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# Products



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## Key to Larvae, Pupae and Males from Central and Western Europe

Wolfgang Lechthaler

2023



**Title:** Culicidae - Key to Larvae, Pupae and Males from Central and Western Europe; DVD-Edition  
**Author:** Wolfgang Lechthaler (2023)

**Copyright:** 2023 by Wolfgang Lechthaler; Eutaxa; lechthaler@eutaxa.com; www.eutaxa.com

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## Culicidae 23 - Product Information

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### Author

Lechthaler Wolfgang

### ISBN

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### Price

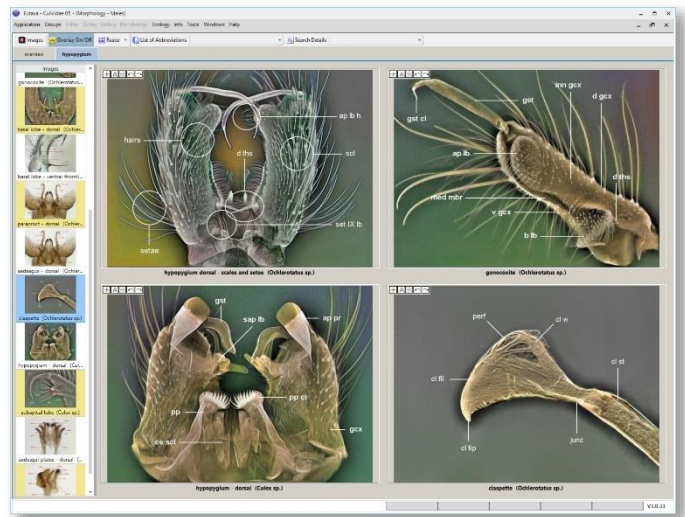
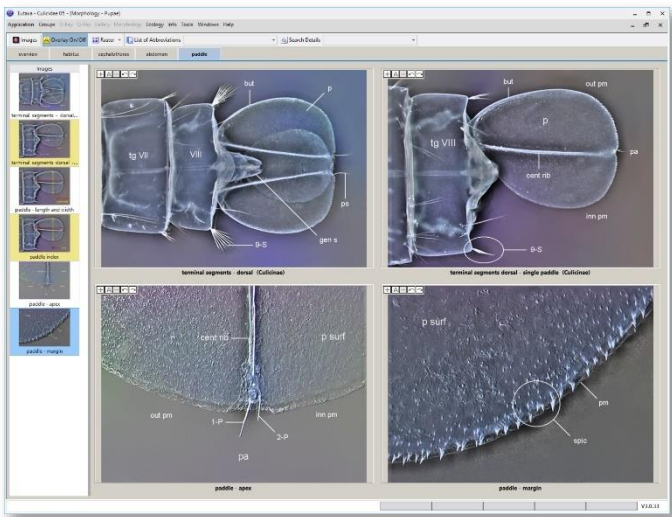
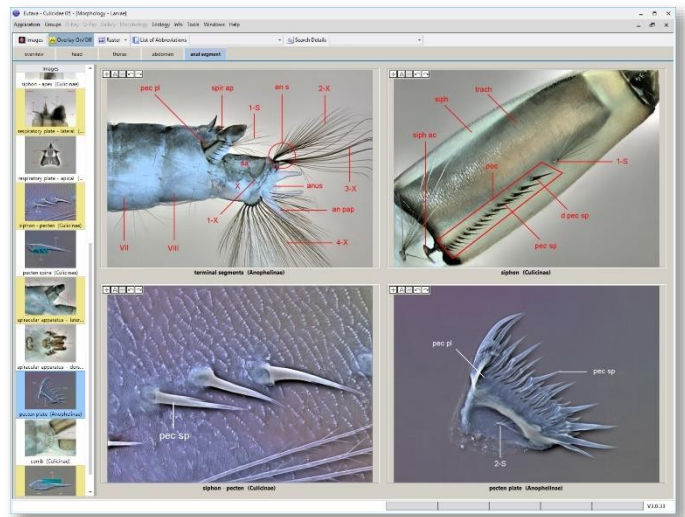
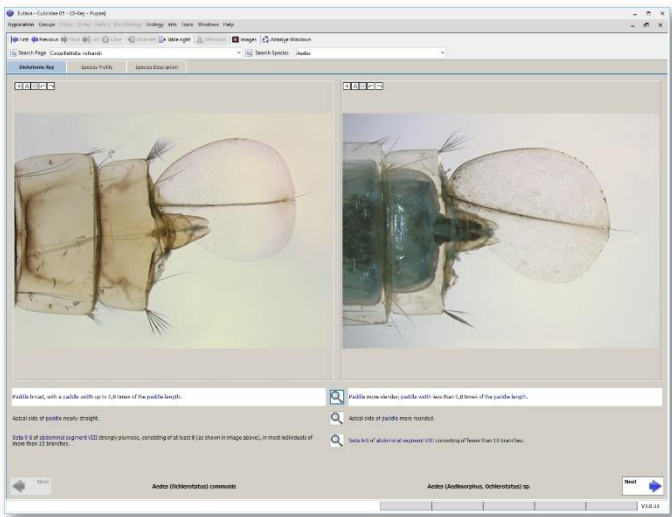
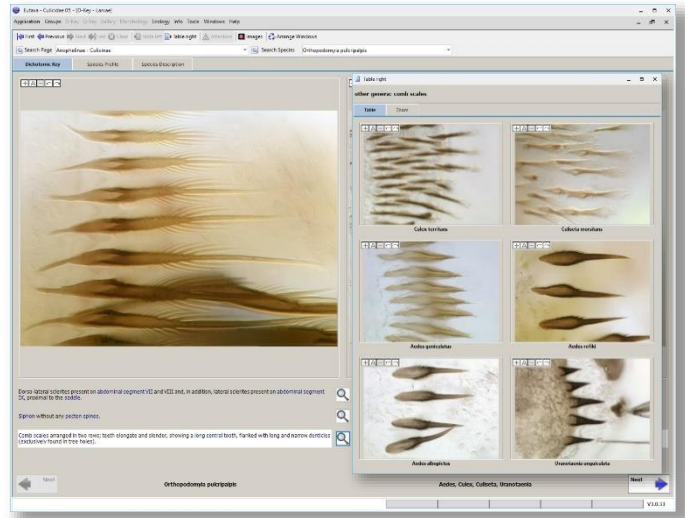
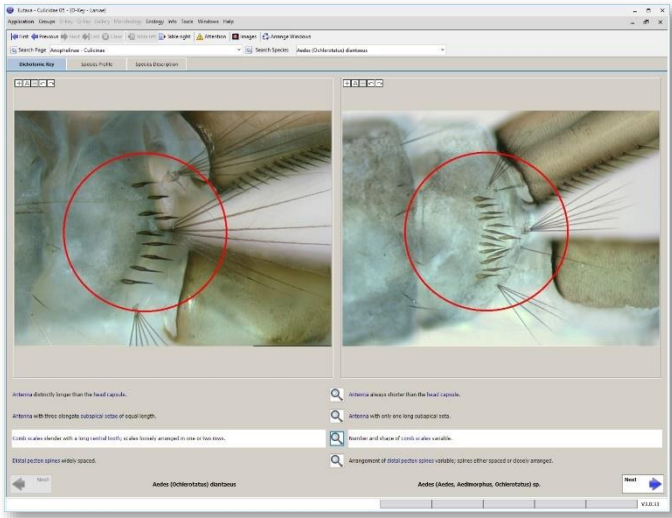
€ 450,00

