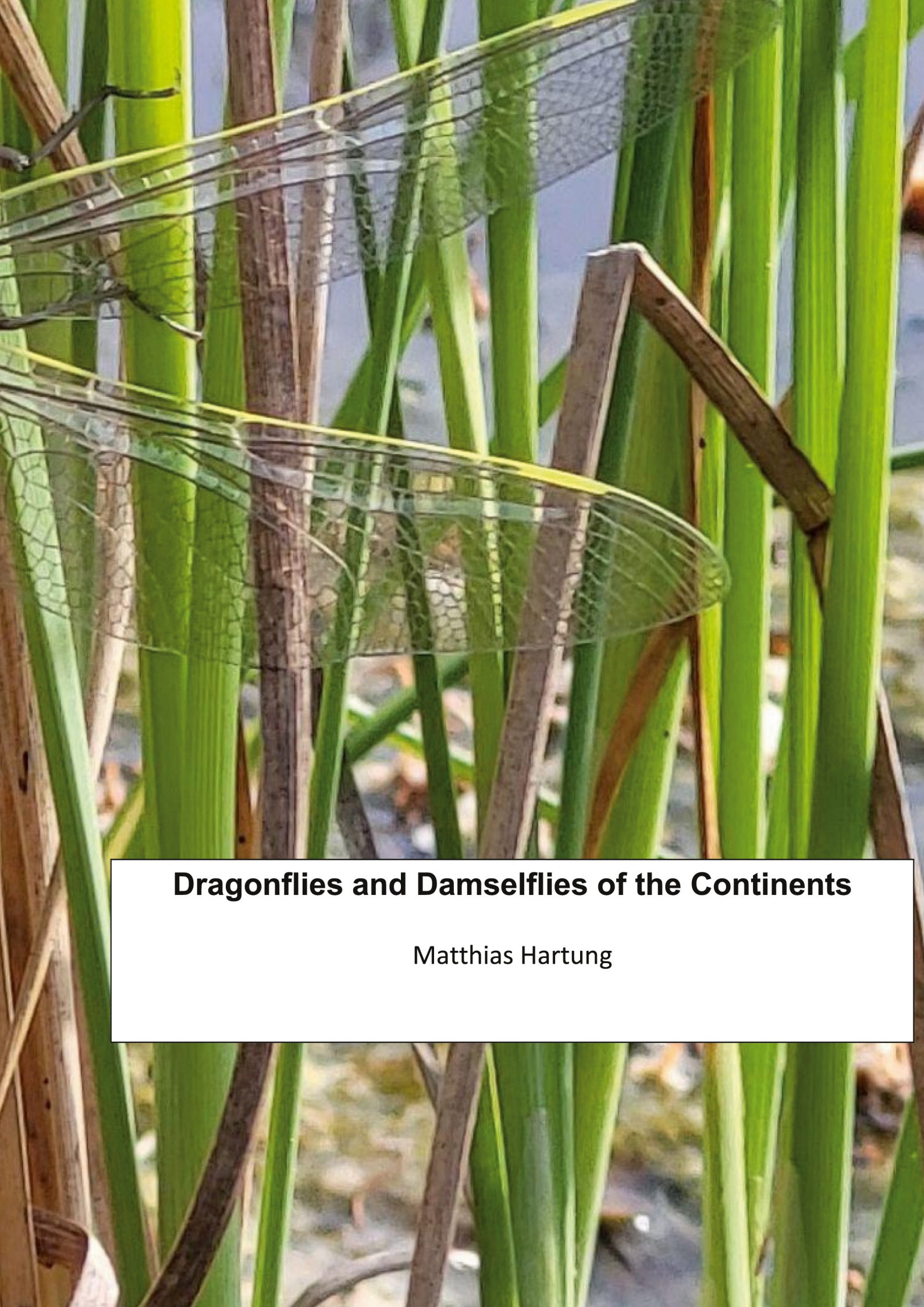




Dragonflies and Damselflies of the Continents

Matthias Hartung

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Member of the Museum of Natural Science in Leipzig

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Introduction

From 1979 on I have got Odonata from many friends and sellers of insects. 1993 I have visited Japan. 1996 and 2001 I have visited Venezuela. 1999 I was in North U.S.A., in New York State and in Minnesota. 2003 I have visited the Philippines. 2015 I was in Argentina. In 2023 I have observed Odonata in Cyprus. Many deliveries with Odonata I got from museums and friends over the time. The Odonata I have identified with the help of many literatures during the long time. The new species for my collection I have integrated in this collection. Some new species or new parts of a species I could describe during this long time in different journals.

Methods

The dried or emerged Odonata I have mostly prepared. The larva I have held in small boxes. During travel no feed have to be in the transport box. After emerging, Odonata were held alive in an Aquafiorarium for a time, feeded with mosquito larva till emerging. After this the preparation followed or they would be set free. Each Odonata, larva, exuvia or emerged one got an individual number. Each individuum was noted in a book and given to a database. For identification the genitalia of male or female Odonata were prepared, photographed with the help of a binocular microscope and identified after several references. One or more references from a database I used and noted the figure numbers, after which I could identify these species.

Number of specimens: No./ year (e.g. 100/ 2000), abbreviations: m = male, f = female, L = larva, E = exuvia, L. = larva, hw. = hind wing, fw. = fore wing, abd. = abdomen, l. (x mm) = length, f. = figure, pl. = plate, tb. = table, An. = ante Nodal, Pn. = post nodal, segm./ S. 1-10 = segment 1 to 10, T (Anisoptera), q (Zygoptera), Ti = super triangle, Lp./Lph. = labial palpus, Pr. = prementum, l. a. = lamina anterior, Ah. = antehumeral, stripe, gen. 2 = genital segment 2, app = appendix, vv. = vulva of female, coll. = collection, det = determined by, Pt = Pterostigma, Pn. = Post-Nodal Veins, hw-index = wing breadth/wing length, LF = collection at artificial light, r. = right, l. = left.

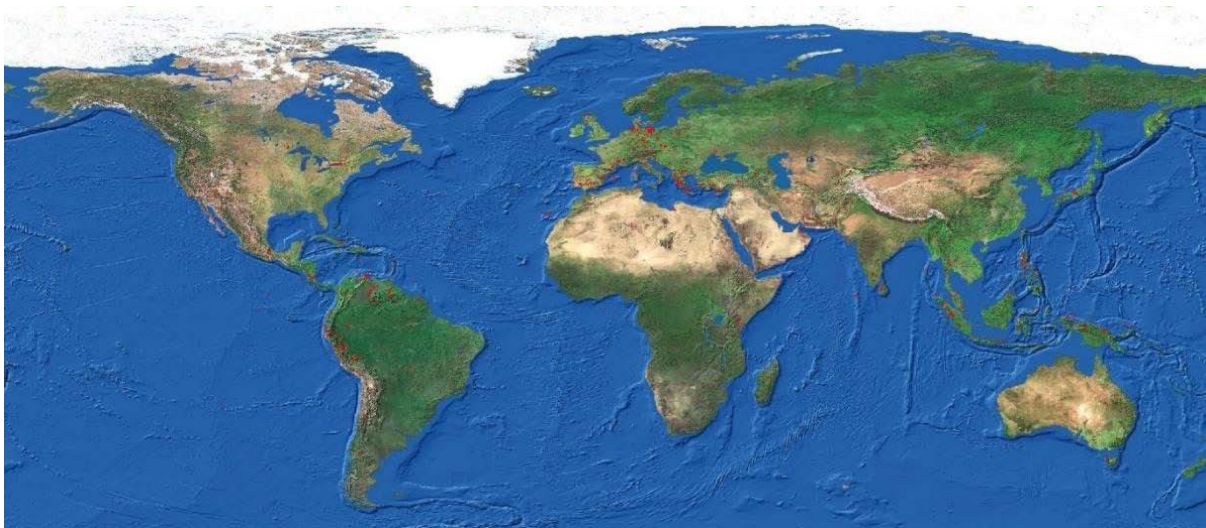
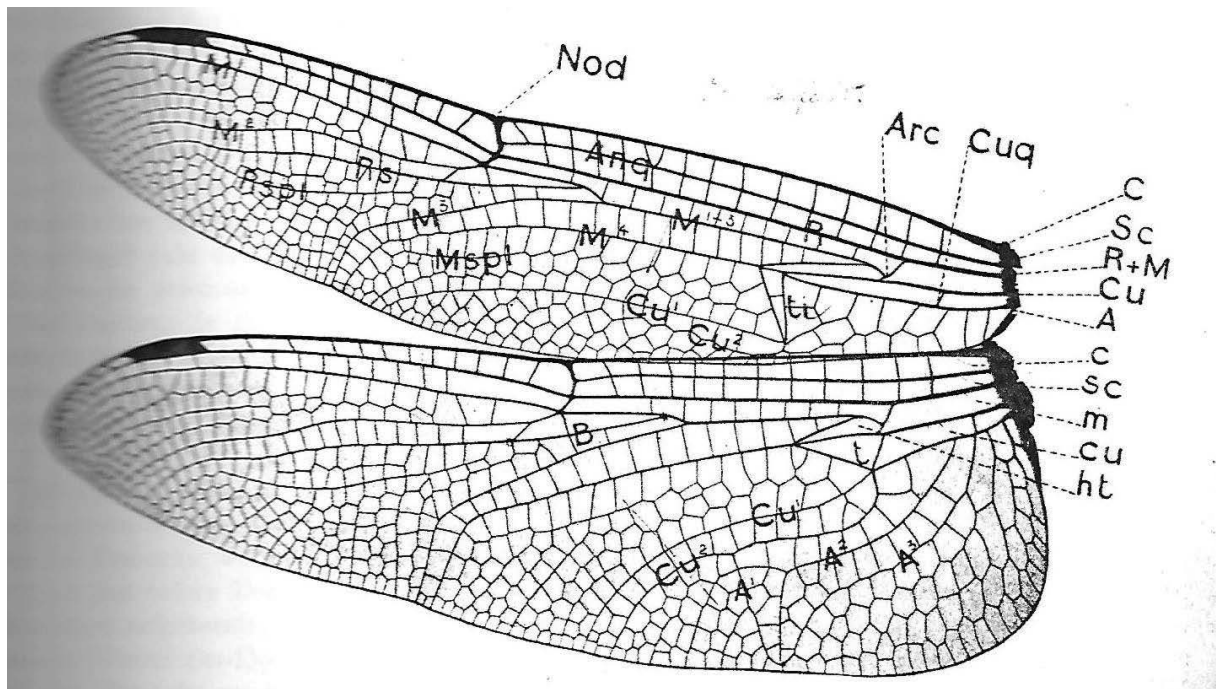


Fig. 1: Locations of Odonata described

In fig. 1 the locations of findings of Odonata are presented. In the following contributions on Odonata in parts of our Earth a short introduction is followed by the detailed description on the Odonata, followed by a table of species and the references at the end.

The wing structures in an example of an Anisoptera wing (Ris, 1909)



C - Costa- Nervure costale.

Sc - Subcosta - Nervure sous-costale.

R + M, resp. R - bis zum Arculus (Arc.) der gemeinsame Stamm von Radius und Mediana, vom Arculus N Radius - Nervure mediane.

M¹⁻², resp. M¹ - Stamm, resp. I. Ast der Medina - Secteur principal (de la nervure mediane).

M² - 2. Ast der Mediana - Secteur nodal.

Rs - Sector des Radius - Sector sous-nodal.

Rspl - radialer Supplementärsektor.

M³ - 3. Ast der Mediana - Secteur median.

M² - 4. Ast der Mediana - Secteur bref.

Mspl - medianer Supplementärsektor.

Cu - Cubitus - Nervure sous-mediane.

Cu¹ - 1. Ast des Cubitus - Secteur superieur du triangle.

Cu² - 2. Ast des Cubitus - Secteur inferieur du triangle.

A - Analader - Nervure post-costale.

A¹, A², A³ - 1.3. Ast der Analader im Hinterflügel. Zwischen CU², A¹ und A³ die Schleife (anal loop Needham - boucle anale R. Martin), durch ihre Mitte A². An der Bifurcation von Cu² und A¹ die „Aus-senecke der Schleife“.

Nod. - Nodus.

Arc. - Arculus. Die costale Hälfte des Arculus ist morphologisch der vereinigte Stamm M¹⁻⁴, die anale Hälfte eine medio-cubiale Querader. M¹⁻³ du M⁴ sind die „Sektoren des Arculus“.

Anq (1) - die Antenodalquerader - Nervules antecubitales, später antenodales.

Cuq - die cubitoanalen Queradern - Nervulus sous-mediane.

B - die Brücke. Der Sector des Radius entspringt am Nodus, überkreuzt M¹ und M², wo er als eine niemals fehlende kleine Schrägader in seinem Endverlauf einbiegt. Das Stück von dieser Schrägader proximalwärts bis zum Stamm M¹⁺², eben die Brücke, ist eine sekundäre Bildung, zu der als nie fehlender Bestandteil auch die Querader unter dem Nodus (deren Lage etwas wechselt) gehört, die normale Brückenader Bq. In der Figur 3 ist zwischen der Schrägader und der Mündung der Brücke

in M^{1+2} nur diese eine Querader vorhanden; wo ihrer mehrere sind (ein wichtiges Merkmal von archaischem Charakter) sprechen wir von „supplementären Brückenqueradern“ Bqs.

C - der Costalraum - espace costal.

Sc - der Subcostalraum - espace sous-costal.

M - der Medianraum - espace basilaire, später median.

Cu - der Cubitoanalraum - espace median, später sous-median.

Ht (1) - der Hypertrigonalraum (Supertriangulrraum) - espace hypertigonal.

T - das Dreieck - trinagle discoidal.

Contribution to the Odonata from Europe incl. Russia and excl. Germany

Dr. Matthias Hartung

Summary and introduction

From the 1970 years I got several lots of Odonata from Europe incl. Russia and excl. Germany, and from other sellers of insects.

Calopterygidae

Calopteryx xanthostoma (Charpentier, 1825), France, Medoc, St. Vielle, Girons, Etang de Leon, N 45.0670 - W -0.1040, 33/1983: w, 24.06.1983, M. Hartung leg. - France, Perpignan, Argeles s. Mer, R. Tech, N 47.3150 - E 0.7520, 114/1983: m, 5.07.1983, M. Hartung leg. - France, Medoc, Maubuisson, Le Grand Lambrusse, Marais de Montaut, N 45.0670 - W -1.1040, 28/1983: m, 22.06.1983, M. Hartung leg., subad. - France, Perpignan, Argeles s. Mer, R. Tech, N 42.5860 - E 2.9780, 29/1983: m, 5.07.1983, M. Hartung leg., subad., France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 30/1983: m, 28.06.1983, M. Hartung leg., ad., France, Perpignan, Argeles, s. Mer, R. Tech, N 47.3150 - E 0.7520, 31/1983: w, 5.07.1983, M. Hartung leg., segment 8-10 partly brownish. - France, Medoc, Maubuisson, Le Grand Lambrusse, Marais de Montaut, N 45.0670 - W -1.1040, 2/1983: m, 22.06.1983, M. Hartung leg., Abd. 8-10 dark, dorsal bronze. - France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 11/1983: 24.06.1983, M. Hartung leg., segment 8-10 dark, from 5 dorsal bronze.

Calopteryx virgo (L., 1758), France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 34/1983: m, 26.06.1983, M. Hartung leg., together with *C. xanthostoma*. 35/1983: m, 28.06.1983, M. Hartung leg., together with *C. xanthostoma*. - France, Archachon, Parentis en Born, Rau de Forges, N 44.660 - W -1.1660, 32/1980: m, 20.08.1980, Torsten Moehlmann leg., destroyed, only wings and parts of body, cf. 155/1980. 155/1980: m, 20.08.1980, Torsten Möhlmann leg., cf. 32/1980. - Austria, Kärnten, N 46.720 - E 14.180, 150/2010: m, Juni 1971, leg. Heinz Karbaum. - Austria, Reifnitz, Wörthersee, N 46.6330 - E 14.150, 206/1990: w, 25.-8.09.1988, Michael Woelky leg., homoeochrome. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Ibbesjön, little stream, N 58.0830 - E 14.0830, 10/1973: m, 25.07.1973, M. Hartung leg., L. 48 mm, Sp. 66 mm. - Sweden, Skaraborgsland, Tidaholm, Höckensås, L. Havsjön, little stream, N 58.10 - E 14.0830, 12/1973: Lm, 2.08.1973, M. Hartung leg. 11/1973: w, 28.07.1973, M. Hartung leg., L. 46 mm, Sp. 67 mm.

