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Key to Families of Macroinvertebrates in European Freshwaters

Wolfgang Lechthaler



2023

Title: Macrozoobenthos - Key to Families of Macroinvertebrates in European Freshwaters; DVD-Edition
Author: Wolfgang Lechthaler (2023)

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ISBN: 978-3-9501839-5-5; Made and printed in Austria

MZB Families 23 - Produkt Information

Titel

Lechthaler W. (2023): Macrozoobenthos – Key to Families of Macroinvertebrates in European Freshwaters. DVD-Edition/Download, Austria

Autor

Lechthaler Wolfgang

ISBN

978-3-9501839-5-5

Preis

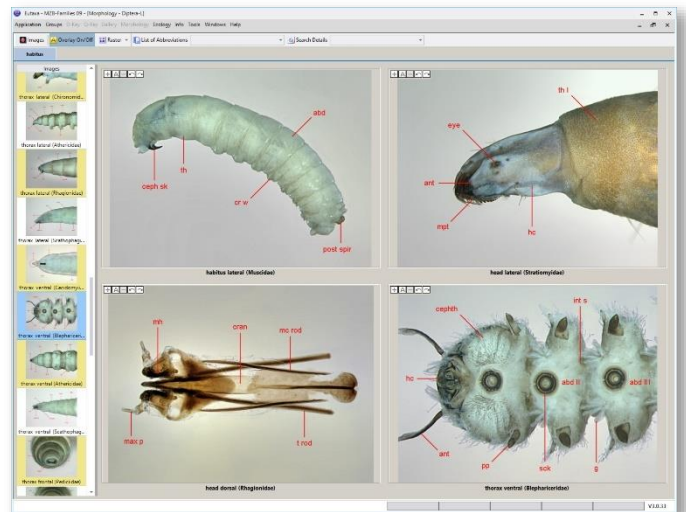
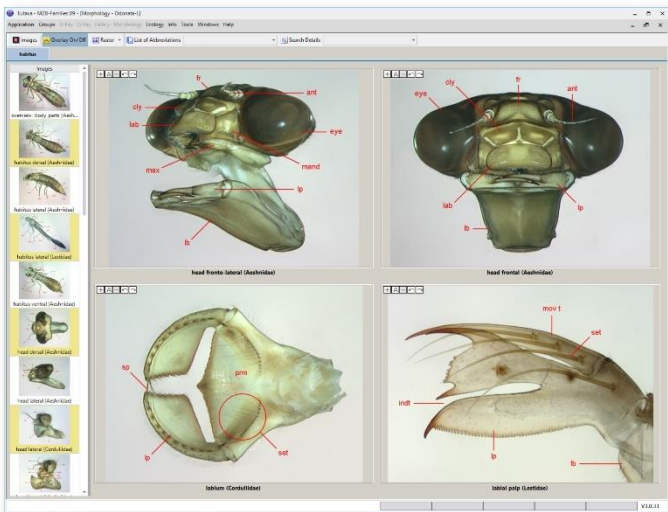
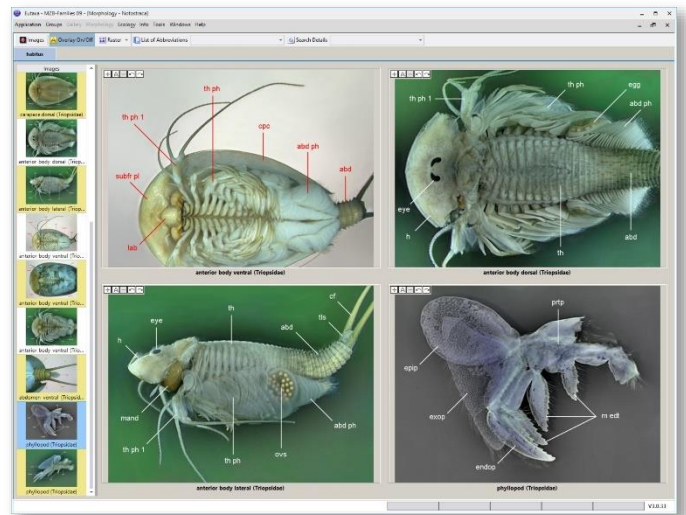
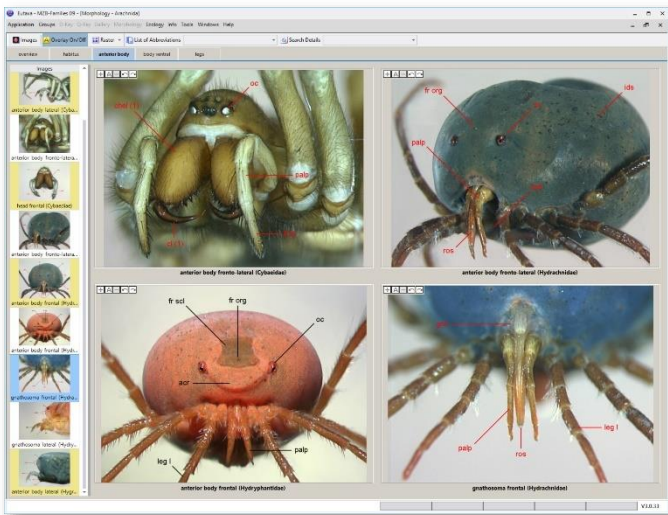
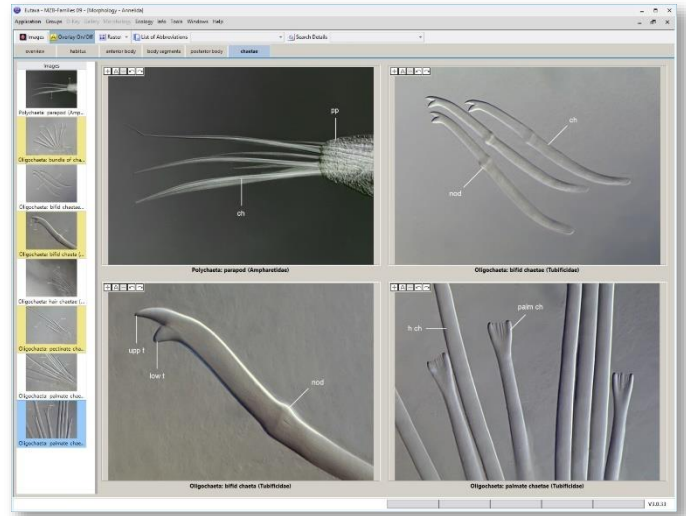
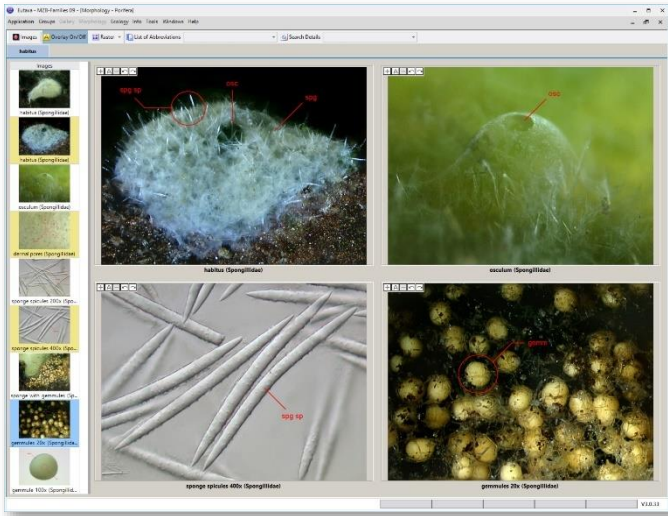
€ 550,00