This product offers a versatile application for identifying larvae, pupae and males of the family Culicidae (O. Diptera, SO. Nematocera). About 57 species of Central- and Western Europe, including the British Isles, are documented in detail and numerous illustrations of relevant morphological characters can be queried from an extensive picture database and compared with each other. A range of ecological and systematic dates shall enhance the knowledge of this invertebrate group, significant for the classification of standing waters and important as vectors of serious diseases to humans and livestock.

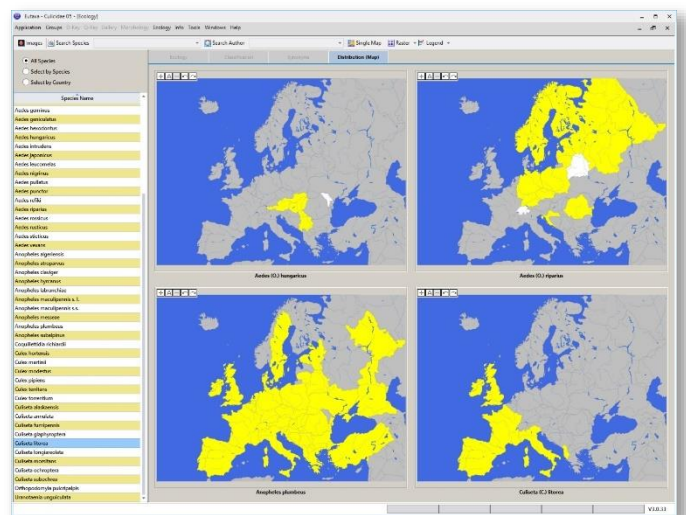
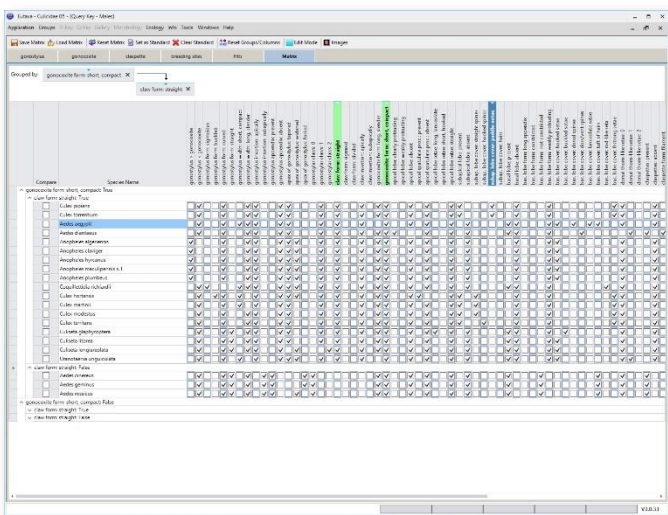
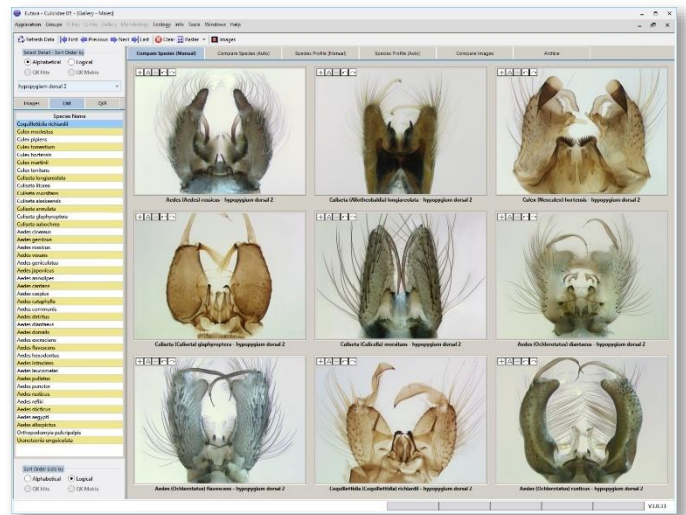
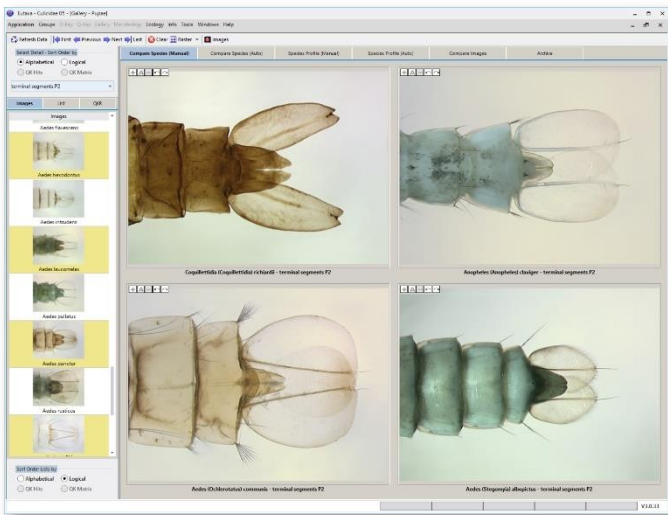
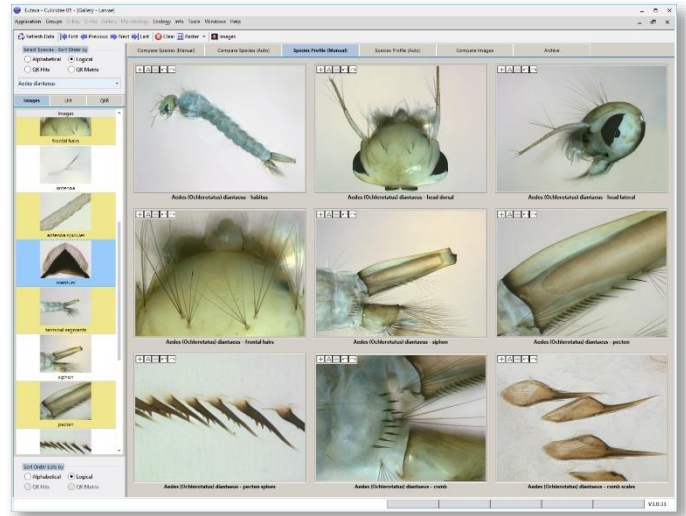
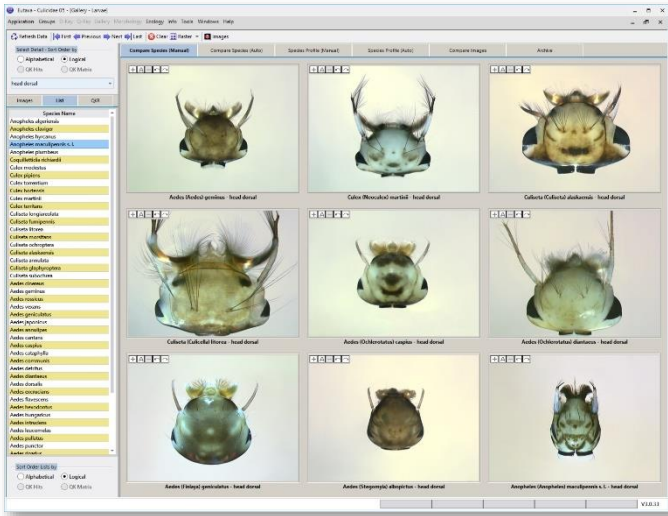
More information about this product, how to order, and a sample of images from the picture data base is given under the internet address [www.eutaxa.com](http://www.eutaxa.com).