Calopteryx haemorrhoidalis (Vand.Lind, 1825), France, Perpignan, Bages stream, N 47.3520 - E 0.6270, 36/1983: m, 6.07.1983, M. Hartung leg. 37/1983: m, 6.07.1983, M. Hartung leg. - France, Corsica, Ajaccio, Porticcio, R. Prunelli, N 41.8550 - E 8.8660, 36/1980: m, 1.06.1980, Kahlenberg leg., subad., W. costal parts yellowish, body some blue metallic. - France, Corsica, Ajaccio, Porticcio, R. Prunelli, N 41.8550 - E 8.8660, 37/1980: m, 1.06.1980, Kahlenberg leg., subad. - Portugal, Odemira, Almogrove, little stream near coast, N 37.6390 - W -8.7910, 33/1980: m, 20.09.1980, M. Hartung leg., allotypus, subad., stream with dense vegetation. 118/1980: m, 20.09.1980, M. Hartung leg., allotypus, subad., Hartung, 1996, fw. apic. light mark from 5.9 mm to border, small form, stream with dense vegetation. 119/1980: m, 20.09.1980, M. Hartung leg., allotypus, adulte, Hartung, 1996, fw. r. no distinct light mark, but hyaline 2mm from apic.-hind border, small form, stream with dense vegetation. 120/1980: m, 20.09.1980, M. Hartung leg., allotypus, subad., Hartung, 1996, hw.r. dark mark. 6.2 mm from apex, small form, stream with dense vegetation. 34/1980: w, 20.09.1980, M. Hartung leg., holotypus, adulte, fw. r. light mark 5.7 mm from apex, Hartung, 1996, small form, stream with dense vegetation. f. *almogravensis* M. Hartung, 1996 (Fig. 2), sim. '*papyreti* Zeller' acc. to Selys-Hagen, 1854, M. Hartung,

1996, small form, Pt. bicoloured, 35/1980: w, 20.09.1980, M. Hartung leg., allotypus, adulte, hw. r. dark mark 6.3 mm from apex, hom. Brown, Hartung, 1996. 121/1980: w, 20.09. 1980, M. Hartung leg., allotypus, adulte, Hartung, 1996, hw. r. dark marking 6.5 mm from apex, small form, stream with dense.

Calopteryx splendens (Harr., 1780), France, Montelimar, R. Jabron, N 44.5580 - E 4.2610, 57/1980: m, 29.08.1980, M. Hartung leg. - Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 15/1974: m, 13.07.1974, M. Hartung leg., subad., L. 43 mm, Sp. 56.5 mm. 16/1974: m, 13.07.1974, M. Hartung leg., L. 42 mm, Sp. 61.5 mm. - Italia, Gardasee Cavedole, N 45.393544 - E 10.636509, 173/2023: w, 3.05.1997, leg. E. Jansen det., Schmidt, 1929. - Tschechia, Böhmen, Hradec Králové (Königgrätz), R. Adler / Elbe, N 50.20 - E 15.8170, 107/1996: m 25.06.1995, Josef Louda, CSc. coll., small hyaline wing apex. 108/1996: m, 25.06.1995, Josef Louda, CSc. coll., small hyaline wing apex. 109/1996: m, 25.06.1995, Josef Louda, CSc. coll., small hyaline wing apex. 113/1996: m, 25.06.1995, Josef Louda, CSc. coll., small hyaline wing apex. 110/1996: w, 25.06.1995, Josef Louda, CSc. coll., wing membrane green. 112/1996: w, 20.06.1995, Josef Louda, CSc. coll., wing membrane green. 114/1996: w, 25.06.1995, Josef Louda, CSc. coll., wing membrane green. 115/1996: w, 20.06.1995, Josef Louda, CSc. coll., wing membrane green. 116/1996: w, 20.06.1995, Josef Louda, CSc. coll., wing membrane green. - Tschechia, Böhmen, Hradec Králové (Königgrätz), R. Bélec, N 50.20 - E 15.8170, 933/2000: m, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 934/2000: m, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 935/2000: m, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 936/2000: m, 4.06.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 937/2000: m, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 938/2000: m, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 939/2000: m, 4.06.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 940/2000: m, 4.06.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 941/2000: m, 4.06.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 942/2000: m, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 943/2000: m, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 944/2000: w, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8c, Pt. 945/2000: w, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8c, Pt. 946/2000: w, 4.06.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8c, Pt. 947/2000: w, 4.06.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8c, Pt. 948/2000: w, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 8c, Pt. 949/2000: w, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8c, Pt. - Tschechia, Böhmen, Paradubice, Labe Channel, N 50.030 - E 15.770, 930/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 931/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing. 932/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 7, wing.

Calopteryx virgo (L., 1758), Tschechia, Böhmen, Hradec Králové (Königgrätz), R. Adler/Elbe, N 50.20 - E 15.8170, 111/1996: m, 20.06.1995, Josef Louda, CSc. coll., small hyaline wing apex. 117/1996: w, 25.06.1995, Josef Louda, CSc. coll., wing membrane green brown. - Tschechia, Böhmen, Hradec Králové (Königgrätz), R. Bélec, N 50.20 - E 15.8170, 880/2000: m, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 881/2000: m, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 882/2000: m, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 883/2000: m, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 884/2000: m, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 885/2000: m, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 886/2000: m, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 887/2000: m, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 888/2000: m, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 889/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 890/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. - Tschechia, Böhmen, Hradec Králové (Königgrätz), R. Bélec, N 50.20 - E 15.8170, 891/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 892/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 893/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 894/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 895/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 896/2000: m, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 897/2000: m, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 898/2000: m, 10.07.1999, J. Louda, CSc. coll.,

Schmidt, 1929, f. 6a, app. 899/2000: m, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app., to Nakamura by W. Piper. 900/2000: m, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 901/2000: m, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 902/2000: m 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 903/2000: m, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 929/2000: m, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 1018/2000: m, 10.07.1999, G3, J. Louda, CSc. coll., Schmidt, 1929, f. 6a, app. 904/2000: w, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 905/2000: w, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 906/2000: w, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 907/2000: w, 13.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 908/2000: w, no D., J. Louda, CSc. coll., fw. without Pt, hw. residual Pt., Schmidt, 1929, f. 8b, wing apex. 909/2000: w, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 910/2000: w, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 911/2000: w, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt., to Nakamura by W. Piper. 912/2000: w, no D., J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt., to Nakamura by W. Piper. 913/2000: w, 16.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 914/2000: w, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 915/2000: w, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 916/2000: w, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 917/2000: w, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 918/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 919/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 920/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 921/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 922/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 923/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 924/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 925/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 926/2000: w, 8.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 927/2000: w, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt. 928/2000: w, 10.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 8b, Pt.

Calopteryx orientalis Selys, 1887, Russian Federation, Dagestan, Busa-Luka, R. Samur-System, N 41.4670 - E 47.6170, 527/1996: w, 24.05.1964, A. Saguljajev, M. Pastuchow leg., head lost, Pn. 18 cells free, Schmidt, 1954, loc. typ., south west of the Kaspi-Lake. - Russian Federation, Dagestan, Cepax R. Samur-System, N 41.7670 - E 47.6170, 546/1996: m, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. 18 cells free, Schmidt, 1954, loc. typ., south west of the Kaspi-See. 550/1996: m, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. 15 cells free, Schmidt, 1954, loc. typ., south west of the Kaspi-See. 551/1996: m, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. cells free >1/2 to Pt., Schmidt, 1954, loc. typ., south west of the Kaspi-See. 552/1996: m, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. cells free >1/2 to Pt., Schmidt, 1954, loc. typ., south west of the Kaspi-See. 547/1996: w, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. cells free >1/2 to Pt., Schmidt, 1954, loc. typ., south west of the Kaspi-See. 548/1996: w, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. cells free >1/2 to Pt., Schmidt, 1954, loc. typ., south west of the Kaspi-See. 549/1996: w, 26.05.1964, A. Saguljajev, M. Pastuchow leg., Pn. cells free >1/2 to Pt., Schmidt, 1954, loc. typ., south west of the Kaspi-See.

Atrocalopteryx atrata (Selys, 1853), Russian Federation, Wladiwostok, Botanic Garden, N 43.0 - E 131.0, 1/1991: m, 10.07.1990, Peter Salk, Ishida et al, 1988, Tsuda, 1991, Nordkorea, Bartenef, 1912, apex of penis.

Lestidae

Sympetma fusca (Vander Linden, 1820), France, Camarque, Port St. Louis, Rhone-Delta, N 43.3990 - E 4.7960, 3/1972: m, 29.07.1972, M. Hartung leg. - Russian Federation, Wladiwostok-N, Primorje, Chanka lake, N 45.0 - E 132.0, 510/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, Ishida, 1988, f. 15, Jödicke, 1992, nominate type Europe to Japan. 511/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, f. 219, head as *braueri*, Ishida, 1988, f. 15. 529/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, f. 219, head as *braueri*, Ishida, 1988, f. 15. 530/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, f. 219, head as *braueri*, Ishida, 1988, f. 15.

Chalcolestes viridis (Vander Linden, 1825), France, Montelimar, R. Roubion, N 44.5580 - E 4.2610, 156/1980: m, 29.08.1980, M. Hartung leg. - Tschechia, Boehmen, Hradec Králové (Königgrätz), Cikán lake, N 50.2110 - E 15.8180, 14/2001: w, 17.07.1999, C1, J. Louda, CSc. coll., Schmidt, 1929, f. 11m, vv. - Tschechia, Böhmen, Hradec Králové (Koeniggrätz), Plachta, N 50.2110 - E 15.8180, 1/2001: m, 8.08.1999, D1, J. Louda, CSc. coll. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 23/1973: m, 31.07.1973, M. Hartung leg., 8.9.1996, S. 9, 10, damaged.

Chalcolestes parvidens Artobolevski, 1929, Tschechia, Böhmen, Hradec Králové (Koeniggrätz), Plachta, N 50.2110 - E 15.8180, 18/2001: w, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 11m, vv.

Lestes sponsa (Hansemann, 1823), Tschechia, Boehmen, Hradec Králové (Koeniggrätz), Cikán lake, N 50.2110 - E 15.8180, 6/2001: m, 17.07.1999, C1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 7/2001: m, 17.07.1999, C1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost, sup. basal spines lost. 15/16/17/2001: 3w, 17.07.1999, C1, J. Louda, CSc. coll., Schmidt, 1929, f. 11l, vv., damaged. - Tschechia, Böhmen, Hradec Králové (Koeniggrätz), Plachta, N 50.2110 - E 15.8180, 2/2001: m, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 3/2001: m, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 4/2001: m, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. - Tschechia, Böhmen, Hradec Králové (Koeniggrätz), Plachta, N 50.2110 - E 15.8180, 5/2001: m, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost, sup. right damaged, left lost. 8/2001: m, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 9/2001: m, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 10/2001: m, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 11/2001: m, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost. 12/2001: m, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost, sup. damaged. 13/2001: m, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11f, app., inf. lost, sup. damaged. 19/2001: w, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 11l, vv, damaged. 20/2001: w, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11l, vv. 21/2001: w, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11l, vv. 2/2001: w, 16.08.1999, H1, J. Louda, CSc. coll., Schmidt, 1929, f. 11l, vv. - Sweden, Dalsland, Gustavsfors E, Lommetjärn, N 59.1830 - E 12.1170, 248/1996: w, 14.07.1995, M. Hartung leg., pond in wood with *Sphagnum* border, Schmidt, 1929, Sahlén, 1985, 18l. - Sweden, Dalsland, Vämmersviken, Västra Silen, N 59.1830 - E 12.1170, 249/1996: w, 14.07.1995, M. Hartung leg., pond in wood with *Sphagnum* border, Schmidt, 1929, Carcini, 1983, f. 13a, 16a, Franke, 1979, pl. IV, Sweden, Dalsland, Årjäng S, Vammerviken-Camping, Västra Silen, near Kärnsbacken-stream, N 59.2170 - E 12.1170, 243/1996: w, 14.07.1995, M. Hartung leg., Schmidt, 1929, Sahlén, 1985, f. 18l. - Sweden, Kronobergslän, Urshult S, Frösjön, N 56.50 - E 14.8330, 215/1996: w, 7.07.1995, M. Hartung leg., vv. little longer than S. 10, Sahlén, 1985, f. 18l, Schmidt, 1929. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 28/1973: m, 31.07.1973, M. Hartung leg. 7/1973: w, 31.07.1973, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Ibbesjön, N 58.0830 - E 14.0830, 8/1973: m, 2.07.1973, M. Hartung leg., afternoon. 27/1973: m, 25.07.1973, M. Hartung leg. 9/1973: w, 25.07.1973, M. Hartung

leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, L. Havsjön, N 58.10 - E 14.0830, 25/1973: m, 23.07.1973, M. Hartung leg., subad. 26/1973: w, 23.07.1973, M. Hartung leg., subad.

Lestes dryas Kirby, 1890, Russian Federation, Tuva, 800m, near Chadyn lake, N 51.0 - E 92.0, 10/1998: m, 16.-23.06.1997, S. Vashchenko & R. Mumistun leg, Schmidt, 1929, f. 11k, vv., f. 9b.

Lestes virens (Charpentier, 1825), Portugal, Odemira, Milfontes, N 37.7180 - W -8.7860, 18/1980: m, 19.09.1980, Pt. zweifarbig. 19/1980: m, 19.09.1980, Pt. zweifarbig (Fig. 4). 20/1980: m, 19.09.1980, Pt. zweifarbig. 21/1980: m, 19.09.1980, Pt. zweifarbig.

Coenagriidae

Coenagrion pulchellum (Vander Linden, 1825), Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 3/1974: m, 16.07.1974, M. Hartung leg. - Denmark, Fünen, at highway parkside at Skållaballa, N 56.0 - E 10.0, 26/1981: m, 14.06.1981, M. Hartung leg., Abd. z. 3-5. ca. 1/5. 240/1981: w, 14.06.1981, M. Hartung leg. - Sweden, Dalsland, Dals-Ed, Håbol, Nilsedtjärnet, N 58.950 - E 11.9830, 27/1981: m, 6.07.1981, M. Hartung leg. - Sweden, Dalsland, Gustavsfors E, Lommetjärn, N 59.1830 - E 12.1170. 247/1996: m, 14.07.1995, M. Hartung leg., Pond in wood with Sphagnum, Schmidt, 1929, f. 19p, q, Sahlén, 1985, 30B-C. - Sweden, Kronobergslän, Urshult S, Wood between, Frösjön & Buskabodagölen, N 56.50 - E 14.8330, 211/1996: m, 7.07.1995, M. Hartung leg., nominate form, Schmidt, 1929, f. 19p, q, Sahlén, 1985, f. 30 B. 212/1996: w, 7.07.1995, M. Hartung leg., homoeochrome, normal form, Schmidt, 1929, f. 22e, Sahlén, 1985, f. 30 D. - Sweden, Småland, Linneryd, Camping site, Linnerydsjön, N 56.650 - E 15.150, 59/1985: w, 20.07.1985, M. Hartung leg.

Coenagrion puella (L., 1758), Sweden, Skaraborgsland, Tidaholm, Höckensås, Ibbesjön, N 58.0830 - E 14.0830, 2/1973: m, 11.08.1973, M. Hartung leg., wood pond. - Russian Federation, Dagestan, Girkansky Les, R. Samur-System, N 41.7670 - E 47.6170, 517/1996: m, 19.-23.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, S. 2, f. 21f, but mid-dorsal blue divided, app. f. 19r, s. 518/1996: m, 19.-23.05.1964, A. Saguljajev, M. Pastuchow leg., abd. lost fr. S. 7, Schmidt, 1929, S2., f. 21f.