Dieses in englischer Sprache erhältliche Produkt ist ein umfassendes taxonomisches Programm für die Bestimmung von Makroinvertebraten in europäischen Binnengewässern. 263 Präparate aus 222 Familien sind darin in mehr als 14.000 Abbildungen dokumentiert, die aus einer Bilddatenbank abgefragt und miteinander verglichen werden können. Zusätzliche Informationen sollen das Wissen über die Ökologie, Systematik und Verbreitung der Familien europäischer aquatischer Wirbelloser erweitern.

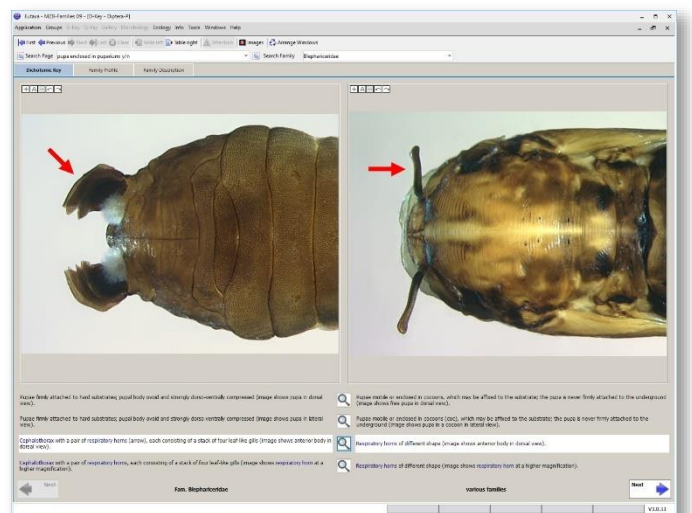
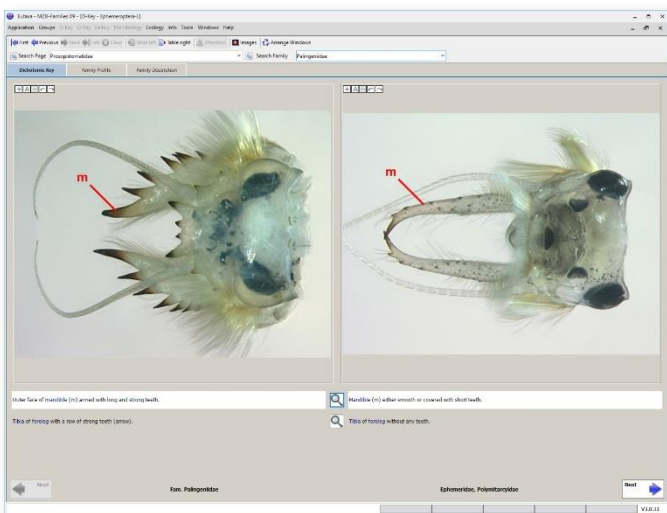
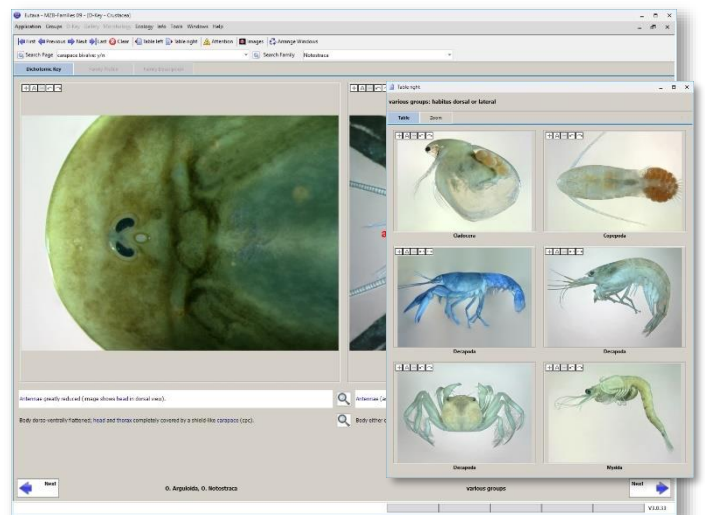
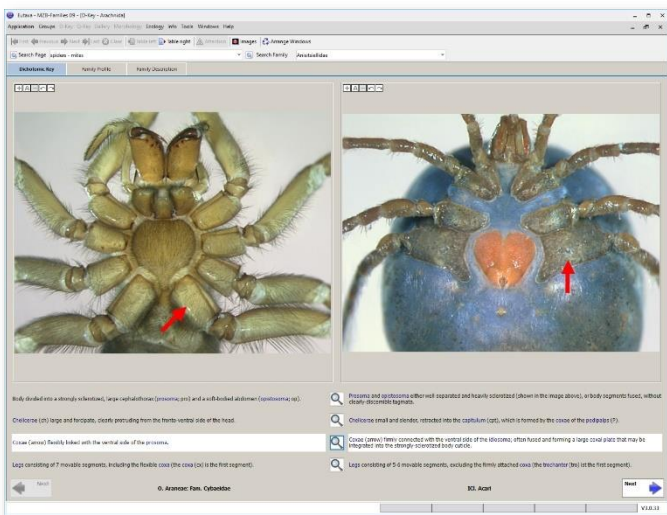
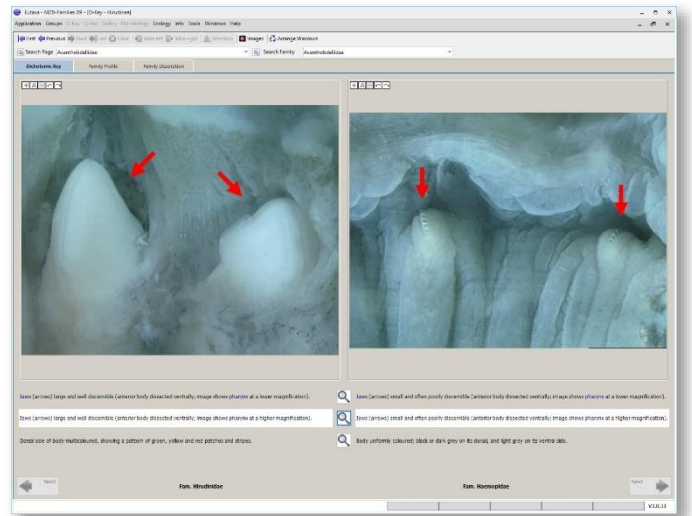
