of Europe, the third decade of exotic dragonflies and a glance on the Orthoptera.

²⁹ Now: Common Vole, *Microtus arvalis* Pallas, 1778.

³⁰ He arrived at Cambridge on 12 October 1867 (CALVERT, 1893: 315).

³¹ Nevertheless he named three animal species after him: two odonates *Orthetrum ramburii* (Selys, 1848) (now regarded a subspecies or synonym of *Orthetrum coerulescens*), *Ischnura ramburii* (Selys in Sagra, 1857) and a cave barklice (*Psyllipsocus ramburii* Selys, 1872).

³² For the reason why he started studying insects see CALVERT (1939).

³³ Förster first contacted Selys before 15 February 1896. On this date, Selys send a reply to him, which gives an idea of how Selys planned and prepared the publication of his research (SCHNEIDER & SIMONS, 2012). Selys and Förster were since then regularly in touch with each other. Selys did much work for him, often checking his identifications and papers (e.g. *Diary* 5 October 1896 "Worked for Förster and wrote him a letter"). After the death of Selys, the tutor role was taken over by Edward Williamson with whom he exchanged many letters and specimens.

³⁴ Selys must have been given there a *Gomphus*, which he described in 1840 as *Gomphus simillimus*, with type locality Aix-en-Provence. This species does not fly in March and cannot have been captured by Selys himself.

³⁵ The last letter had only put his name on the cover of a publication in the Japanese fauna collection by Philipp Von Siebold, while many people had cooperated in the project (BROUWER, 1953) and Schlegel did most of the descriptions. The Von Siebold collection would be the main source for the diverse publications by Selys of the Odonata of Japan, which numbered 67 species in his 1862 publication (SELYS, 1862).

³⁶ When the Dutch Entomological Society was invited by the Belgian Entomological Society to congratulate their honorary member Selys on his 80th birthday in 1893, Albarda offered he would deliver a letter of congratulation to him (ANONYMOUS, 1893).

³⁷ This must be the genus *Thore* (later *Polythore*).

³⁸ Bought for 25 pound sterling* (which would probably be €1,25 a piece in 2013). On 11 November 1866 he completed the pinning of the dragonflies of Bates and 20 February 1867 he completed inserting the dragonflies of Bates in his collection.

³⁹ This new species descriptions were of two new small mammals and a new mammal genus (SELYS, 1836), of which the European pine vole *Microtus subterraneus* Selys, 1836 described from Belgium and occurring throughout central Europe, is still a valid species.

⁴⁰ On the first collection he wrote in 1841 he put on pin in his collection over 300 other Neuroptera (Névroptères) from the collection Latreille (*Diary*: 31 January 1841). The last three collections, were those from which RAMBUR (1842) described all odonate species. The [Neuroptera, including Odonata] collections of Rambur arrived at Longchamps in 1845, after half a year of delay (*Diary*: 23 March 1845). Rambur had described 129 odonate species, 25 subspecies and 123 synonyms.

⁴¹ Wilhelm Gottlieb Schneider (1814-1889; see Bridges, 1994: x.127).

⁴² His other holdings contained an extensive collection of European birds and mammals (CALVERT, 1901). From all world families he had representatives and he was most proud on his Great Auk (*Alca impennis*, now: *Pinguinus impennis*) and Hoopoe Starling (*Fregilupus varius*). His egg-collection, however, when visited by August Blasius in 1884, had not been looked at for 40 years (BLASIUS, 1901: 367). Since July 1877 he had engaged Georges Minnen (1836-1912) as curator ("conservator") for his collection.

⁴³ The first three publications on Lepidoptera from Belgium were all by Selys, published in 1837, 1844 and 1857 (DE PRINS & STEEMAN, 2010). There he described some new species, but these turned out to be synonyms. One valid subspecies remains: *Melitaea athalia navarina* Selys, 1845. The collection mentioned earlier is composed entirely of Rhopalocera, and contains almost all Palaearctic species. He wrote five papers on Orthoptera and published at least one valid non-

- European species, *Acanthogryllus brunneri* (Selys, 1868), and two European forms: *Tetrix subulata attenuata* Selys, 1862 and *Chortippus parallelus explicata* Selys, 1862. All small insect groups in those days (except fleas) were placed in the 'Neuroptera'. Most people describing dragonflies studied those insects as well. So friends like Hagen and McLachlan, as well as Rambur, worked on Psocoptera. Selys named at least one cave barklice (*Psyllipsocus ramburii* Selys, 1872). Lastly, a valid Ascalaphidae described by Selys, is *Cordulecerus maclechani* Selys, 1871.
- ⁴⁴ Among small mammals, he described several mice in the period 1836-1847. As valid species are considered *Microtus subterraneus* Selys, 1836, *M. savii* (Selys, 1838), *M. duodecimcostatus* (Selys, 1839). As valid subspecies *Microtus oeconomus arenicola* (Selys, 1841), the Dutch tundra vole. Selys also published about 15 invalid mammal species (WILSON & REEDER, 2005). He published three valid bird species and one subspecies: the Red Rail *Aphanapteryx bonasia* (Selys, 1848), the Réunion Swampphen *Porphyrio coerulescens* (Selys, 1848) and the extinct Réunion Ibis *Threskiornis solitaries* (Selys, 1848) and a subspecies of the Willow Tit, *Parus montanus borealis* Selys, 1843. Selys was the first to start making notes on the migration behavior of birds in the period 1841 to 1846 (SELYS & QUETELET, 1848). In this article he also included observations of many other Western European countries and much later this type of observations was followed by others e.g. in Russia (1855) and Germany (1874) (VORDERMAN, 1886). During his entire life Selys was involved with birds for his scientific career, his appointment as President of Honour of the International Congress on birds in Paris a few months before his death (*Diary*: 26 June 1900) must have been a great personal triumph.
- ⁴⁵ Hagen, who had drawn the illustrations for these two monographs, also made drawings for the projected 'Monographie des agrionines', which was never published. These drawings were taken to Cambridge (USA) by Hagen (CALVERT, 1901) and are still there at the MCZ Archives (librarian Robert Young, pers. comm. 2 April 2013).
- ⁴⁶ Fauna of: New Guinea, Philippines, Japan, the Palaearctic region, Asia Minor, Sumatra, Kirgizia, Burma and others (BLASIUS: 1901).
- ⁴⁷ Seen on 30 October 2012 in Brussels.
- ⁴⁸ Of the first described species over later described species.
- ⁴⁹ Although he might have preferred to use the French translation by GUÉRIN-MÉNEVILLE (1843).
- ⁵⁰ The text and discussion of this code was published by BLANCHARD (1889).
- ⁵¹ A day later he received the 'Grand cordon de l'Ordre de Léopold' and on 27 May 1900 he was succeeded in the Senate by baron Ancion (COEN, 1982: 129).
- ⁵² In his diary on 25 October he wrote notes on drawing of *Xanthagrion*'s of Chatham, which he returned to Maurice de Luchin.
- ⁵³ Before so often visited by him and in 2013 having the most futuristic railway station of northwestern Europe.
- ⁵⁴ FRASER (1953), on Australian gomphids, has been published in the series, but cannot be regarded as a real part of it.

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