Coenagrion hastulatum (Charpentier, 1825), Sweden, Dalsland, Bäckefors, Sandvikensjön, N 58.8170 - E 12.1670, 34/1981: m, 5.07.1981, M. Hartung leg., greenish. - Sweden, Dalsland, Dals-Ed, Håbol, Stora Stabburstjärnet, N 58.9830 - E 12.0170, 35/1981: m, 7.07.1981, M. Hartung leg., form A, Tjönneland, 1952. - Sweden, Dalsland, Gustavsfors E, Lommetjärn, N 59.1830 - E 12.1170, 246/1996: m, 14.07.1995, M. Hartung leg., pond in wood, Schmidt, 1929, f. 49l, Sahlén, 1985. - Sweden, Jämtland, Krokum, Rötiken, Kroktjärnet, N 63.950 - E 14.10, 36/1981: m, 29.06.1981, M. Hartung leg. - Sweden, Jämtland, Sveg, Lillhårdal, Lomtjärnen, N 61.9330 - E 14.1330, 29/1981: m, 2.07.1981, M. Hartung leg., form A n. Tjönneland, 1952. 251/1981: w, 2.07.1981, M. Hartung leg. 252/1981: w, 2.07.1981, M. Hartung leg., abd. with many parasites. 253/1981: w, 2.07.1981, M. Hartung leg. - Sweden, Kronobergslän, Urshult S, Frösjön, N 56.50 - E 14.8330, 213/1996: m, 7.07.1995, M. Hartung leg., at Equisetum, form D with S. 2 lat. branches in contact to basal marking. - Sweden, Skaraborgsland, Tidaholm, Höckensås, L. Havsjön, N 58.10 - E 14.0830, 3/1973: m, 23.07.1973, M. Hartung leg., wood pond, Form D, Tjönneland, 1952. - Sweden, Skaraborgsland, Tidaholm, Höckensås, St. Öjasjön, N 58.0670 - E 14.0670, 254/1981: m, 18.06.1981, M. Hartung leg., subad. 255/1981: m, 18.06.1981, M. Hartung leg. 256/1981: m, 18.06.1981, M. Hartung leg. 257/1981: m, 18.06.1981, M. Hartung leg. 33/1981: w, 17.06.1981, M. Hartung leg, brownish. 258/1981: w, 18.06.1981, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, wood pond, N 58.0670 - E 14.0670, 241/1981: m, 17.06.1981, M. Hartung leg. 242/1981: m, 17.06.1981, M. Hartung leg. 243/1981: m, 17.06.1981, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, old stream part, N 60.30 - E 13.0170, 31/1981: m, 24.06.1981, M. Hartung leg., form

G, Tjänneland, 1952. 250/1981: m, 24.06.1981, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, N 60.30 - E 13.0330, 56/1985: m, 14.07.1985, M. Hartung leg., form B, Tjänneland, 1952. - Sweden, Värmland, Vägsjöfors, Långnäs, Bever pond, N 60.30 - E 13.0330, 32/1981: m, 23.06.1981, M. Hartung leg., form H, Tjänneland, 1952. 246/1981: m, 23.06.1981, M. Hartung leg. 247/1981: m, 23.06.1981, M. Hartung leg. 310/1981: m, 23.06.1981, M. Hartung leg., form D, Tjänneland, 1952. 244/1981: w, 22.06.1981, M. Hartung leg. 245/1981: w, 22.06.1981, M. Hartung leg. 248/1981: w, 23.06.1981, M. Hartung leg., 249/1981: w, 23.06.1981, M. Hartung leg. - Finland, Joutsa, Huhtiniemi, Vennanlampi, N 61.7330 - E 26.1670, 1/1976: m, 25.07.1976, M. Hartung leg., form E, Tjänneland, 1952.

Coenagrion lunulatum Charpentier, 1840, Sweden, Jämtland, Sveg, Lillhärdal, Lomtjärnen, N 61.9330 - E 14.1330, 37/1981: m, 2.07.1981, M. Hartung leg., 38/1981: w, 2.07.1981, M. Hartung leg., homoeochrome, Nr. 1. 39/1981: w, 2.07.1981, M. Hartung leg., heterochrome, Nr. 2. 259/1981: w, 2.07.1981, M. Hartung leg.

Pyrrhosoma nymphula (Sulzer, 1776), Tschechia, Böhmen, Hradec Králové (Königgrätz), Belecko, N 50.1520 - E 15.9470, 26/2001: m, 4.06.1999, G2, J. Louda, CSc. coll., Schmidt, 1929, f. 16a, b, app. 27/2001: m, 4.06.1999, G2, J. Louda, CSc. coll., Schmidt, 1929, f. 16a, b, app. 28/2001: w, 4.06.1999, G2, J. Louda, CSc. coll., Schmidt, 1929, f. 15e, thorax. - France, Aquitaine, Huchet Vieux, Etang de Leon, N 43.8970 - W -1.3310, 23/1983: m, 26.06.1983, M. Hartung leg. 123/1983: w, 26.06.1983, M. Hartung leg. - United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330, 22/1978: m, 8.07.1978, M. Hartung leg. 23/1978: w, 8.07.1978, M. Hartung leg. - United Kingdom of Great Britain, Schottland, Fort Augustus, Loch Tarff, N 57.150 - E -4.60, 3/1978: m, 16.07.1978, M. Hartung leg., wood at open ponds, High moor pond. - United Kingdom of Great Britain, Schottland, Spean Bridge, moor pond, around Lòn Lèanachain, N 56.8670 - W -4.950, 4/1978: m, 21.07.1978, M. Hartung leg., only seen. - Sweden, Dalsland, Elsendal near Bäckeåfors, Vattnetjärnet, N 58.8170 - E 12.1830, 7/1981: m, 5.07.1981, M. Hartung leg. - United Kingdom of Great Britain, Schottland, Spean Bridge, moor pond, around Lòn Lèanachain, N 56.8670 - W -4.950, 4/1978: m, 21.07.1978, M. Hartung leg., only seen. - Sweden, Skaraborgsland, Tidaholm, Höckensås, St. Öjasjön, N 58.0670 - E 14.0670, 44/1981: w, 17.06.1981, M. Hartung leg.

Ischnura elegans (Vander Linden, 1820), Italia, Gardasee Cavedole, N 45.393544 - E 10.636509, 174/2023: w, 3.05.1997, leg. E. Jansen, 9.5 PN, f. 17c, e, prothorax hindborder, S. 8-9, Schmidt, 1929. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Svinary, N 50.2180 - E 15.8960, 23/2001: m, 20.05.1999, B1, J. Louda, CSc. coll., Schmidt, 1967, penis prep., tb. 7, f. 3e. - Sweden, Kronobergslän, Urshult N, Dunsudde penisland., Åsnen, N 56.5330 - E 14.7830, 217/1996: m, 8.07.1995, M. Hartung leg., Schmidt, 1967, Schmidt, 1929, Sahlén, 1985, f. 31c, prothorax hindborder frontal part longer. - Sweden, Kronobergslän, Urshult S, Frösjön, N 56.50 - E 14.8330, 214/1996: w, 7.07.1995, M. Hartung leg., sub-adulte, f. a, *violacea*, at *Equisetum*, Schmidt, 1967, Schmidt, 1929, Sahlén, 1985. - France, Montelimar, N 44.5580 - E 4.2610, 29/1980: w, 29.09.1980, M. Hartung leg. - United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330, 5/1978: w, 14.07.1978, M. Hartung leg., f. c, Schmidt, 1967, f. *infuscans-obsoleta* Killington. - Russian Federation, Dagestan, Girkansky Les, R. Samur-System, N 41.7670 - E 47.6170, 516/1996: m, 19.-23.05.1964, A. Saguljajev, M. Pastuchow leg., type loc. Caspic Iran. Schmidt, 1929, 1967, penis, f. 3e.

Ischnura pumilio (Charpentier, 1825), France, Montelimar, R. Jabron, N 44.5510 - E 4.2610, 62/1980: m, 29.08.1980, M. Hartung leg., single specimen at place. - Russian Federation, Dagestan, Girkansky Les, R. Samur-System, N 41.7670 - E 47.6170, 512/1996: m, 15.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, abd. S. 8, 9 = typ III, f. 17l. app, f. 16o, q. 513/1996: w, 15.05.1964, A. Saguljajev, M. Pastuchow leg., in copula with 512/1995, Schmidt, 1929, abd. S. 2, 3=typ II, f. 17m, thorax, 17i. 514/1996: w, 15.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, abd. S. 2, 3 = typ I-II, f. 17m, thorax, 17i. 512/1996: m, 15.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, abd. S. 8, 9 =

typ III, f. 17l. app, f. 16o, q. 513/1996: w, 15.05.1964, A. Saguljajev, M. Pastuchow leg., in copula with 512/1995, Schmidt, 1929, abd. S. 2, 3 = typ II, f. 17m, thorax, 17i. 514/1996: w, 15.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, abd. S. 2, 3 = typ I-II, f. 17m, thorax, 17i.

Erythromma najas (Hansemann, 1823), Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 5/1974: w, 13.07.1974, M. Hartung leg. - Sweden, Dalsland, Håbol, Bengtsfors, St. Stabburstjärnet, N 58.9830 - E 12.0170, 260/1981: w, 7.07.1981, M. Hartung leg., *Sphagnum*. - Sweden, Kronobergslän, Urshult N, Åsnen near I. Rättsholmen, N 56.5330 - E 14.7830, 218/1996: Em, 8.07.1995, M. Hartung leg., more light brown, Carchini, 1983, Sahlén, 1985, f. 13b. 225/1996: Ew, 9.07.1995, M. Hartung leg., more light brown, Carchini, 1983, Sahlén, 1985, f. 13b. - Sweden, Kronobergslän, Urshult N, Rösswik-Camping, Åsnen, N 56.50 - E 14.80, 226/1996: Em, 9.07.1995, M. Hartung leg., darker brown, Carchini, 1983, Sahlén, 1985, f. 13b. 227/1996: Em, 9.07.1995, M. Hartung leg., darker brown, Carchini, 1983, Sahlén, 1985, f. 13b. - Sweden, Skaraborgsland, Tidaholm, Höckensås, L. Havsjön, N 58.10 - E 14.0830, 4/1973: m, 3.07.1973, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, St. Öjasjön, N 58.0670 - E 14.0670, 45/1981: m, 18.06.1981, M. Hartung leg., Torfmoos. - Sweden, Värmland, Årjäng, Island Störöna, Västra Silen, N 59.350 - E 12.1330. 13/1985: Em, 3.07.1985, M. Hartung leg. 14/1985: m, 3.07.1985, M. Hartung leg.

Erythromma viridulum (Charpentier, 1840), Portugal, Odemira, Barragem de Santa Clara, N 37.50- W -8.50, 61/1980: m, 18.09.1980, M. Hartung leg.

Erythromma lindenii (Selys, 1840), Portugal, Odemira, Barragem de Santa Clara, N 37.50- W -8.50, 111/1980: m, 18.09.1980, M. Hartung leg., Schmidt, 1929, fig. 19l.

Enallagma cyathigerum (Charp., 1840), Finland, Joutsa, Matara, Hiruijärvi, N 61.750 - E 26.1670, 2/1976: m, 27.07.1976, M. Hartung leg., near Huhtiniemi, Ecy-13/1976. - Dagestan, Girkansky Les, R. Samur-System, N 41.7670 - E 47.6170, 515/1996: w, 19.-23.05.1964, A. Saguljajev, M. Pastuchow leg., abd. markings more developed, Schmidt, 1929, abd. S. 8, 9 = f. 18d. - Russian Federation, Kamtschatka-Hi., Petropawlowsk, N 53.0 - E 158.0, 19/1992: w, 28.07.1991, Klaus Reinhardt, in alc., det. K. Reinhardt. - Russian Federation, Kamtschatka-Hi., Petropawlowsk, dirty pool, N 53.0 - E 158.0, 18/1992: w, 8.08.1988, Klaus Reinhardt, homoeochrome, in alc., det. K. Reinhardt. - Sweden, Dalsland, Elsendal near Bäcke-fors, 'Elchmoos'-pond, N 58.8170 - E 12.1830, 47/1981: m, 5.07.1981, M. Hartung leg., f. *nordica* (me), 2. segment with tubercles. 272/1981: m, 5.07.1981, M. Hartung leg., hill above the pond, Ecy-41/1981, f. *nordica*, 2. seg segment m. with enlarged markings. 50/1981: w, 5.07.1981, M. Hartung leg., f. *nordica*, Ecy-44/1981, cf. 47/1981. - Sweden, Dalsland, Årjäng S, Vammerviken-Camping, Västra Silen, N 59.2170 - E 12.1170, 228/1996: m, 11.07.1995, M. Hartung leg., high abundance, melanised, S. 2 horns in contact to lat. line S. 1-4(5), S. 8-9. 229/1996: m, 11.07.1995, M. Hartung leg., high abundance, more week melanised, S. 2 horns in contact to lat. line, S. 1-4. 230/1996: m, 11.07.1995, M. Hartung leg., high abundance, very week melanised, S. 2 horns in contact to lat. line, S. 1-4, S. 8-9, S. 8. 236/1996: w, 13. 07.1995, M. Hartung leg., with parasites, Schmidt, 1929, f. 19D, Sahlén, 1985, f. 19D. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 32/1973: m, 31.07.1973, M. Hartung leg., Ecy-2/1973. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Ibbesjön, N 58.0830 - E 14.0830, 5/1973: m, 25.07.1973, M. Hartung leg., Ecy-7/1973. 6/1973: m, 11.08.1973, M. Hartung leg., Ecy-1/1973. 33/1973: w, 11.08.1973, M. Hartung leg., Ecy, 4/1973. - Sweden, Värmland, Vägsjöfors, Långnäs, N 60.30 - E 13.0170, 51/1981: m, 22.06.1981, M. Hartung leg., Ecy, 37/1981. - Sweden, Värmland, Vägsjöfors, Långnäs, Bever pond, N 60.30 - E 13.0330, 30/1981: m, 23.06.1981, M. Hartung leg., subad., Ecy, 39/1981. 269/1981: m, 23.06.1981, M. Hartung leg., Ecy, 40/1981. 270/1981: w, 23.06.1981, M. Hartung leg., Ecy, 42/1981. 271/1981: w, 23.06.1981, M. Hartung leg., Ecy, 43/1981. - Sweden, Värmland, Årjäng, Strandtjärnet, N 59.3670 - E 12.1670, 65/1985: m, 3.07.1985, M. Hartung leg., subad., Ecy, 50/1985. 66/1985: m, 3.07.1985, M. Hartung leg., subad., Ecy, 51/1985. - Sweden,

Värmland, Årjäng, Island Störöna, Västra Silen, N 59.350 - E 12.1330, 17/1985: Em, 3.07.1985, M. Hartung leg. 78/1985: Em, 3.07.1985, M. Hartung leg. 18/1985: Ew, 3.07.1985, M. Hartung leg. 63/1985: w, 3.07.1985, M. Hartung leg., subad., Ecy, 53/1985. - Sweden, Värmland, Årjäng, Island Störöna, W Västra Silen, N 59.3670 - E 12.1170, 64/1985: m, 5.07.1985, M. Hartung leg., subad., Ecy-53/1985. - Sweden, Värmland, Årjäng, Sommarvik-Camping, Västra Silen, N 59.3670 - E 12.1330, 67/1985: m, 2.07.1985, M. Hartung leg., subad., Ecy-52/1985. 68/1985: m, 2.07.1985, M. Hartung leg., subad. 69/1985: m, 2.07.1985, M. Hartung leg., subad. - Russian Federation, Kamtschatka-Hi., Petropawlowsk, N 53.0 - E 158.0, 19/1992: w, 28.07.1991, Klaus Reinhardt, in alc., det. K. Reinhardt. 18/1992: w, 8.08.1988, Klaus Reinhardt, homoeochrome, in alc., det. K. Reinhardt *E. cyathigerum*. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 248/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Walker, 1953, Tf. 24, f. 5, app. 249/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Walker, 1953, Tf. 24, f. 5, app. 282/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, S. 7-10 lost, penis free, Haritonov, 1975, f. 3, habitus, f. 1, Belyshev, 1973, Schmidt, 1961. 247/1993: w, 5.07.1993, Josef Louda, CSc. coll., Walker, 1953, Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Walker, 1953, Tf. 28, f. 5, thorax. 250/1993: w, 5.07.1993, Josef Louda, CSc. coll., Walker, 1953, Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Walker, 1953, Tf. 28, f. 5, thorax. 255/1993: w, 5.07.1993, Josef Louda, CSc. coll., Walker, 1953, Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Walker, 1953, Tf. 28, f. 5, thorax. 256/1993: w, 5.07.1993, Josef Louda, CSc. coll., Walker, 1953, Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Walker, 1953, Tf. 28, f. 5, thorax. 253/1994: w, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, Belyshev, 1973, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale, Haritonov, 1975, f. 3c, mesostigmal plate. - United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330, 7/1978: m, 8.07.1978, M. Hartung leg. - United Kingdom of Great Britain, Schottland, Fort Augustus, Loch Tarff, N 57.150 - W -4.60, 8/1978: m, 10.07.1978, M. Hartung leg., only seen. - United Kingdom of Great Britain, Schottland, Spean Bridge, moore pond, around Lònanachain, N 56.8670 - W -4.950, 6/1978: m, 21.07.1978, M. Hartung leg. Ecy 1978, 25, f. "*kephaleon*" (Hartung, 1978), 2. seg segment m. with darker marking. 24/1978: m, 21.07.1978, M. Hartung leg., Ecy, 1978-26, 2. seg segment m. with darker marking. 25/1978: m, 21.07.1978, M. Hartung leg., Ecy 1978-27, 2. segment with darker marking. 26/1978: w, 21.07.1978, M. Hartung leg., Ecy, 1978-28.