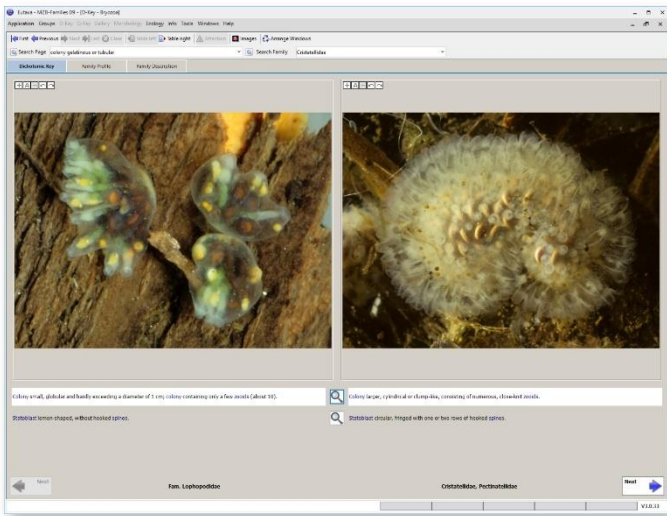
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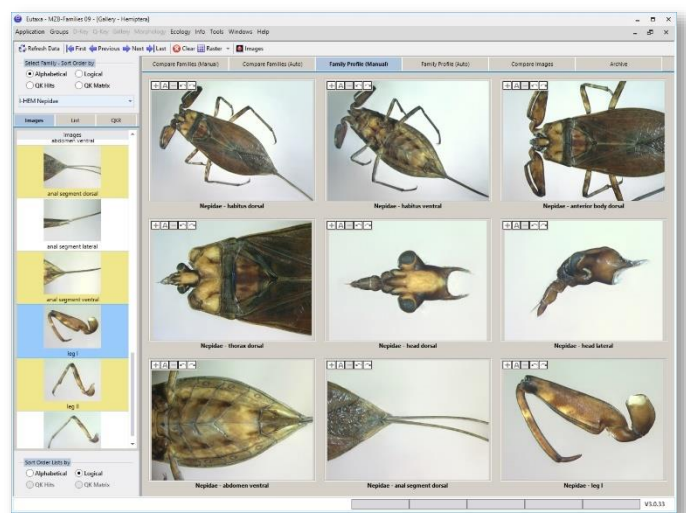
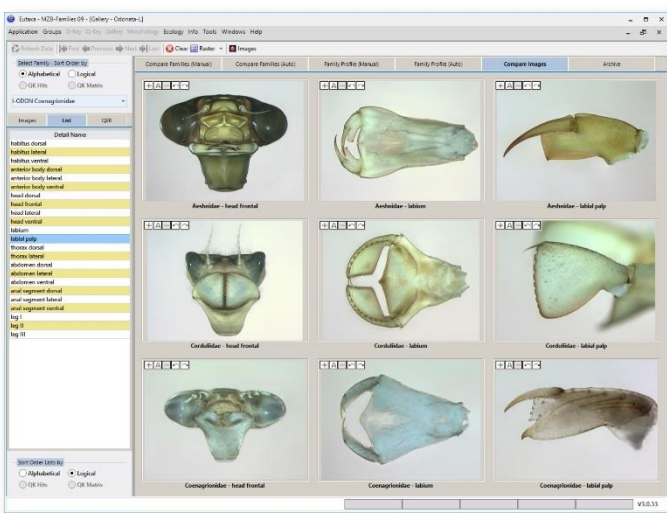
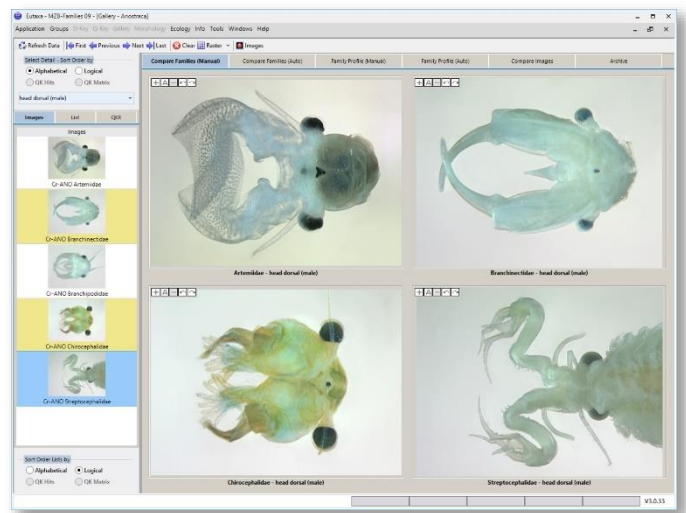
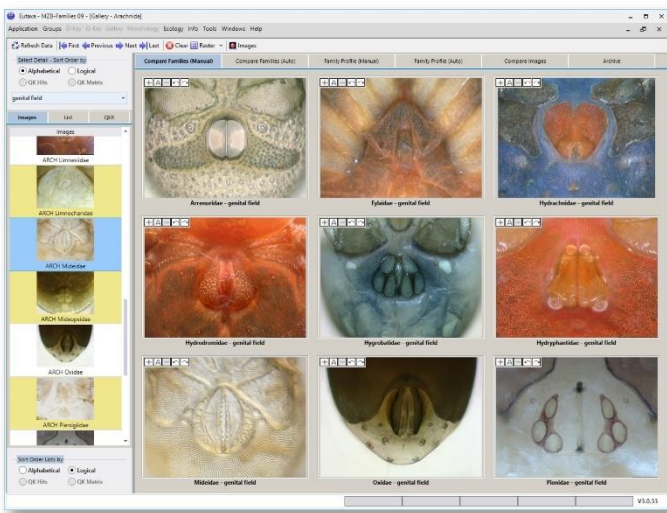
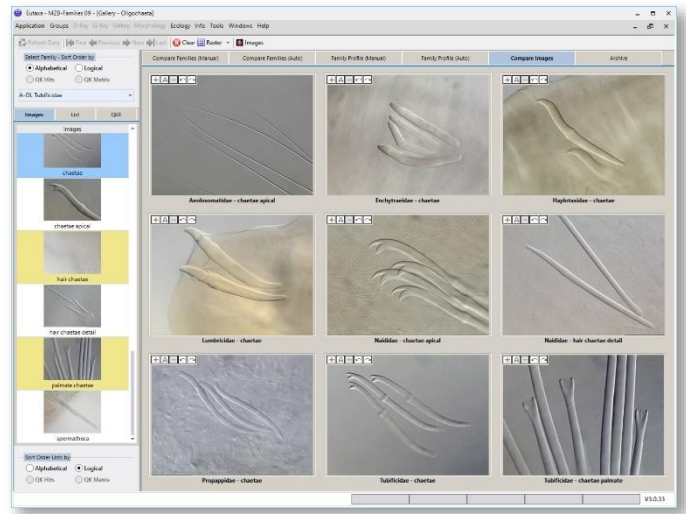
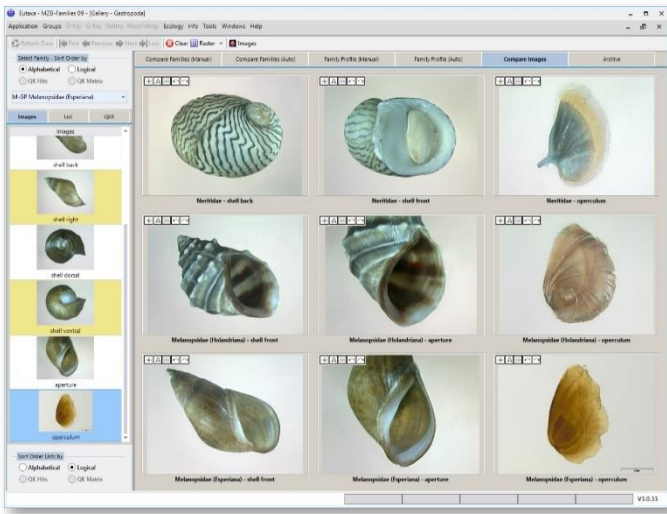
Programm-Oberfläche: Morphologie



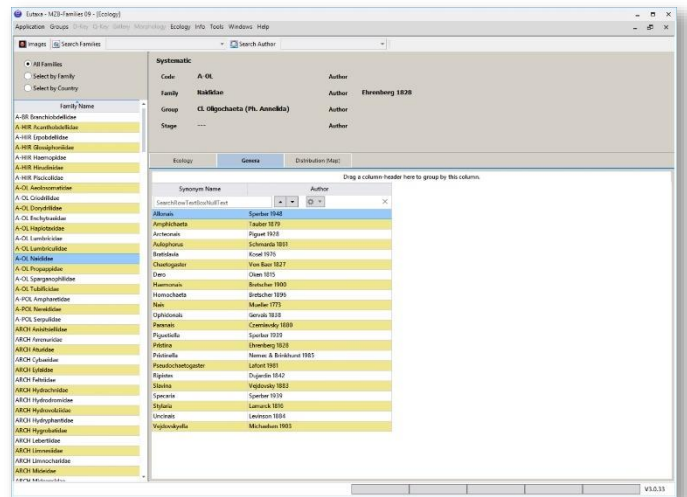
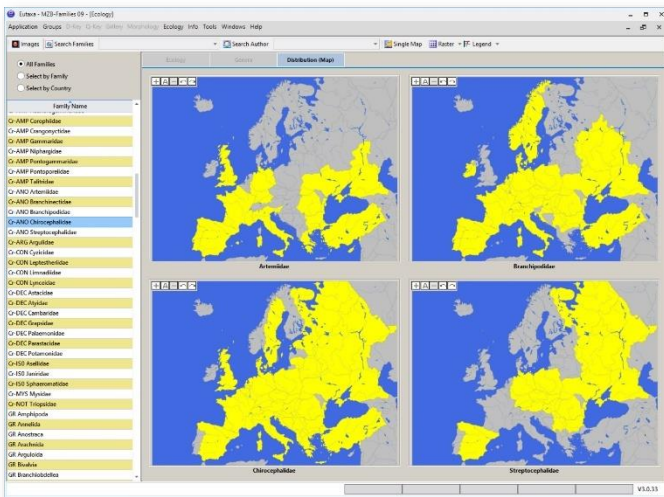
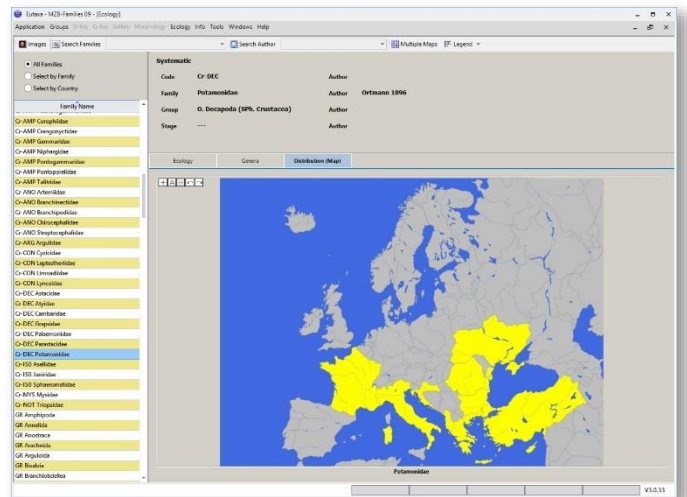
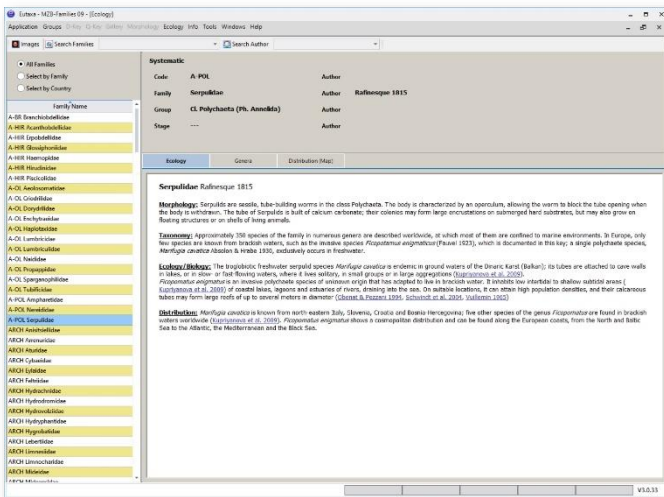
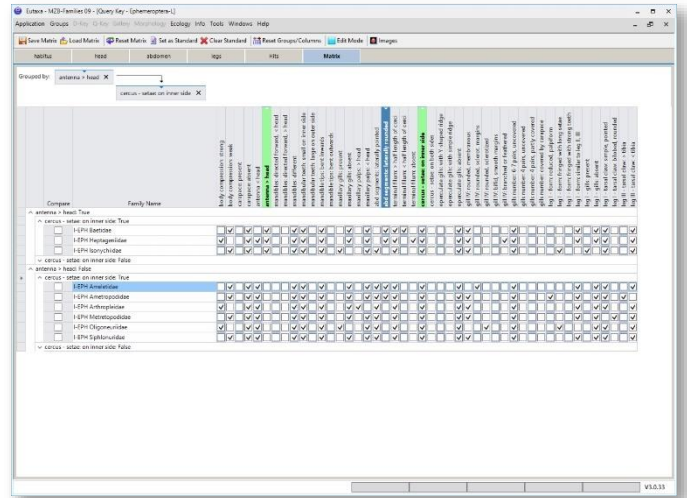
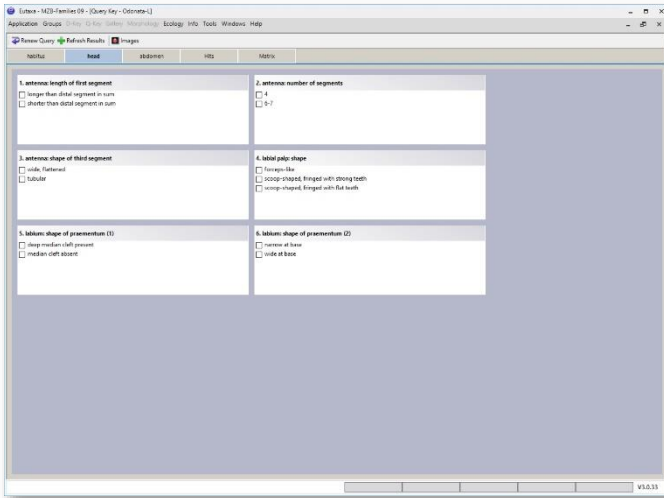
Programm-Oberfläche: D-Key (Dichotomer Schlüssel)