Enallagma deserti (Selys, 1871), Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 250/1994: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, habitus, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale. 251/1994: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, habitus, Schmidt, 1961, Cannings & Stuart, 1997, nec boreale.

Enallagma nigrolineatum Belyshev & Haritonov, 1975, Russian Federation, Kamtschatka-Hi., 70 km S Petropawlowsk, near Vulcan Myrtnowki, 1000m, N 53.0 - E 158.0, 22/1992: w, 22.07.1991, Klaus Reinhardt, in alc., K. Reinhardt, no unusual melanism, abd. with lateroventral blackish line at S. 1-8, each from base to ca. 3/4 of S, between f. 3a, c, mesostigmal plate, cf. comment to 17/1992. - Russian Federation, Kamtschatka-Hi., Petropawlowsk, flat shores, N 53.0 - E 158.0, 15/1992: m, 8.08.1988, Klaus Reinhardt, in alc., K. Reinhardt. 16/1992: m, 8.08.1988, Klaus Reinhardt, in alc., K. Reinhardt. 20/1992: m, 8.08.1988, Klaus Reinhardt, in alc., K. Reinhardt. 21/1992: m, 8.08.1988, Klaus Reinhardt, in alc., K. Reinhardt. - Russian Federation, Kamtschatka-Hi., Petropawlowsk, small pond, N 53.0 - E 158., 17/1992: m, 8.08.1988, Klaus Reinhardt, in alcohol, K. Reinhardt. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 254/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax dark. 255/1994: m, 5.07.1993, Josef Louda, CSc. coll., head un-sure, Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 256/1994: m, 5.07.1993, Josef Louda, CSc. coll., head unsure, Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 257/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. dark. 258/1994: m, 5.07.1993,

Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. more light. 259/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 260/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax, abd. more light. 261/1994: m, 5.07. 1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax dark. 262/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 263/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/1994: 15 m, 5.07.1993, Josef Louda, CSc. coll., with mites, Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 279/1994: m, 5.07.1993, Josef Louda, CSc. coll., Haritonov, 1975, f. 2a, app., f. 1a, app. lat., thorax. 280/1994: m, 5.07.1993, Josef Louda, CSc. coll., S. 7-10 lost, Haritonov, 1975, f. 1a, thorax, f. 3e, penis. prep. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 281/1994: m, 5.07.1993, Josef Louda, CSc. coll., S. 7-10 lost, Haritonov, 1975, f. 1a, thorax, f. 3e, penis. prep. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.667573 - E 101.996081, 252/1994: w, 5.07. 1993, Josef Louda, CSc. coll., Belyshev, 1973, habitus, Schmidt, 1961, Cannings & Stuart, 1997, nec *boreale*.

Coenagrion puella (L., 1758), France, Lannemezan, Montrejeau, Pyrenaeen, N 43.1230 - E 0.3820, 13/1983: Em, 29.06.1983, M. Hartung leg., Abd. 2-4, Dorsalstreif. - France, Haut Marne, St. Dizier, Lac du Der-Chantequoc, N 48.5490 - E 4.8060, 125/1983: w, 13.06.1983, M. Hartung leg.

Coenagrion pulchellum (Vander Linden, 1825), France, Medoc, Lacanau, Canal de Jonction at Marais de Talaris, N 45.0 - W -1.1160, 124/1983: w, 18.06.1983, M. Hartung leg. - Austria, Burgenland, Eisenstadt, Neusiedler See, N 47.80 - E 16.6830, 4/1974: m, 7.07.1974, M. Hartung leg. - Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330. 2/1974: m, 16.07.1974, M. Hartung leg.

Coenagrion scitulum (Rambur, 1842), France, Bretagne, St. Jean de Monts, N 46.7920 - W -2.0950, 122/1983: m, 26.05.1983, Herbert Jacobs leg., to W. Piper f. Mus. Nakamura, 18.4.1996. - France, Bretagne, St. Jean de Monts, N 46.7920 - W -2.0950, 17/1983: m, 26.05.1983, Herbert Jacobs leg., heterochrome.

Coenagrion mercuriale (Charpentier, 1840), France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 18/1983: m, 26.06.1983, M. Hartung leg., near Camping site. - France, Perpignan, Bages, stream, N 42.6040 - E 2.8860, 19/1983: m, 2.07.1983, M. Hartung leg., markings 2. Segm, only week attached to apical black ring. - France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 20/1983: w, 25.06.1983, M. Hartung leg., near Camping site, homoeochrome. - France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 102/1983: w, 24.06.1983, M. Hartung leg., near Camping site, heterochrome. 103/1983: w, 24.06.1983, M. Hartung leg., near Camping site, subadult. 104/1983: m, 24.06.1983, M. Hartung leg., near Camping site, subadult. 105/1983: m, 24.06.1983, M. Hartung leg., near Camping site. 106/1983: w, 25.06.1983, M. Hartung leg., near Camping site, heterochrome. 107/1983: m, 28.06.1983, M. Hartung leg., near Camping site. 108/1983: m, 28.06. 1983, M. Hartung leg., near Camping site. 109/1983: w, 28.06.1983, M. Hartung leg., near Camping site, to W. Piper f. Mus. Nakamura, 18.4.1996.

Coenagrion johanssoni (Wallengreen, 1894), Sweden, Dalsland, Elsendal near Bäckefors, Elchmoospond, N 58.8170 - E 12.1830, 24/1981: m, 8.07.1981, M. Hartung leg., abd. lost fr. S. 8. 273/1981: m, 8.07.1981, M. Hartung leg., at 5.6.1983 to Peter Jahn. - Sweden, Jämtland, Sveg, Lillhärdal, Lomtjärnen, N 61.9330 - E 14.1330, 29/1981: m, 2.07.1981, M. Hartung leg., in the near oft the pond. 23/1981: w, 2.07.1981, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, Beverpond, N 60.30 - E 13.0330, 25/1981: m, 22.06.1981, M. Hartung leg. - Sweden, Värmland, Årjäng, Strandtjärnet, N 59.3670 - E 12.1670, 58/1985: m, 3.07.1985, M. Hartung leg.

Cercion lindenii (Selys, 1840), France, Medoc, Maubuisson, Etang de Cousseau, N 45.0380 - W -1.1450, 24/1977: w, 21.08.1977, M. Hartung leg. - France, Medoc, Maubuisson, Etang de Cousseau, N 45.0380 - W -1.1450, 2/1977: w, 21.08.1977, M. Hartung leg.

Platycnemidae

Platycnemis latipes Rambur, 1842, France, Cuiza, N 42.941333 - E 2.256586, 177/2023: m, 4.08.1979, leg. E. Jansen. Schmidt, 1929, 9.5 PN., f. 14g, app. - France, Limoges, Chabannes, fish pond, N 45.7730 - E 1.2880, 63/1983: m, 16.06.1983, M. Hartung leg., Abd. 7 only with apical markings.

Platycnemis pennipes (Pallas, 1771), Provence, Le Méès, region, 400m, N 44.0290 - E 5.9750, 73/1985: m, 16.-26.06.1985, Michael Woelky leg. 74/1985: m, 16.-26.06.1985, Michael Woelky leg. 75/1985: w, 16.-26.06.1985, Michael Woelky leg. 76/1985: m, 16.-26.06.85, Michael Woelky leg. - France, Limoges, Chabannes, fish pond, N 45.7730 - E 1.2880, 117/1983: w, 16.06.1983, M. Hartung leg. - France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 118/1983: m, 25.06.1983, M. Hartung leg. 119/1983: w, 25.06.1983, M. Hartung leg. 120/1983: w, 25.06.1983, M. Hartung leg. - France, Aquitaine, St. Girons-Vielle, Cout d. l'Auga, Etang de Leon, N 43.9050 - W -1.3250, 121/1983: w, 26.06.1983, M. Hartung leg. - Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 21/1974: w, 13.07.1974, M. Hartung leg. - Italia, Gardasee Cavedole, N 45.393544 - E 10.636509, 175/2023: m, 3.05.1997, leg. E. Jansen, f. 14g, app., Schmidt, 1929. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Svinary, N 50.2180 - E 15.8960, 24/2001: m, 20.05.1999, G1, J. Louda, CSc. coll., Schmidt, 1929, f. 14g, h, genital, segment 2, f. 14d, thorax. 25/2001: m, 20.05.1999, G1, J. Louda, CSc. coll., Schmidt, 1929, f. 14d, thorax, abd. lost from S. 5. - Tschechia, Dunaj, N 49.780650 - E 15.431570, 176/2023: m, 1.07.1988, leg. E. Jansen, 9.5 PN, f. 14g, app., Schmidt, 1929. - France, Medoc, Lacanau, Canal de Jonction at Marais de Talaris, N 45.0 - E -1.1160, 59/1983: m, 17.06.1983, M. Hartung leg., without dorsal abdominal black markings. - France, Aquitaine, St. Girons-Vielle, Cout d. l'Auga, Etang de Leon, N 43.9050 - E -1.3250, 60/1983: m, 26.06.1983, M. Hartung leg., dorsal abdominal black markings, 7-9. - France, Medoc, Lacanau, Canal de Jonction at Marais de Talaris, N 45.0 - W -1.1160, 61/1983: w, 17.06.1983, M. Hartung leg., very week dorsal abdominal black markings. - France, Aquitaine, St. Girons-Vielle, Cout d. l' Auga, Etang de Leon, N 43.9050 - W -1.3250, 62/1983: w. 26.06.1983, M. Hartung leg., week dorsal abdominal black markings.

Platycnemis dealbata Selys, 1850, Russian Federation, Dagestan, Busa-Luka, R. Samur-System, N 41.4670 - E 47.6170, 526/1996: w, 24.05.1964, A. Saguljajev, M. Pastuchow leg., subad., weekly black marked, Schneider, 1986, prothorax f. 254, Dumont, 1991, f. 54.

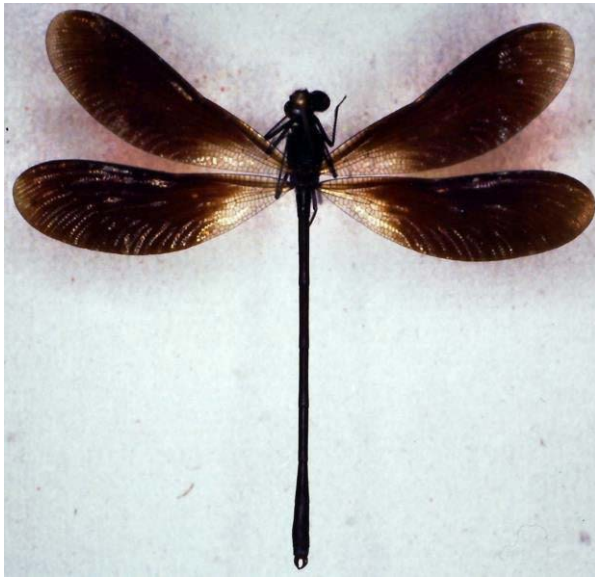


Fig. 2: *Calopteryx haemorrhoidalis* (Vand. Lind, 1825), f. *almogravensis* M. Hartung, 1996

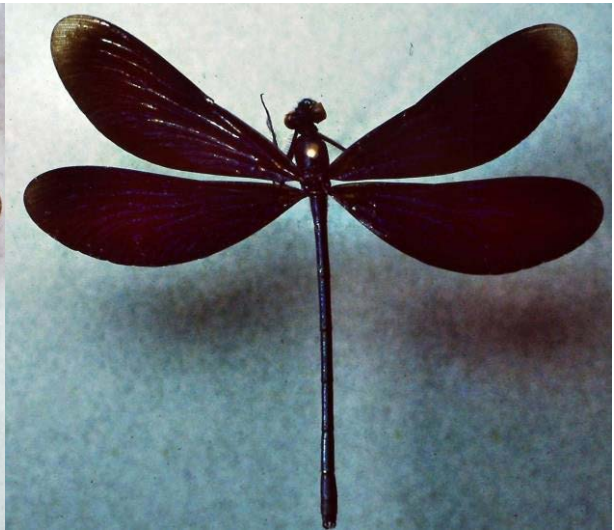


Fig. 3: *Calopteryx virgo* (L., 1758)

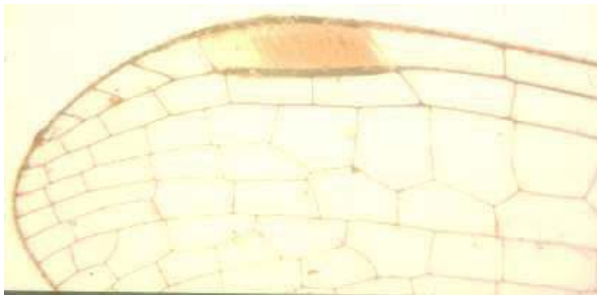


Fig. 4: *Lestes virens* (Charpentier, 1825), Pt. - male app.



Fig. 5: *Coenagrion lunulatum* Charpentier, 1840



Fig. 6: *Ischnura elegans* (Vander Linden, 1820) - genital, 2. segment, ventral - genital, 2. segment, lateral



Fig. 7: *Anax parthenope* Selys, 1839



Fig. 8: *Aeshna juncea* (L., 1758)

Fig. 9: *Aeshna affinis* Vander Linden, 1820, head



Aeshna affinis Vander Linden, 1820

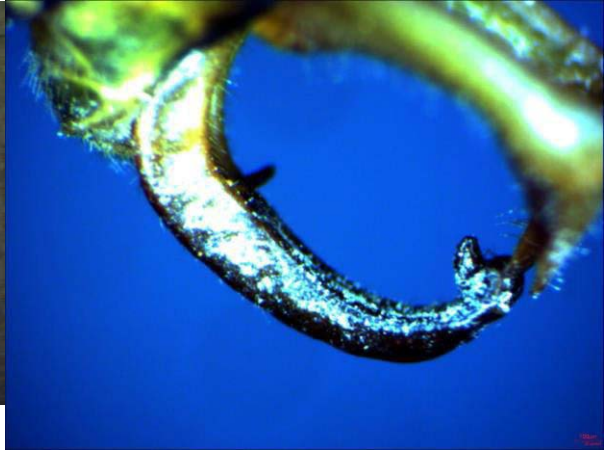


Fig. 10: *Onychogomphus forcipatus* (L., 1758)



Fig. 11: *Somatochlora metallica* (Vander Linden, 1825)



Fig. 12: *Boyeria irene* (Fonscolombe, 1838)



Fig. 13: *Oxygastra curtisi* (Dale, 1834)



Fig. 14: *Leucorrhinia caudalis* (Charpentier, 1840)



Fig. 15: *Leucorrhinia dubia* (Vander Linden, 1825)



Fig. 16: *Pantala flavescens* (Fabricius, 1798)

Aeshnidae

Anax imperator Leach in Burmeister, 1815, France, Narbonne plage, N 43.1530 - E 3.1580, 5/1977: m, 24.08.1977, M. Hartung leg. - Portugal, Madeira I., Sto. Da Serra, 660m, N 32.750 - W -17.0, 140/1998: w, 10.05.1998, K. Dörbrandt leg., dead found, subad., Peters, 1987, Baez, 1985. - Portugal, Odemira, Milfontes, parched ditch, N 37.7330 - W -8.7910, 41/1980: m, 15.09.1980, M. Hartung leg., wet ditch of heathland, 800m from coast.

Anax parthenope Selys, 1839, France, Camarque, Stes. Maries d. l. Mer, N 43.4570 - E 4.4430, 7/1977: w, 25.08.1977, M. Hartung leg., at beach, crepuscular flight. 20/1977: w, 28.08.1977, M. Hartung leg., subad., at beach, crepuscular flight, Buchholz, 1955, f. 7, 1. - Portugal, Odemira, Barragem de Santa Clara, N 37.4960 - W -8.4310, 43/1980: w, 18.09.1980, M. Hartung leg.

Aeshna juncea (L., 1758), Sweden, Gällivare, E Pond S R. Linaälven, water: 16.6C, air: 18C, N 67.10 - E 20.90, 496/2001: m, 22.07.2001, M. Hartung leg., Sahlén, 1996, f. p. 97, thorax, Norling & Sahlén, 1997, f. 360ju, genital, segment 2. - Sweden, Gällivare E, near Lake Hauka Jaure, water: 5C, air: 19.5C, N 67.133330 - E 20.90, 501/2001: Hw, 22.07.2001, M. Hartung leg., skin in water bog, Sahlén, 1996, Norling & Sahlén, 1997, confirmed by G. Peters, 18.1.2002. - Sweden, Gällivare, E, Dundret W, Fritidsby, Bog S Road, Air: 21.2C, N 67.10 - E 20.650, 717/2001: Em, 27.07.2001, S. 22.9.2001, M. Hartung leg., cf. 717.1, Sahlén, 1996, Norling & Sahlén, 1997. 717/1/2001: Em, 27.07.2001, S. 22.9.2001, M. Hartung leg., dead 6.10.2001, Sahlén, 1996, f. p. 97, thorax, Norling & Sahlén, 1997, f. 350ju, genital, segment 2. - Sweden, Gällivare E, Dundrets Fritidsby, N 67.116670 - E 20.650, 498/2001: m, 20.07.2001, M. Hartung leg., damaged bay car, Sahlén, 1996, f. p. 97, thorax, Norling & Sahlén, 1997, f. 360ju, genital, segment 2. - Sweden, Gällivare, E, Dundrets Fritidsby, Bogs in wetland, water: 11.7C, air: 14.1C, N 67.10 - E 20.650, 714/2001: Lw, 25.07.2001, M. Hartung leg., Gerken & Sternberg (1999), f. 201b, prementum. 715/2001: w, 27.07.2001, M. Hartung leg., dead 14.9.2001. 712/2001: Lm, 25.07.2001, M. Hartung leg., Gerken & Sternberg (1999), f. 187c, prothorax tubercel, f. ~198b, f. 199b, Genital f. ~199a. 716/2001: m, 27.07.2001, M. Hartung leg. - Sweden, Gällivare, E, Dundrets Fritidsby, Hauken Jaure, water: 19.5C, air: 5C, N 67.134967 - E 20.902133, 711/2001: w, 22.07.2001, M. Hartung leg., dead 7.9.2001. 713/2001: m, 22.07.2001, M. Hartung leg. - Sweden, Gällivare, S, foot of Lilla toppen of Dundret, water: 8.4C, air: 17.4C, N 67.116670 - E 20.550, 497/2001: m, 21.07.2001, M. Hartung leg., Sahlén, 1996, f. p. 97, thorax, Norling & Sahlén, 1997, f. 360ju, genital, segment 2. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 13/1973: Em, 31.07.1973, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, L. Havsjön, N 58.10 - E 14.0830, 15/1973: m, 14.08.1973, M. Hartung leg. 14/1973: w, 2.08.1973, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, Bever pond, N 60.30 - E 13.0330, 21/1985: m, 14.07.1985, M. Hartung leg. - Sweden, Värmland, Årjäng, Strandtjärnet, N 59.3670 - E 12.1670, 22/1985: m, 10.07.1985, M. Hartung leg. - Russian Federation, Domba, L. Mussa, N 52.962341 - E 12.349340, 19/2015: w, 07.1980, M. Hartung leg., 39/1980. - Russian Federation, Sibiria, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0670, 251/1993: m, 18.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. controlled 252/1993: w, 19.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr. 253/1993: w, 8.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr. - Russian Federation, Sibiria, Burjatia, Sajany-Geb., Mondy, 1600m, N 51.6830 - E 101.0, 278/1993: m, 8.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr., subad., w. brownish. 279/1993: m, 8.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr., subad., w. brownish. 280/1993: m, 8.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr., subad. 289/1993: m, 18.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr. 281/1993: w, 8.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr., subad., w. yellowish. - 282/283/284/285/286/287/1993: 6w, 8.07.1993, Josef Louda, CSc. coll., Tsuda,

1991, ssp., Peters, 1987, 1994, det. contr., subad., w. yellowish. 295/1993: w, 18.07. 1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr. 296/1993: w, 18.07.1993, Josef Louda, CSc. coll., Tsuda, 1991, ssp., Peters, 1987, 1994, det. contr. - Russian Federation, Dombej, Mussa Atschitam, Kaukasus, N 43.2170 - E 41.5170, 103/1980: m, 07.1980, Schmoeckel leg., Bartenef, 1929, Peters 1994, det. contr., July 1994 to Pr. Peters, Berlin.

Aeshna subarctica Walker, 1908, Sweden, Dalsland, Elsendal near Bäckefors, Elchmoos-pond, N 58.8170 - E 12.1830, 88/1981: m, 9.07.1981, M. Hartung leg., subad., found with ants during emerging, living up to 11.07.1981. - Sweden, Gällivare E, Dundrets Fritidsby, Bogs in wetland, water: 21.2C, N 67.10 - E 20.650, 505/2001: w, 27.07.2001, M. Hartung leg., Sahlén, 1996, Norling & Sahlen, 1997, conf. G. Peters, 18.1.2002, f. 208, 207 Gerken & Sternberg.

Aeshna mixta Latreille, 1805, France, Camarque, Stes. Maries d. l. Mer, N 43.4570 - E 4.4430, 19/1972: w, 27.07.1972, M. Hartung leg. - France, Medoc, Maubuisson, N 45.0590 - W -1.1320, 12/1977: w, 20.08.1977, M. Hartung leg. - Russian Federation, Primorsk. Reg., Kondratenovka, N 43.10 - E 131.550, 7/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., Belyshev, 1973: app. sup. wo. ventr. horn, f. 157, app., frons, thorax, G. Peters, 18.01.2002. 8/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, app. sup. wo. ventral spine, f. 157, app., frons, thorax, G. Peters, 18.01.2002. - Russian Federation, Tuva, Tanu-Ola Moutains, 1200-1500m, near Shurmak vil., N 51.0 - E 92.0, 5/1998: w, 24.06.-1.07.1997, S. Vaschchenko & R. Mumistun leg., Belyshev, 1973, f. 157, frons, thorax, conf. G. Peters, 18.01.2002. - Austria, Wien, N 48.2330 - E 16.40, 191/1978: m, 5.08.1978, Christine leg., Berlin.

Aeshna cyanea (Müll., 1764), Denmark, Lønstrup, N 56.0 - E 10.0, 169/1986: w, 6.07.-2.08.1986, Michael Woelky leg. - Russian Federation, Armenien, Aragatgebirge, 2800m, N 39.8170 - E 44.6670, 165/1994: w, 25.06.1990, Peter Salk leg., Peters (1987), n. eyes border, Pt., w. apex veins, mass. vv., browish w. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Cikán lake, N 50.2110 - E 15.8180, 863/ 2000: m, 6.08.1999, J. Louda, CSc. coll., Peters, 1987, f. 15c, app.

Aeshna grandis (L., 1758), Austria, Kärnten, Keutschach Rauschelesee, N 46.5830 - E 14.1330, 3/1975: m, 07.1975, M. Hartung leg. - Sweden, Dalsland, Årjäng S, Vammerviken-Camping, Västra Silen, N 59.2170 - E 12.1170, 252/1996: m, 12.07.1995, M. Hartung leg., E-2, w. to ca. S. 2, near shore in water, Robert, 1959, Carchini, 1983, Sahlén, 1985. - Sweden, Skaraborgsland, Tidaholm, Höckensås Ibbesjön, N 58.0830 - E 14.0830, 16/1973: w, 22.07.1973, M. Hartung leg. - Sweden, Värmland, Årjäng, Strandtjärnet, N 59.3670 - E 12.1670, 77/1985: Em, 10.07.1985, M. Hartung leg. 23/1985: m, 10.07.1985, M. Hartung leg. - Finland, Joutsa, Huhtiniemi, Vennanlampi, N 61.7330 - E 26.1670, 4/1976: m, 19.07.1976, M. Hartung leg., sim. to ssp. *linnaei* Ander, 1953, Sahlén, 1985, thorax pattern. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Cikán lake, N 50.2110 - E 15.8180, 864/2000: w, 6.08.1999, J. Louda, CSc. coll., Peters, 1987. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Plachta, N 50.2110 - E 15.8180, 32/2002: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 29b, frons.

Aeshna affinis Vander Linden, 1820, France, Perpignan, Argeles s. Mer, R. Tech, dried river, N 42.5860 - E 2.9780, 70/1983: m, 3.07.1983, M. Hartung leg., ad.

Brachytron pratense (Müller, 1764), France, Haut Marne, St. Dizier, Lac du Der-Chantequoc, N 48.5490 - E 4.8060, 39/1983: m, 14.06.1983, M. Hartung leg., in number, in wood near lac. 40/1983: w, 14.06.1983, M. Hartung leg., left app. sup. lost, in number, in wood near Lac.

Aeshna caerulea (Ström, 1783), Sweden, Gällivare E, Dundrets Fritidsby, Bogs in wetland, water: 21.2C, N 67.10 - E 20.650, 504/2001: Lm, 27.07.2001, M. Hartung leg., Sahlén, 1996, Norling & Sahlen, 1997, conf. G. Peters, 18.1.2002, f. 208, 207, Gerken & Sternberg. - Sweden, Gällivare S, Dundret hill, near Kärmejänkta, Bogs, N 67.10 - E 20.616670, 499/2001: m, 21.07.2001, M. Hartung leg., Sahlén, 1996, f. p. 96, abd. pattern, but S. 2 more sim. to f. of female. conf. G. Peters, 18.1.2002. - Sweden, Skaraborgs-

land, Tidaholm, Höckensås Ibbesjön, N 58.0830 - E 14.0830, 29/1973: m, 25.07.1973, M. Hartung leg., subad., deformed, Pape-Lange, 2014, f. S. 121. - Russian Federation, Sibiria, Magadan. R., Susupan, Gydan mountins, N 59.0 - E 150.0, 145/1992: w, 24.06.1992, RN Dr. Josef Louda, CSc., confirmed by G. Peters, 20.10.2000. 146/1992: w, 24.06.1992, RN Dr. Josef Louda, CSc., juv., confirmed by G. Peters, 20.10.2000. 106/1996: w, 26.06.1992, Josef Louda, CSc. coll., cf. 145/1992, confirmed by G. Peters, 15.04.1998. - Austria, N. Tirol, Kufstein, Ellmau, Moor am Eibergkopf, 1670m, N 47.4830 - E 12.250, 59/1987: Em, 14.07.1987, G. Lehmann leg. 60/1987: Em, 14.07.1987, G. Lehmann leg. 62/1987: Ew, 14.07.1987, G. Lehmann leg. 63/1987: Ew, 14.07.1987, G. Lehmann leg. - Austria, N. Tirol, Kufstein, Ellmau, W. Hartkaseralm, Moorweiher, 1500m, N 47.4830 - E 12.250, 150/1986: m, 6.08.1986, G. Lehmann leg. 61/1987: w, 15.07.1986, G. Lehmann leg. - Sweden, Gällivare E, Dundrets Fritidsby, N 67.116670 - E 20.650, 500/2001: w, 22.07.2001, M. Hartung leg., Sahlén, 1996, ~f. p. 96, abd. pattern, conf. G. Peters, 18.1.2002. - Sweden, Gällivare E, Dundrets Fritidsby, Bogs in wetland, water: 11.7C, air: 14.1C, N 67.10 - E 20.650, 502/2001: Lm, 25.07.2001, 23:11h, M. Hartung leg., damaged by bit of larva, Sahlén, 1996, Norling & Sahlen, 1997, conf. G. Peters, 18.1.2002.

Aeshna crenata Hagen, 1856, Russian Federation, Primorsk. Reg., Kondratenovka, N 43.10 - E 131.550, 6/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 147, app., thorax, left side discoloured, conf. by G. Peters, 18.01.2002. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 254/1993: m, 18.07.1993, Josef Louda, CSc. coll. s. 276/1993, same locality, typical *wnukoskii*, here, more/fewer clear wings. 276/1993: m, 19.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr., cf. 254/1993. 288/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr., w. postcostal space brownish. 290/1993: m, 19.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr., w. costal sp. yellowish post-costal. 291/1993: m, 19.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 292/1993: m, 19.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 293/1993: m, 19.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 294/1993: m, 19.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. - Russian Federation, Sibirien, Burjatia, Sajany-mountins., Mondy, 1600m, N 51.6830 - E 101.0, 277/1993: Ew, 8.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 298/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 299/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 300/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 301/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 302/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr. 303/1993: m, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr., head lost. 297/1993: w, 18.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Peters, 1987, 1994, det. contr.

Isoaeshna isosceles (Mueller, 1767), Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 10/1974: Em, 16.07.1974, M. Hartung leg. - Tschechia, Ziharec, N 48.073521 - E 17.871477, 170/2023: m, 1.07.1988, leg. E. Jansen, f. p. 305, Wildermuth, 2014.

Gomphidae

Sieboldius albardae Selys, 1886, Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 56/1998: m, 13.08.1997, S. Vashchenko & R. Mumistun leg, Belyshev, 1973, f. 173, thorax, app. lat., Ishida et al., 1988, pl. 29, f. 23, 30, head.

Gomphus vulgatissimus (L., 1758), Tschechia, Böhmen, Hradec Králové (Königgrätz), Cikán lake, N 50.2190 - E 15.8980, 879/2000: m, 20.05.1999, J. Louda, CSc. coll., damaged, Schmidt, 1929.

Gomphus simillimus Selys, 1840, France, Perpignan, Argeles s. Mer, R. Tech, N 47.3150 - E 0.7520, 74/1983: m, 5.07.1983, M. Hartung leg.

Gomphus pulchellus Selys, 1840, France, Limoges, Chabannes, fish pond, N 45.7730 - E 1.2880, 115/1983: m, 16.06.1983, M. Hartung leg. - Portugal, R. Guadiana, N 37.9680 - W -7.6460, 181/1995: Ew, 02.-03.05.1988, Peter Jahn leg.

Gomphus graslinii Rambur, 1842, Portugal, R. Guadiana, N 37.9680 - W -7.6460, 172/1995: Em, 02.-03.05.1988, Peter Jahn leg. 173/1995: Ew, 02.-03.05.1988, Peter Jahn leg. 174/1995: Ew, 02.-03.05.1988, Peter Jahn leg. 175/1995: Ew, 02.-03.05.1988, Peter Jahn leg.

Paragomphus genei (Selys, 1841), Portugal, Ribera de Limas, R. Guadiana, N 37.8460 - W -7.5460, 77/1983: w, 15.09.1983, S. 29.12.1983, Peter Jahn leg. - Portugal, Serpa, N, R. Guadiana, N 37.9680 - W -7.6460, 76/1/1983: Em, 14.09.1983, S. 26.12.1983, Peter Jahn leg., an Gerken. 76/2/1983: Em, 14.09.1983, Peter Jahn leg., L -1. 78/1983: Lw, 14.09.1983, Peter Jahn leg., L -1. 76/1983: m, 14.09.1983, S. 26.12.1983, Peter Jahn leg.

Onychogomphus forcipatus (L., 1758), Finland, Joutsa, Huhtiniemi, Vennanlampi, N 61.7330 - E 26.1670, 13/1976: m, 20.07.1976, M. Hartung leg., L. 48 mm, Sp. 59 mm. - France, N 34.0 - E 5.0, 103/1982: m, no D., Lehmann, Bergkamen coll., Abd. 5-10 lost, thorax, typ. *unguiculatus*, 2. segment dors. only black at end third. - France, Perpignan, Argeles s. Mer, R. Tech, N 47.3150 - E 0.7520, 66/1983: m, 5.07. 1983, M. Hartung leg., nearly dry river valley, wing apical regions deformed, f. left, h. right. - France, Provence, Le Méès, region, 400m, N 44.0290 - E 5.9750, 72/1985: w, 16.-26.06.1985, Michael Woelky leg., to W. Piper f. Mus. Nakamura, 18.4.1996.

Onychogomphus forcipatus unguiculatus VdL., 1820, France, Perpignan, Argeles s. Mer, R. Tech, N 47.3150 - E 0.7520, 67/1983: m, 5.07.1983, M. Hartung leg.

Onychogomphus uncatus (Charpentier, 1840), France, Sommieres, S-F., N 43.790 - E 4.0180, 127/1998: w, 9.06.1995, J. Arlt leg., Carchini, 1983, f. 27d, ant., 38b, labium. 128/1998: w, 9.06.1995, J. Arlt leg., Carchini, 1983, f. 27d, ant., 38b, labium.