Programm-Oberfläche: Galerie (Referenz-Sammlung)



Programm-Oberfläche: Query Key, Ökologie (Biologie, Verbreitung, Gattungen)



Liste der im Schlüssel behandelten Familien

Phylum Porifera

Spongillidae Gray, 1867

Phylum Cnidaria

Clavidae McGrady, 1859

Hydridae Dana, 1846

Olindiadidae Haeckel, 1879

Phylum Bryozoa

Cristatellidae Allman, 1856

Fredericellidae Hyatt, 1868

Lophopodidae Rogick, 1935

Paludicellidae Allman, 1885

Pectinatellidae Lacourt, 1968

Plumatellidae Allman, 1856

Klasse Gastropoda

Acroloxidae Thiele, 1931

Assimineidae H. & A. Adams, 1856

Bithyniidae Troschel, 1857

Ellobiidae Pfeiffer, 1854

Emmericiidae Brusina, 1870

Hydrobiidae Troschel, 1857

Lymnaeidae Lamarck, 1812

Melanopsidae Adams & Adams, 1854

Neritidae Lamarck, 1809

Physidae Fitzinger, 1833

Planorbidae Rafinesque, 1815

Succineidae Beck, 1837

Thiaridae Troschel, 1857

Valvatidae Gray, 1840

Viviparidae Lamarck, 1809

Klasse Bivalvia

Corbiculidae Gray, 1847

Dreissenidae Gray, 1840

Margaritiferidae Haas, 1940

Sphaeriidae Deshayes, 1854

Unionidae Rafinesque, 1820

Phylum Annelida

Klasse Polychaeta

Ampharetidae Malmgren, 1865

Nereididae Blainville, 1818

Serpulidae Rafinesque, 1815

Klasse Oligochaeta

Aeolosomatidae Beddard, 1895

Criodrilidae Vejdovsky, 1884

Dorydrilidae Grube, 1851

Enchytraeidae Vejdovsky, 1879

Haplotaxidae Michaelsen, 1900

Lumbricidae Rafinesque-Schmaltz, 1815

Lumbriculidae Vejdovsky, 1884

Naididae Ehrenberg, 1828

Propappidae Coates, 1986

Sparganophilidae Michaelsen, 1918

Tubificidae Vejdovsky, 1876

Klasse Branchiobdellea

Branchiobdellidae Grube, 1851

Klasse Hirudinea

Acanthobdellidae Grube, 1851

Erpobdellidae Blanchard, 1894

Glossiphoniidae Vaillant, 1890

Haemopidae Richardson, 1969

Hirudinidae Whitman, 1886

Piscicolidae Johnston, 1865

Phylum Arthropoda

Klasse Arachnida

Anisitsiellidae Koenike, 1910

Arrenuridae Thor, 1900

Aturidae Thor, 1900

Cybaeidae Banks, 1892

Eylaidae Leach, 1815

Feltriidae Thor, 1929

Hydrachnidae Leach, 1815

Hydrodromidae Viets, 1936

Hydrovolziidae Thor, 1905

Hydryphantidae Piersig, 1896

Hygrobatidae Koch, 1842

Lebertiidae Thor, 1900

Limnesiidae Thor, 1900

Limnocharidae Grube, 1859

Mideidae Thor, 1911

Mideopsidae Koenike, 1910

Oxidae Viets, 1926

Piersigiidae Oudemans, 1902

Pionidae Thor, 1900

Sperchontidae Thor, 1900

Teutoniidae Koenike, 1910

Torrenticolidae Piersig, 1902

Unionicolidae Oudemans, 1909

Subphylum Crustacea

Ordnung Anostraca

Artemiidae Grochowski, 1896

Branchinectidae Daday, 1910

Branchipodidae Simon, 1886

Chirocephalidae Daday, 1910

Streptocephalidae Daday, 1910

Ordnung Conchostraca

Cyzicidae Stebbing, 1910
 Leptestheriidae Daday, 1923
 Limnadiidae Daday, 1923
 Lynceidae Baird, 1845

Ordnung Notostraca

Triopsidae Keilhack, 1909

Ordnung Arguloidea

Argulidae Leach, 1819

Ordnung Mysida

Mysidae Haworth, 1825

Ordnung Amphipoda

Acanthogammaridae Garjajeff, 1901
 Corophiidae Dana, 1849
 Crangonyctidae Bousfield, 1973
 Gammaridae Leach, 1814
 Niphargidae Bousfield, 1977
 Pontogammaridae Bousfield, 1977
 Pontoporeiidae Sars, 1882
 Talitridae Stebbing, 1906

Ordnung Isopoda

Asellidae Rafinesque, 1815
 Janiridae Sars, 1899
 Sphaeromatidae Latreille, 1825

Ordnung Decapoda

Astacidae Latreille, 1802
 Atyidae De Haan, 1852
 Cambaridae Hobbs, 1942
 Grapsidae MacLeay, 1838
 Palaemonidae Rafinesque, 1815
 Parastacidae Huxley, 1879
 Potamonidae Ortmann, 1896

Klasse Insecta

Ordnung Ephemeroptera (Larven)

Ameletidae McCafferty, 1991
 Ametropodidae Bengtsson, 1913
 Arthropleidae Balthasar, 1937
 Baetidae Leach, 1815
 Caenidae Newman, 1853
 Ephemerellidae Klapálek, 1909
 Ephemeridae Latreille, 1810
 Heptageniidae Needham, 1901
 Isonychiidae Burks, 1953
 Leptophlebiidae Banks, 1900
 Metretopodidae Traver, 1935
 Neoephemeridae Traver, 1935
 Oligoneuriidae Ulmer, 1914
 Palingeniidae Albarda, 1888
 Polymitarcyidae Banks, 1900
 Potamanthidae Albarda, 1888