Ophiogomphus obscurus Bartenev, 1909, Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 93/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 184, map, distrib., typ. location, f. 183, thorax, abd., Bridges, 1994. 94/1998: w, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 183, thorax, abd., occ. triangle, vv., Bridges, 1994. 95/1998: w, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 183, thorax, abd., occ. triangle, vv., Bridges, 1994.

Cordulegasteridae

Cordulegaster boltonii (Donovan, 1807), Austria, G. Saalfelden, Maria Alm, 1500m, N 47.40 - E 12.8830, 185/2010: w, 20.07.1972, leg. Heinz Karbaum, Schmidt, 1929, f. 39b, body colour. - United Kingdom of Gr, Schottland, Aberfoyle, forest, pond & stream, around Lochan Spling, N 56.1670 - W -4.3830, 192/1978: Em, 9.07.1978, M. Hartung leg., L. 80 mm, Sp. 97 mm, Egg depos. near shore, at muddy place.

17/1978: Ew, 9.07.1978, M. Hartung leg., L. 76 mm, Sp. 90 mm, ca. 50-60 cm over water near shore flying, ca. 200cm over forest. 18/1978: Ew, 9.07.1978, M. Hartung leg., L. 80 mm, Sp. 97 mm, Egg depos. near shore at muddy place. - United Kingdom of Gr, Schottland, Fort Augustus, Loch Tarff, N 57.150 - W -4.60, 19/1978: w, 16.07.1978, M. Hartung, only seen.

Cordulegaster bidentata Selys, 1854, Austria, G. Saalfelden, Maria Alm, 1500m, N 47.40 - E 12.8830, 153/1986: m, 20.07.1972, Heinz Karbaum leg. - Austria, Kärnten, Gailtaler Alpen, St. Daniel, Wildbach, 2.5m over waterline at mountain, N 46.0 - E 13.0, 2/2004: Ew, 7.07.2004, J. Heymann leg., Schmidt, 1929, Dreyer, 1986, Tafel V, S. 204, Kopf, Labium, abd. lateral spines. - Austria, Kärnten, Kötschach-Mauten, 900m, small pond at mountain, N 46.6670 - E 13.0, 315/1994: Ew, 10.06.1994, Michael Woelky leg., Carchini, 1983.

Corduliidae

Cordulia aenea (L., 1758), Sweden, Dalsland, Bäcke-fors, Sandvikensjön, N 58.8170 - E 12.1670, 262/1981: m, 5.07.1981, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, N 58.10 - E 14.0830, 96/1981: Em, 17.06.1981, M. Hartung leg., w. hyaline. 34/1973: m, 08.1973, M. Hartung leg., 1983 to W. Schmöckel. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 17/1973: w, 22.07.1973, M. Hartung leg., L. 50.5 mm, Sp. 73 mm. - Sweden, Värmland, Vägsjöfors, Långnäs, N 60.30 - E 13.0170, 261/1981: m, 22.06.1981, M. Hartung leg., Sweden, Värmland, Vägsjöfors, Långnäs, Bever pond, N 60.30 - E 13.0330, 97/1981: Em, 22.06.1981, M. Hartung leg. - Finland, Joutsa, Huhtiniemi, Vennanlampi, N 61.7330 - E 26.1670, 7/1976: m, 25.07.1976, M. Hartung leg., L. 47 mm, Sp. 67 mm, w. apices, postcostal border brownish.

Somatochlora metallica (Vander Linden, 1825), Sweden, Dalsland, Årjäng S, Vammerviken-Camping, Västra Silen, N 59.2170 - E 12.1170, 251/1996: Lw, 13.07.1995, M. Hartung leg., ill found near shore, Carchini, 1983, Sahlén, 1985. - Sweden, Värmland, Årjäng, Island Störöna, Västra Silen, N 59.350 - E 12.1330, 25/1985: Em, 5.07.1985, M. Hartung leg. - Finland, Joutsa, Huhtiniemi, Vennanlampi, N 61.7330 - E 26.1670, 8/1976: m, 19.07.1976, M. Hartung leg., L. 49 mm, Sp. 70 mm. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Cikán lake, N 50.2110 - E 15.8180, 867/2000: m, 20.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Cikán lake, N 50.2110 - E 15.8180, 868/2000: m, 20.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 869/2000: m, 20.07.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 870/2000: m, 6.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 871/2000: m, 6.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 872/2000: m, 5.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 873/2000: m, 6.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 874/2000: m, 6.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app., to Nakamura by W. Piper. 875/2000: m, 5.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app., to Nakamura by W. Piper. 876/2000: m, 5.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 877/2000: m, 5.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app. 862/2000: w, 5.08.1999, J. Louda, CSc. coll., penis free, Schmidt, 1929, f. 43b, app. - Tschechia, Böhmen, Paradubice, Labe Channel, N 50.030 - E 15.770, 878/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 43b, app.

Somatochlora flavomaculata (Vander Linden, 1825), France, Aquitaine, St. Girons-Vielle, Cout d. l' Auga, Etang de Leon, N 43.9050 - W -1.3250, 83/1983: m, 26.06.1983, M. Hartung leg. - France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.0, 84/1983: m, 24.06.1983, M. Hartung leg. - Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 22/1974: m, 13.07.1974, M. Hartung leg. - Sweden, Kronobergslän, Urshult S, wood between, Frösjön

& Buskabodagölen, N 56.50 - E 14.8330, 216/1996: w, 7.07.1995, M. Hartung leg., Schmidt, 1929, f. 43c.

Somatochlora alpestris (Selys, 1840), Austria, N. Tirol, Kufstein, Ellmau, Moor am Eibergkopf, 1670m, N 47.4830 - E 12.250, 66/67/69/70/1987: 2 Em, Ew, m, 14.07.1987, G. Lehmann leg., change with *L. macrostigma*-Ex from Greece. - Austria, N. Tirol, Kufstein, Ellmau, W. Hartkaseralm, Moorweiher, 1500m, N 47.4830 - E 12.250, 65/1987: m, 6.08.1986, G. Lehmann leg., change with *L. macrostigma*-Ex from Greece. 68/1987: w, 22.07.1986, G. Lehmann leg., change with *L. macrostigma*-Ex from Greece. - Russian Federation, Sibiria, Magadan. R., Susupan, Gydan mountains, N 59.0 - E 150.0, 144/1992: w, 24.06.1992, RN Dr. Josef Louda, CSc.

Somatochlora exuberata Bartenev, 1910, Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 58/1998: w, 13.08.1997, S. Vaschchenko & R. Mumistun leg, Pt. dark brown, Belyshev, 1973, f. 118, vv. very long, rel. short app., Ishida et al., 1988, vv. ~f. 42, *japonica*, Lohmann, 1984, sim. *japonica*, but then lap. should be named exuberata, and bona spec., typ. location. 59/1998: w, 13.08.1997, S. Vaschchenko & R. Mumistun leg, Pt. dark brown, Belyshev, 1973, f. 118, vv. very long, after egg laying.

Somatochlora viridiaena (Uhler, 1858), Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 50/1998: w, 10.-12.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 118, app., Ishida et al., 1988, f. 41, app., thorax.

Somatochlora graeseri Selys, 1887, Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 57/1998: m, 13.08.1997, S. Vaschchenko & R. Mumistun leg, cf. 4/1991, Belyshev, 1973, f. 121, app. lat. dors. apex here very thin, Martin, 1906. - Russian Federation, Wladiwostok, Botanic Garden, N 43.0 - E 131.0, 4/1991: m, 10.07.1990, Peter Salk leg., Ishida et al, 1988, App., Tsuda, 1991, GUS, Nordkorea.

Boyeria irene (Fonscolombe, 1838), Portugal, P. N. da Penada-Gerees, R. Homem, N 40.0 - W -8.0, 38/1983: m, 23.09.1983, Peter Jahn leg.

Oxygastra curtisi (Dale, 1834), France, Camarque, Petit Rhone, N 43.540 - E 4.3330, 14/1977: w, 26.08.1977, M. Hartung leg., L. 49 mm, Sp. 69 mm. - France, Medoc, Maubuisson, Canal de Jonction at Marais de Montaut, N 45.0610 - W -1. 1240, 81/1983: m, 21.06.1983, M. Hartung leg. - France, Montpellier, N 43.6160 - E 3.8670, 129/1998: w, 26.05.1994, J. Arlt leg., heavy soiled, Carchini, 1983, f. 31a, d, abd. 131/1998: w, 26.05.1994, J. Arlt leg., heavy soiled, Carchini, 1983, f. 31a, d, abd. 130/1998: Em, 26.05.1994, J. Arlt leg., medium soiled, Carchini, 1983, f. 31a, d, abd.

Libellulidae

Orthetrum coerulescens (Fabricius, 1798), France, Medoc, Maubuisson, N 45.0590 - W -1.1320, 8/1977: w, 20.08.1977, M. Hartung leg., L. 4.3 mm, Sp. 6.5 mm, subad. - France, Montelimar, R. Jabron, N 44.5510 - E 4.2610, 47/1980: m, 29.08.1980, M. Hartung leg. - Sweden, Dalsland, Dals-Ed, Håbol, Stämingsgarna-area, N 58.9830 - E 11.9830, 106/1981: w, 7.07.1981, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 18/1973: m, 31.07.1973, M. Hartung leg. 30/1973: m, 31.07.1973, M. Hartung leg. - Russian Federation, Kuratal near Mzreda, Caucasus, N 52.605970 - E 79.47970, 183/2023: m, 24.09.1987, leg. E. Jansen. - Portugal, Odemira, Barragem de Santa Clara, N 37.50 - W -8.50, 45/1980: m, 18.09.1980, M. Hartung leg., w. apices dark Morera, 1950. 140/1980: m, 18.09.1980, M. Hartung leg. 141/1980: w, 18.09.1980, M. Hartung leg. 51/1980: w, 15.09.1980, M. Hartung leg.

Orthetrum chrysostigma (Burmeister, 1839), Portugal, Odemira, Milfontes, parched ditch, N 37.7330 - W -8.7910, 50/1980: Ew, 15.09.1980, M. Hartung leg.

Orthetrum albistylum (Selys, 1848), Russian Federation, Dagestan, Busa-Luka, R. Samur-System, N 41.7670 - E 47.6170, 523/1996: w, 24.05.1964, A. Saguljajev, M. Pastuchow leg., subad., very large, Schmidt, 1929, 1954, app. white, S. 8. 524/1996: w, 24.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, app. white, S. 8, vv., f. 53E, Belyshev, 1973. - Russian Federation, Dagestan, Girkansky Les, at wood border, R. Samur-System, N 41.7670 - E 47.6170, 521/1996: m, 18.05.1964, A. Saguljajev, M. Pastuchow leg., at evening, Conci-Nielsen, 1956, RSpl/fwl w. 5-6 double c., lam., ant., ham., f. 87.6, 88.5. 522/1996: m, 18.05.1964, A. Saguljajev, M. Pastuchow leg., at evening, Conci-Nielsen, 1956, RSpl/fwl w. 8 double c., lam., ant., ham., f. 87.6, 88.5. 520/1996: w, 16.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, app. white, S. 8, vv., f. 53E, Belyshev, 1973.

Orthetrum brunneum (Fonscolombe, 1837), France, Provence, Le Mées region, N 44.0290 - E 5.9750, 31/1985: w, 16.-26.06.1985, Michael Woelky leg., abd. 9-10 lost.

Orthetrum cancellatum (L., 1758), France, Camarque, Petit Rhone, N 43.540 - E 4.3330, 16/1977: m, 26.08.1977, M. Hartung leg., L. 43 mm, Sp. 71 mm. - Tschechia, Böhmen, Hradec Kralove, N 50.209520 - E 15.832630, 17/2012: m, 20.07.1995, leg. Josef Louda, CSc., f. 47c, genital, segment 2, f. 47d, lam. ant., Schmidt, 1929. - Tschechia, Böhmen, Hradec Králové (Koeniggratz), Cikán lake, N 50.2110 - E 15.8180, 955/956/957/2000: 3m, 6.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47c, genital, segment 2, d. lam. ant. - Tschechia, Patince, N 47.737685 - E 18.289481, 182/2023: m, 29.06.1988, leg. E. Jansen. 181/2023: w, 29.06.1988, leg. E. Jansen.

Libellula quadrimaculata L., 1758, United Kingdom of Gr, Schottland, Aberfoyle, N 56.150 - W -4.3330, 21/1978: m, 9.07.1978, M. Hartung leg. - United Kingdom of Great Britain, Schottland, Spean Bridge, moore pond, around Lònn Lèanachain, N 56.8670 - W -4.950, 20/1978: w, 21.07.1978, M. Hartung leg., L. 47 mm, Sp. 75 mm. - Tschechia, Böhmen, Hradec Králové (Koeniggratz), Cikán lake, N 50.2110 - E 15.8180, 950/2000: m, 20.07.1999, J. Louda, CSc. coll., Schmidt, 1929. - Sweden, Skaraborgsland, Tidaholm, Höckensås, Björnsjön, N 58.0670 - E 14.0830, 24/1973: m, 31.07.1973, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, N 60.30 - E 13.0170, 192/1981: m, 22.06.1981, M. Hartung leg.

Libellula depressa L., 1758, Russian Federation, Dagestan, Girkansky Les, at wood border, R. Samur-System, N 41.7670 - E 47.6170, 519/1996: m, 16.05.1964, A. Saguljajev, M. Pastuchow leg., Schmidt, 1929, f. 46, hamuli.

Libellula fulva Mueller, 1764, Austria, Kärnten, Keutschach, Rauschelesee, N 46.5830 - E 14.1330, 23/1974: m, 16.07.1974, M. Hartung leg. - France, Medoc, Maubuisson, Canal de Jonction at Marais de Montaut, S 45.0610 - W -1.1240, 88/1983: w, 17.06.1983, M. Hartung leg. - France, Medoc, Lacanau, Marais de Talaris, N 45.0 - W -1.1160, 89/1983: w. 19.06.1983, M. Hartung leg.

Crocothemis erythraea (Brulle, 1832), Tschechia, Near Okoc, Donau, N 47.886236 - E 17.800073, 180/2023: w, 1.07.1988, leg. E. Jansen, f. 7, 96, Aguesse, 1968. - France, Camarque, Stes. Maries d. l. Mer, N 43.4570 - E 4.4430, 13/1972: Ew, 27.07.1972, M. Hartung leg. - France, Camarque, Stes. Maries d. l. Mer, N 43.4570 - E 4.4430, 17/1977: m, 25.07.1977, M. Hartung leg., at beach high abundance incl. river mouth. - France, Camarque, Stes. Maries d. l. Mer, N 43.4570 - E 4.4430, 21/1977: m, 25.08.1977, M. Hartung leg., 22/1977: w, 25.08.1977, M. Hartung leg. - France, Camargue, N 43.555170 - E 4.625638, 179/2023: w, 6.08.1979, leg. E. Jansen. - Portugal, Odemira, Barragem de Santa Clara, N 37.50 - W -8.50, 132/1980: w, 18.09.1980, M. Hartung leg.

Sympetrum fonscolombii (Selys, 1840), France, Camarque, Stes. Maries d. l. Mer, N 43.4570 - E 4.4430, 14/1972: w, 27.07.1972, M. Hartung leg. - France, Camarque, Port St. Louis, Rhone-Delta, N 43.3990 -

E 4.7960, 15/1972: w, 29.07.1972, M. Hartung leg. - France, Narbonne plage, N 43.1530 - E 3.1580, 19/1977: m, 24.08.1977, M. Hartung leg. - Russian Federation, Capustan, Caspisc Ocean, N 43.0091490 - E 52.0011070, 184/2023: m, no D., leg. E. Jansen. - Russian Federation, Kuratal near Mzreda, Kaukasus, N 41.962854 - E 43.516989, 206/2023: m, 24.09.1987, leg. E. Jansen, 205/2023: w, 24.09.1987, leg. E. Jansen. 207/2023: w, 24.09.1987, leg. E. Jansen. - Russian Federation, Salst. Mardakan, Surach, Caspisc Ocean, N 40.484412 - E 50.148038, 203/2023: w, 22.09.1987, leg. E. Jansen. - Portugal, Odemira, Milfontes, N 37.7180 - W -8.7860, 135/1980: m, 15.09.1980, M. Hartung leg. subad. 136/1980: m, 15.09.1980, M. Hartung leg., ad. 137/1980: w, 10.09.1980, M. Hartung leg., subad.

Sympetrum sanguineum (Mueller, 1764), France, Camarque, Port St. Louis, Rhone-Delta, N 43.3990 - E 4.7960, 8/1972: m, 29.07.1972, M. Hartung leg. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Plachta, N 50.2110 - E 15.8180, 987/988/989/991/2000: 4m, 3.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47p, genital, segment 2. 997/998/999/1000/1001/1002/1003/1004/1005 1006/1007/1008/1009/1010/1011/1012/1013/1014/1015/2000: 19m, 16.08.1999, J. Louda, CSc. coll. Schmidt, 1929, f. 47p, genital, segment 2. 1016/2000: m, 16.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47p, genital, segment 2. 1017/2000: m, 16.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47p, genital, segment 2. 990/2000: w, 3.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 49v, vv. 992/2000: w, 16.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 49v, vv. - Tschechia, Böhmen, Paradubice, Labe Channel, N 50.030 - E 15.770, 993/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47p, genital, segment 2. 996/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47p, genital, segment 2. - United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330, 14/1978: m, 14.07.1978, M. Hartung leg., only seen. - Russian Federation, Armenien, Garni, 1300m, N 40.0 - E 44.0, 166/1994: w, 17.06.1990, Peter Salk leg., Ris, 1916, Tsuda, 1991.

Sympetrum vulgatum (L., 1758), Tschechia, Böhmen, Hradec Kralove, N 50.209520 - E 15.832630, 18/2012: m, 20.07.1995, leg. Josef Louda, CSc., f. 51b, frons, f. 47c, genital, segment 2, Schmidt, 1929. - Tschechia, Böhmen, Hradec Králové (Koeniggratz), Plachta, N 50.2110 - E 15.8180, 980/981/982/2000: 3m, 16.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47l, genital, segment 2, f. 51b, frons. - Tschechia, Boehmen, Paradubice, Labe Channel, N 50.030 - E 15.770, 983/2000: m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47l, genital, segment 2, f. 51b, frons. 984/994/995/2000: 3m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47l, genital, segment 2, f. 51b, frons. - Tschechia, Böhmen, Paradubice, Labe Channel, N 50.030 - E 15.770, 985/2000: w, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929. 986/2000: w, 18.08. 1999, J. Louda, CSc. coll., Schmidt, 1929.

Sympetrum danae (Sulzer, 1776), Finland, Joutsa, Rauhaniemi near Huhtiniemi, Ven nanlampi, N 61.7330 - E 26.1670, 10/1976: m, 07.1976, M. Hartung leg. - Tschechia, Böhmen, Hradec Králové (Königgrätz), Plachta, N 50.2110 - E 15.8180, 958/959/960/961/962/963/964/965/966/968/969/2000: 10m, 8.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47m, genital, segment 2, f. 49e, thorax. 1019/2000: m, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 47l, genital, segment 2, f. 51b, frons. 1020/2000: m, 8.08.1999, D1, J. Louda, CSc. coll., Schmidt, 1929, f. 47m, genital, segment 2, f. 49e, thorax. 967/2000: w, 3.08.1999, J. Louda, CSc. Coll., Schmidt, 1929, f. 49e, thorax. - Tschechia, Böhmen, Paradubice, Labe Channel, N 50.030 - E 15.770, 970/971/972/973/974/975/2000: 6m, 18.08.1999, J. Louda, CSc. coll., Schmidt, 1929, f. 47m, genital, segment 2, f. 49e, thorax. - Sweden, Skaraborgsland, Tidaholm, Höckensås, L. Havsjön, N 58.10 - E 14.0830, 21/1973: Ew, 3.08.1973, M. Hartung leg. 22/1973: m, 11.08.1973, M. Hartung leg. 31/1973: m, 11.08.1973, M. Hartung leg.

Sympetrum striolatum (Charp., 1840), Russian Federation, Capustan, Caspisc Ocean, N 43.009149 - E 52.001107, 194/2023: w, 23.09.1987, leg. E. Jansen, Schmidt, 1929, f. 49n, genital, segment 2, Schmidt, 1929. 195/2023: w, 23.09.1987, leg. E. Jansen, Schmidt, 1929, f. 49n, o., genital, segment 2, Schmidt, 1929. 197/2023: w, 23.09.1987, leg. E. Jansen, Schmidt, 1929. - Russian Federation, Gehard, Garni, Kaukasus, N 40.141469 - E 44.454110, 198/2023: m, 18.09.1987, leg. E. Jansen, Schmidt, 1929. 199/

2023: m, 24.09.1987, leg. E. Jansen, Schmidt, 1929. 200/2023: m, 18.09.1987, leg. E. Jansen, Schmidt, 1929. 201/2023: w, 18.09.1987, leg. E. Jansen, Schmidt, 1929. 202/2023: w, 18.09.1987, leg. E. Jansen, Schmidt, 1929. - Russian Federation, Kuratal near Mzreda, Kaukasus, N 41.962854 - E 43.516989, 204/2023: m, no D., leg. E. Jansen, Schmidt, 1929. - Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 53/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., 6.5 An., yellow wings at costae, Belyshev, 1973, f. 83, genital, segment 2, ac. Key, russ., imit. w. yellow. 70/1998: m, 13.08.1997, Josef Louda, CSc. coll., yellow wings at costae, Belyshev, 1973, f. 83, genital, segment 2, key, russ., imit. w. yellow. 96/1998: m, 14.08.1997, Josef Louda, CSc. coll., yellow wings at costae, Belyshev, 1973, f. 83, genital, segment 2, ac. Key, russ., imit. w. yellow. - Russian Federation, Wladiwostok-N, Primorje, Chanka lake, N 45.0 - E 132.0, 497/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Ris, 1909, 1919, Schmidt, 1929, f. 47k, Schneider, 1986, Belyshev, 1973, var., yellowish wings, artificial due to SO₂-prep., legs not as *S. pallidum*, Belyshev, 1973, western up to Mongolia, yellow wing vein. 500/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Pt., light red, Ris, 1909, 1919, Schmidt, 1929, f. 47k, Schneider, 1986, Belyshev, 1973. 498/1996: w. 29.08.1996, Belokobyski, Habokatschachinsk, Ris, 1909, 1919, Schmidt, 1929, f. 49n, med. only weekly notched, Schneider, 1986. - France, Medoc, Maubuisson, N 45.0590 - W -1.1320, 9/1977: m, 20.08.1977, M. Hartung leg. - France, Aquitaine, St. Girons-Vielle, Cp. "Col Vert", little stream into Etang de Leon, N 43.9040 - W -1.3170, 116/1983: w, 28.06.1983, M. Hartung leg.

Sympetrum meridionale (Selys, 1841), Russian Federation, Capustan, Caspic Ocean, N 43.009149 - E 52.001107, 185/2023: m, 23.09.1984, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 186/2023: m, 23.09.1984, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 187/2023: m, 23.09.1984, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 188/2023: m, 23.09.1984, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 189/2023: m, 23.09.1984, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 190/2023: m, 29.09.1987, leg. E. Jansen, f. 47i, genital, segment S. 2, Schmidt, 1929. 191/2023: m, 23.09.1987, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 192/2023: m, 23.09.1987, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 193/2023: m, 23.09.1987, leg. E. Jansen, f. 47i, genital, segment 2, Schmidt, 1929. 196/2023: w, 23.09.1987, leg. E. Jansen. Portugal, Odemira, Milfontes, N 37.7180 - W -8.7860, 139/1980: m, 16.09.1980, M. Hartung leg., 56/1980: w, 15.09.1980, M. Hartung leg.

Sympetrum flaveolum (L., 1758), Russian Federation, Tuva, 800m, near Chadyn lake, N 51.0 - E 92.0, 11/1998: m, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 47h, genital, segment 2, Conci & Nielsen, 1956, f. 94.5, genital, segment 2. 12/1998: m, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 47h, genital, segment 2, Conci & Nielsen, 1956, f. 94.5, genital, segment 2. 13/1998: m, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 47h, genital, segment 2, Conci & Nielsen, 1956, f. 94.5, genital, segment 2. 18/1998: m, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, w. bas. yellow t. dist. T & y. spot more at N at fw., cf. 14/1997. 14/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 49l, vv., Conci & Nielsen, 1956, f. 95.6, vv. 15/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 49l, vv., Conci & Nielsen, 1956, f. 95.6, vv. 16/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, w. bas. yellow t. A2, Schmidt, 1929, f. 49l, vv., Conci & Nielsen, 1956, f. 95.6, vv. 17/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, subad., w. bas. yellow t. dist. T & y. spot at N at fw., cf. 14/1997. 19/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, subad., w. bas. yellow t. dist. T & yellow spot at N all w., cf. 14/1997. 20/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg, subad., w. bas. yellow t. dist. T & y. spot at N at fw., cf. 14/1997. - Sweden, Dalsland, Årjäng S, Vam-merviken-Camping, Västra Silen, near Kärrsbacken-stream, N 59.2170 - E 12.1170, 244/1996: m, 14.07. 1995, M. Hartung leg., Schmidt, 1929, f. 47h, Sahlén, 1985. 245/1996: m, 14.07.1995, M. Hartung leg., Schmidt, 1929, f. 49l, Sahlén, 1985. - Russian Federation, Tuva, Tanu-Ola Moutains, 1200-1500m, near Shurmak

vil., N 51.0 - E 92.0, 9/1998: w, 16.-23.06.1997, S. Vaschchenko & R. Mumistun leg. w. bas. yellow t. A2, Schmidt, 1929, f. 49l, vv., Conci & Nielsen, 1956, f. 95.6, vv.

Sympetrum depressiusculum (Selys, 1841), Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 54/1998: m, 10.-12.08.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 47o., 49h, app. lat, ventr., Ishida et al., 1988, f. 54, frons, thorax. 55/1998: m, 10.-12.08.1997, S. Vaschchenko & R. Mumistun leg, Schmidt, 1929, f. 47o., 49h, app. lateral, ventral, Ishida et al., 1988, f. 54, frons, thorax. 97/1998: w, 14.08.1997, Josef Louda, CSc. coll., Abd. ventral pruinose, Schmidt, 1929, f. 49u, vv., Ishida et al., 1988, f. 54, vv., thorax, frons. - Russian Federation, Wladiwostok-N, Primorje, Chanka lake, N 45.0 - E 132.0, 501/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Ishida et al., 1988, vv., f. 54, Belyshev, 1973. 502/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Ishida et al., 1988, vv., f. 54, Belyshev, 1973. 503/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Ishida et al., 1988, vv., f. 54, Belyshev, 1973. 507/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, subadult, Belyshev, 1973, Ishida et al., 1988, vv., f. 54, cf. 501/1996.

Sympetrum pedemontanum (Mueller in Allioni, 1766), N 45.0 - E 132.0, 504/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, extrem orient, cf. *Intermedium*, Sibiria & Mongolia, p. 243. 505/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, extrem orient, cf. *Intermedium*, Sibiria & Mongolia, p. 243. 506/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, extrem orient, cf. *intermedium*, Sibiria & Mongolia, p. 243.

Sympetrum infuscatum (Selys, 1883), Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 51/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., Ris, 1911, f. 384, genital, segment 2, Belyshev, 1973, f. 68, genital, segment 2, app., Ishida et al., 1988, f. 52. 62/63/64/65/66/67/68/69/1998: 8m, 13.08.1997, Josef Louda, CSc. coll., Ris, 1911, f. 384, genital, segment 2, Belyshev, 1973, f. 68, genital, segment 2, app., Ishida et al., 1988, f. 52. 52/1998: w, 10.-12.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 68, vv., thorax, Ishida et al., 1988, f. 52, thorax lat. - Russian Federation, Wladiwostok-N, Primorje, Chanka lake, N 45.0 - E 132.0, 508/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, f. 68, Ishida, 1988, pl. 62, f. 52, thorax, jap., type. 509/1996: w, 29.08.1996, Belokobyski, Habokatschachinsk, Belyshev, 1973, f. 68, Ishida, 1988, pl. 62, f. 52.

Sympetrum eroticum (Selys, 1883), Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 71/1998: m, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 72/1998: m, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 73/1998: m, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 74/1998: m, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 75/1998: m, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 76/1998: m, 13.08.1997, Josef Louda, CSc. coll., subad., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 77/1998: m, 13.08.1997, Josef Louda, CSc. coll., subad., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 78/1998: m, 13.08.1997, Josef Louda, CSc. coll., subad., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 84/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 85/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 86/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 87/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 88/1998: m, 14.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, genital, segment 2, Ishida et al., 1988, f. 52, but w. apex clear. 79/1998: w, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, vv., thorax,

Ishida et al., 1988, f. 55. 80/81/82/83/89/90/1998: 6w, 13.08.1997, Josef Louda, CSc. coll., Belyshev, 1973, f. 57, vv., thorax, Ishida et al., 1988, f. 55.

Sympetrum parvulum (Bartenev, 1912), Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 49/1998: m, 10.08.1997, 12.08.1997, Josef Louda, CSc. coll., subad., Belyshev, 1973, f. 67, thorax, genital, segment 2.

Sympetrum uniforme (Selys, 1883), Russian Federation, Wladiwostok-N, Primorje, Chanka lake, N 45.0 - E 132.0, 499/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Ishida, 1988, pl. 64, AN. 8.5, 2 rows RSPL, f. 398, Ris, 1911. - Russian Federation, Wladiwostok-N, Primorje, Chanka lake, N 45.0 - E 132.0, 496/1996: m, 29.08.1996, Belokobyski, Habokatschachinsk, Ris, 1909, Belyshev, 1973.

Leucorrhinia caudalis (Charpentier, 1840), Sweden, Dalsland, near Bäckefors, N 58.8170 - E 12.1670, 14/1976: m, 13.07.1976, M. Hartung leg., L. 36 mm, Sp. 65 mm.

Leucorrhinia albifrons (Burmeister, 1839), Sweden, Dalsland, Elsendal near Bäckefors, Elchmoos-pond, N 58.8170 - E 12.1830, 263/1981: m, 9.07.1981, M. Hartung leg. 173/1981: w, 8.07.1981, M. Hartung leg.

Leucorrhinia dubia (Vander Linden, 1825), Sweden, Dalsland, Bäckefors, Sandvikensjön, N 58.8170 - E 12.1670, 15/1976: m, 13.07.1976, M. Hartung leg. - Sweden, Dalsland, Elsendal near Bäckefors, Elchmoos-pond, N 58.8170 - E 12.1830, 178/1981: w, 9.07.1981, M. Hartung leg. - Sweden, Gällivare E, Pond S R. Linaälven, water: 16.6C, air: 18C, N 67.10 - E 20.90, 718/1/2001: Em, 22.07.2001, M. Hartung leg., Schmidt, 1929, f. 53c, genital, segment 2. 718/2/2001: m, 22.07.2001, M. Hartung leg., Schmidt, 1929, f. 53c, genital, segment 2. - Sweden, Jämtland, Sveg, Lillhärdal, Lomtjärnen, N 61.9330 - E 14.1330, 175/1981: m, 2.07.1981, M. Hartung leg. 176/1981: w, 2.07.1981, M. Hartung leg. 264/1981: w, 2.07.1981, M. Hartung leg. - Sweden, Skaraborgsland, Tidaholm, Höckensås, St. Öjasjön, N 58.0670 - E 14.0670, 177/1981: m, 18.06.1981, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, N 60.30 - E 13.0170, 265/1981: m, 22.06.1981, M. Hartung leg. - Sweden, Värmland, Vägsjöfors, Långnäs, Bever pond, N 60.30 - E 13.0330, 174/1981: m, 22.06. 1981, M. Hartung leg., juv. - Sweden, Värmland, Årjäng, Orrfjället, N 59.3670 - E 12.1670, 61/1985: w, 8.07.1985, M. Hartung leg. - Sweden, Värmland, Årjäng, Strandtjärnet, N 59.3670 - E 12.1670, 60/1985: m, 3.07.1985, M. Hartung leg. 62/1985: w, 10.07.1985, M. Hartung leg.

Leucorrhinia rubicunda (L., 1758), Sweden, Skaraborgsland, Tidaholm, Höckensås, St. Öjasjön, N 58.0670 - E 14.0670, 268/1981: m, 18.06.1981, M. Hartung leg. - Sweden, Småland, Linneryd, wood near Rolsmo, N 56.650 - E 15.1670, 34/1985: w, 21.07.1985, M. Hartung leg., ad. - Sweden, Värmland, Vägsjöfors, Långnäs, N 60.30 - E 13.0170, 179/1981: m, 22.06.1981, M. Hartung leg. 266/1981: m, 22.06.1981, M. Hartung leg. 180/1981: w, 24.06.1981, M. Hartung leg. 267/1981: w, 22.06.1981, M. Hartung leg.