Prosopistomatidae Laméere, 1917
 Siphonuridae Ulmer, 1920 (1888)

Ordnung Odonata (Larven)

Aeshnidae Rambur, 1842
 Calopterygidae Sélys, 1850
 Coenagrionidae Kirby, 1890
 Cordulegastridae Calvert, 1893
 Corduliidae Kirby, 1890
 Gomphidae Rambur, 1842
 Lestidae Calvert, 1901
 Libellulidae Rambur, 1842
 Platycnemidae Tillyard, 1917

Ordnung Plecoptera (Larven)

Capniidae Klapálek, 1905
 Chloroperlidae Okamoto, 1912
 Leuctridae Klapálek, 1905
 Nemouridae Newman, 1853
 Perlidae Latreille, 1802
 Perlodidae Klapálek, 1912
 Taeniopterygidae Klapálek, 1905

Ordnung Hemiptera (Adulte)

Aphelocheiridae Fieber, 1851
 Belostomatidae Leach, 1815
 Corixidae Leach, 1815
 Gerridae Leach, 1815
 Hebridae Amyot & Serville, 1843
 Hydrometridae Billberg, 1820
 Mesoveliidae Douglas & Scott, 1867
 Naucoridae Fallén, 1814
 Nepidae Latreille, 1802
 Notonectidae Leach, 1815
 Pleidae Fieber, 1851
 Veliidae Amyot & Serville, 1843

Ordnung Megaloptera (Larven)

Sialidae Leach, 1815

Ordnung Neuroptera (Larven)

Osmylidae Leach, 1815
 Sisyridae Handlirsch, 1908

Ordnung Coleoptera (Larven & Adulte)

Chrysomelidae Latreille, 1802
 Curculionidae Latreille, 1802
 Dryopidae Billberg, 1820
 Dytiscidae Leach, 1815
 Elmidae Curtis, 1830
 Gyrinidae Latreille, 1810
 Haliplidae Aube, 1836
 Helophoridae Leach, 1815
 Hydraenidae Mulsant, 1844
 Hydrochidae Thomson, 1859
 Hydrophilidae Latreille, 1802
 Hygrobiidae Ganglbauer, 1892
 Noteridae Bertrand, 1928

Psephenidae Lacordaire, 1854
Scirtidae Fleming, 1821
Spercheidae Erichson, 1837

Ordnung Trichoptera (Larven)

Apataniidae Wallengren, 1886
Beraeidae Wallengren, 1891
Brachycentridae Ulmer, 1903
Ecnomidae Ulmer, 1903
Glossosomatidae Wallengren, 1891
Goeridae Ulmer, 1903
Helicopsychidae Ulmer, 1906
Hydropsychidae Curtis, 1835
Hydroptilidae Stephens, 1836
Lepidostomatidae Ulmer, 1903
Leptoceridae Leach, 1815
Limnephilidae Kolenati, 1848
Molannidae Wallengren, 1891
Odontoceridae Wallengren, 1891
Philopotamidae Stephens, 1829
Phryganeidae Leach, 1815
Polycentropodidae Ulmer, 1903
Psychomyiidae Walker, 1852
Ptilocolepidae Martynov, 1913
Rhyacophilidae Stephens, 1836
Sericostomatidae Stephens, 1836
Uenoidae Iwata, 1927

Ordnung Lepidoptera (Larven)

Crambidae Latreille, 1810

Ordnung Diptera (Larven & Puppen)

Athericidae Stuckenberg, 1973
Bibionidae Fleming, 1821
Blephariceridae Loew, 1861
Cecidomyiidae Newman, 1834
Ceratopogonidae Newman, 1834
Chaoboridae Edwards, 1920
Chironomidae Newman, 1834
Culicidae Stephens, 1829
Cylindrotomidae Schiner, 1863
Dixidae Schiner, 1868
Dolichopodidae Latreille, 1809
Empididae Latreille, 1804
Ephydriidae Zetterstedt, 1837
Fanniidae Schnabl, 1911
Limoniidae Speiser, 1909
Muscidae Latreille, 1802
Pediciidae Osten-Sacken, 1860
Psychodidae Newman, 1834
Ptychopteridae Osten-Sacken, 1862
Rhagionidae Latreille, 1802
Scathophagidae Robineau-Desvoidy, 1830
Scatopsidae Newman, 1834
Sciomyzidae Fallén, 1820
Simuliidae Newman, 1834
Stratiomyiidae Latreille, 1804
Syrphidae Latreille, 1802
Tabanidae Latreille, 1802
Thaumaleidae Bezzi, 1913
Tipulidae Latreille, 1802
Trichoceridae Kertesa, 1902