Leucorrhinia orientalis Selys, 1887, Russian Federation, Sibiria, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 245/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, nec *circassica*, Bartenev, 1929. 246/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, nec *circassica*, Bartenev, 1929. 257/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973. - Russian Federation, Sibirien, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 258/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, head poss. from female. 259/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, subad. 260/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, head possibly from male. 261/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973. 262/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973. 263/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973. 264/1993: w, 5.07. 1993,

Josef Louda, CSc. coll., Belyshev, 1973. 241/1993: w, 5.07.1993, Josef Louda, CSc. coll., w. dark brownish smoked, Belyshev, 1973, nec *circassica* (Bartenef, 1929).

Leucorrhinia intermedia Bartenef, 1910, Russian Federation, Sibiria, Burjatia, Sajany-Geb., Mondy, N 51.6830 - E 101.0, 243/1993: m, 5.07.1993, Josef Louda, CSc. coll., w. costal region 4 cell beyond nod. yellowish, fw. cubital space. 244/1993: m, 5.07.1993, Josef Louda, CSc. coll., subad., Belyshev, 1973. 265/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 266/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 267/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 268/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 269/1993: m, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 242/1993: w, 5.07.1993, Josef Louda, CSc. coll., w. costal region 2 cell beyond nod. yellowish, fw. cubital space id. 243/1993: w, 5.07.1993, Josef Louda, CSc. coll., w. clear, homoeochrome, Belyshev, 1973. 270/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 271/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 272/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 273/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 274/1993: w, 5.07.1993, Josef Louda, CSc. coll., Belyshev, 1973, Ris, 1912. 275/1993: w, 5.07.1993, Josef Louda, CSc. coll., hw. yellow, bas. to nodus +4 cel. pn., fw. cub. Space at t, Belyshev, 1973.

Trithemis annulata (De Beauvois, 1807), Portugal, Odemira, Barragem de Santa Clara, N 37.50 - W -8.50, 99/1980: m, 18.09.1980, M. Hartung leg., to W. Piper f. Mus. Nakamura, 18.4.1996. 122/1980: w, 18.09.1980, M. Hartung leg., subad. 123/1980: w, 18.09.1980, M. Hartung leg., ad.

Pantala flavescens (Fabricius, 1798), Russian Federation, Primorsk. Reg., Kondratenovka, near Shurmak vil., N 43.10 - E 131.550, 42/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 43/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 44/1998: m, 10.-12.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 60/1998: m, 13.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 61/1998: m, 13.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 91/1998: m, 14.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 92/1998: m, 14.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing, f. 39A, genital, segment 2. 45/46/47/48/1998: 4w, 10.-12.08.1997, Josef Louda, CSc. coll., S. 5 w. add. cross line, Belyshev, 1973, f. 38, wing. - France, Digne, N 44.0870 - E 6.220, 112/1979: m, no D., Berlin 1979.

Table: Species of the Odonata from Europe incl. Russia and excl. Germany

Species	M	W	E/L
01. <i>Atrocalopteryx atrata</i> (Selys, 1853)	1	0	0
02. <i>Calopteryx splendens</i> (Harr., 1780)	19	12	0
03. <i>Calopteryx virgo</i> (L., 1758)	4	0	0
04. <i>Calopteryx haemorrhoidalis</i> (Vand. Linden, 1825)	7	3	0
05. <i>Calopteryx xanthostoma</i> (Charpentier, 1825)	5	1	0
06. <i>Calopteryx orientalis</i> Selys, 1887	4	4	0
07. <i>Calopteryx virgo</i> (L., 1758)	27	26	2
08. <i>Sympecma paedisca</i> (Brauer, 1877)	2	3	0
09. <i>Lestes sponsa</i> (Hansemann, 1823)	12	7	0
10. <i>Lestes dryas</i> Kirby, 1890	1	0	0
11. <i>Lestes virens</i> (Charpentier, 1825)	4	0	0
12. <i>Chalcolestes viridis</i> (Vander Linden, 1825)	2	1	0
13. <i>Chalcolestes parvidens</i> Artobolevski, 1929	0	1	0
14. <i>Ceriagrion tenellum</i> (Villers, 1789)	2	6	0
15. <i>Coenagrion pulchellum</i> (Vander Linden, 1825)	0	1	0
16. <i>Coenagrion puella</i> (L., 1758)	2	1	1
17. <i>Coenagrion scitulum</i> (Rambur, 1842)	2	0	0
18. <i>Coenagrion mercuriale</i> (Charpentier, 1840)	6	5	0
19. <i>Coenagrion hastulatum</i> (Charpentier, 1825)	1	0	0
20. <i>Enallagma cyathigerum</i> (Charp., 1840)	52	31	3
21. <i>Platycnemis pennipes</i> (Pallas, 1771)	4	0	0
22. <i>Pyrrhosoma nymphula</i> (Sulzer, 1776)	6	3	0
23. <i>Ischnura elegans</i> (Vander Linden, 1820)	2	3	0
24. <i>Ischnura pumilio</i> (Charpentier, 1825)	2	2	0
25. <i>Cercion lindenii</i> (Selys, 1840)	0	1	0
26. <i>Enallagma cyathigerum</i> (Charp., 1840)	7	9	0
27. <i>Enallagma deserti</i> (Selys, 1871)	0	2	0
28. <i>Erythromma lindenii</i> (Selys, 1840)	0	1	0
29. <i>Enallagma nigrolineatum</i> Belyshev & Haritonov, 1975)	33	2	0
30. <i>Erythromma viridulum</i> (Charpentier, 1840)	1	0	0
31. <i>Erythromma lindenii</i> (Selys, 1840)	1	1	0
32. <i>Platycnemis pennipes</i> (Pallas, 1771)	5	5	0
33. <i>Platycnemis acutipennis</i> Selys, 1841	2	2	0
34. <i>Platycnemis latipes</i> Rambur, 1842	1	0	0
35. <i>Platycnemis dealbata</i> Selys, 1850	0	1	0
36. <i>Anax imperator</i> Leach in Burmeister, 1815	2	2	0
37. <i>Anax parthenope</i> Selys, 1839	0	2	0
38. <i>Aeshna juncea</i> (L., 1758)	6	11	1
39. <i>Aeshna caerulea</i> (Ström, 1783)	0	3	0
40. <i>Aeshna mixta</i> Latreille, 1805	2	3	0
41. <i>Aeshna crenata</i> Hagen, 1856	16	2	1
42. <i>Aeshna affinis</i> Vander Linden, 1820	1	0	0
43. <i>Aeshna grandis</i> (L., 1758)	2	1	0
44. <i>Isoaeshna isosceles</i> (Mueller, 1767)	1	0	0
45. <i>Brachytron pratense</i> (Müller, 1764)	1	1	0
46. <i>Boyeria irene</i> (Fonscolombe, 1838)	1	0	0

47. <i>Gomphus vulgatissimus</i> (L., 1758)	1	0	0
48. <i>Gomphus simillimus</i> Selys, 1840	1	0	0
49. <i>Gomphus pulchellus</i> Selys, 1840	1	0	1
50. <i>Gomphus graslinii</i> Rambur, 1842	0	0	4
50. <i>Paragomphus genei</i> (Selys, 1841)	1	1	3
52. <i>Onychogomphus uncatus</i> (Charpentier, 1840)	0	0	2
53. <i>Onychogomphus forcipatus</i> (L., 1758)	3	1	0
54. <i>Onychogomphus forcipatus unguiculatus</i> VdL., 1812	1	0	0
56. <i>Ophiogomphus obscurus</i> Bartenev, 1909	1	2	0
57. <i>Cordulia aenea</i> (L., 1758)	1	0	0
58. <i>Somatochlora metallica</i> (Vander Linden, 1825)	14	1	0
59. <i>Somatochlora flavomaculata</i> (Vander Linden, 1825)	2	0	0
60. <i>Cordulegaster boltonii</i> (Donovan, 1807)	0	0	3
61. <i>Somatochlora exuberata</i> Bartenev, 1910	0	2	0
62. <i>Somatochlora alpestris</i> (Selys, 1840)	0	1	0
63. <i>Somatochlora viridiaena</i> (Uhler, 1858)	0	1	0
64. <i>Somatochlora graeseri</i> Selys, 1887	2	0	0
65. <i>Oxygastra curtisi</i> (Dale, 1834)	1	1	3
66. <i>Orthetrum coerulescens</i> (Fabricius, 1798)	3	2	0
67. <i>Orthetrum cancellatum</i> (L., 1758)	6	1	0
68. <i>Orthetrum brunneum</i> (Fonscolombe, 1837)	1	1	0
69. <i>Orthetrum albistylum</i> (Selys, 1848)	2	3	0
70. <i>Libellula fulva</i> Mueller, 1764	0	2	0
71. <i>Libellula quadrimaculata</i> L., 1758	2	1	0
72. <i>Libellula depressa</i> L., 1758	1	0	0
73. <i>Crocothemis erythraea</i> (Brulle, 1832)	3	4	1
74. <i>Sympetrum vulgatum</i> (L., 1758)	8	2	0
75. <i>Sympetrum striolatum</i> (Charp., 1840)	10	7	0
76. <i>Sympetrum sanguineum</i> (Müller, 1764)	29	3	0
77. <i>Sympetrum flaveolum</i> (L., 1758)	4	7	0
78. <i>Sympetrum danae</i> (Sulzer, 1776)	19	1	0
79. <i>Sympetrum pedemontanum</i> (Müller in Allioni, 1766)	0	3	0
80. <i>Sympetrum fonscolombii</i> (Selys, 1840)	5	6	0
81. <i>Sympetrum meridionale</i> (Selys, 1841)	10	2	0
82. <i>Sympetrum depressiusculum</i> (Selys, 1841)	3	4	0
83. <i>Sympetrum infuscatum</i> (Selys, 1883)	10	2	0
84. <i>Sympetrum eroticum</i> (Selys, 1883)	13	7	0
85. <i>Sympetrum parvulum</i> (Bartenef, 1912)	1	0	0
86. <i>Sympetrum uniforme</i> (Selys, 1883)	1	0	0
87. <i>Leucorrhinia orientalis</i> Selys, 1887	5	6	0
88. <i>Leucorrhinia intermedia</i> Bartenev, 1910	7	8	0
89. <i>Trithemis annulata</i> (De Beauvois, 1807)	1	2	0
90. <i>Pantala flavescens</i> (Fabricius, 1798)	1	4	0

Number of datasets: 146

Diskussion

90 Odonata species were identified during the last decades. 146 specimen I have got from several persons.

Contribution to the Odonata from Germany (in german)

Dr. Matthias Hartung

Zusammenfassung und Einführung

Von den 1970er Jahren an hatte ich viele Libellen an verschiedenen Orten in West-Berlin, später auch in der Umgebung und an einigen Orten im damaligen West-Deutschland beobachtet und gesammelt. Von den Mitgliedern der Entomologischen Gesellschaft Orion in Berlin hatte ich viele Libellen aus verschiedenen Orten der Welt inkl. Deutschland erhalten. Auch viele Händler auf der Insektenbörse in Berlin hatten mir Libellen aus Mitteleuropa zugesendet, teilweise aus früheren Jahren.

Methodik



Fig. 17: Bestimmung des Lateraldorn-Index von *Sympetrum vulgatum*, *striolatum* und *vulgatum*.

Die Messung der Breite A und Länge Lateraldorn 9 B, Lateraldorn-Index (B/A) = 0,433 (*Sympetrum vulgatum*), B/A = 0,303 (*S. sanguineum*), B/A = 0,262 (*S. striolatum*). - Measuring of breadth and length of lateral spines 9 B, lateral spines index (B/A) = 0.433 (*Sympetrum vulgatum*), B/A = 0.303 (*S. sanguineum*), B/A = 0.262 (*S. striolatum*, f. 14).

Abkürzungen: Präp. = präpariert, Lb./Lbp. = Labialborsten, Pb. = Prementumborsten, Ld. = Lateralborsten, S. = Schlupfdatum, r. = rechts, l. = links, Sp. = Spannweite, L. x mm = Länge.

Resultate

Die Resultate meiner Identifikationen aus Deutschland von 1969 bis 2024 sind im folgenden Part dargestellt. Die Fundorte sind bei jedem beschriebenen Objekt angegeben. In fig. 14 ist die Grundlage der Bestimmung der Exuvien von *Sympetrum vulgatum*, *sanguineum* und von *striolatum*.

Calopterygidae

Calopteryx splendens (Harr., 1780) (Gebänderte Prachtlibelle), Berlin, Biesenthal, N 52.7330 - O 13.6670, 3/1994: m, 3.07.1993, Michael Woelky leg., Orion Gesellschaft, Berlin. 4/1994: m, 3.07.1993, Michael Woelky leg., Orion Gesellschaft, Berlin. - Berlin, Biesenthal, N 52.7330 - O 13.6670, 36/1995: m, 30.06.1993, Wolfgang Schmöckel leg., 37/1995: m, 30.06.1993, Wolfgang Schmöckel leg., hw. r., dist. hyal. 2,9 mm, abgeben an W. Piper f. Mus. Nakamura, 18.4.1996. 5/1994: w, 3.07.1993, Michael Woelky leg., subad., Orion, abgeben über W. Piper f. Mus. Nakamura, 18.4.1996. 6/1994: w, 3.07.1993, Michael Woelky leg., Orion Gesellschaft, Berlin. 39/1995: w, 30.06.1993, Wolfgang Schmöckel leg., Berlin. - Luckenwalde, neue Parkstrasse, N 52.08360 - O 13.1760, 13/2012: w, 26.07.2012, leg. N. Schumann, E. Schmidt, 1929, f. 8c, Pt. wings. - Berlin, Lübars, N 52.620 - O 13.70, 149/2010: w, 12.07.1971, leg. Heinz Karbaum. - Bayern, Niederbayern, Kallmünz, N 49.4170 - O 11.9670, 270/1990: m, 10.06.1984, O. Woelky leg. 204/1990: m, 15.06.1986, Michael Woelky leg. 205/1990: m, 26.05.1985, Michael Woelky leg., Segment 7-10 fehlen. - Bayern, Niederbayern, Kallmünz, Flußmündungsgebiet Vils/Naab, N 49.4170 - O 11.9670, 38/1995: m, 10.06.1984, Wolfgang Schmöckel leg. - Berlin, Niederlehme, N 52.3220 - O 13.6630, 104/1992: m, 15.07.1975, Peter Salk. 105/1992: m, 15.07.1975, Peter Salk. 106/1992: w, 10.07.1975, Peter Salk, Abd. 7-10 fehlen. - Berlin, Ruhland, An der Schwarzen Pumpe, N 51.4630 - O 13.8710, 35/2003: m, 11.07.2003, M. Woelky leg. 38/2003: w, 11.07.2003, M. Woelky leg.

Calopteryx virgo (L., 1758), Berlin, Biesenthal, N 52.7330 - O 13.6670, 211/1990: m, 4.06.1950, Georg Belter leg., l. hw. Spitze abgebrochen (angeheftet). 212/1990: m, 4.06.1950, Georg Belter leg., app. sup. und 10. S. Tergit fehlen. - Bayern, Frankenwald, Wallenfels, Bach, N 50.250 - O 11.4670, 4/1969: w, 5.08.1969, M. Hartung leg., L. 49 mm, Sp. 64 mm, Schloßberg, Geuserberg. - Brandenburg, Fränkische Schweiz, Waischenfeld, Fluß Wisent, N 49.8330 - O 11.3330, 65/1981: m, 7.06.1981, M. Hartung leg., Flügel grün metallisch, f. *septentrionale* Selys. - Berlin, Hohenlandsberg, 359m, N 49.59050 - O 10.28550. 28/2006: m, 21.06.2003, P. Weigert leg., Schmidt, 1929. 29/2006: m, 21.06.2003, P. Weigert leg., Schmidt, 1929. 30/2006: w, 21.06.2003, P. Weigert leg., Schmidt, 1929, f. 8, Flügel, Pt. - Niedersachsen, Schledehausen, Osnabrück, N 52.2670 - O 8.2330, 162/1986: m, 1.07.1986, Torsten Möhlmann leg., gemeldet n. NS-Kataster ohne Gewässerdetail.