For questions, concerning this product, please send an E-Mail to [lechthaler@eutaxa.com](mailto:lechthaler@eutaxa.com).

Software Images: D-Key, Morphology



## Software Images: Gallery, Query Key, Ecology



**List of Species, covered by the Key**

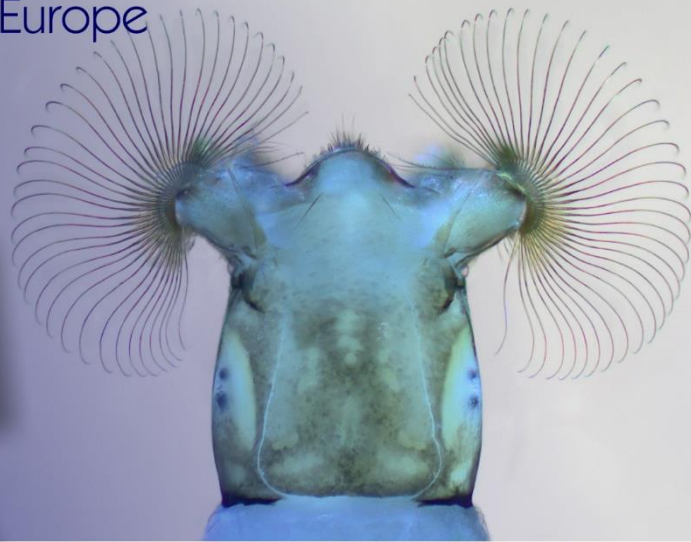
Anopheles (Anopheles) algeriensis Theobald, 1903  
 Anopheles (Anopheles) atroparvus Van Thiel, 1927  
 Anopheles (Anopheles) claviger (Meigen, 1804)  
 Anopheles (Anopheles) hyrcanus (Pallas, 1771)  
 Anopheles (Anopheles) labbranchiae Falleroni, 1926  
 Anopheles (Anopheles) maculipennis s. s. Meigen, 1818  
 Anopheles (Anopheles) messeae Falleroni, 1926  
 Anopheles (Anopheles) plumbeus Stephens, 1828  
 Anopheles (Anopheles) subalpinus Hackett & Lewis, 1935  
 Aedes (Aedes) cinereus Meigen, 1818  
 Aedes (Aedes) geminus Peus, 1970  
 Aedes (Aedes) rossicus Dolbeškin, Gorickaja & Mitrofanova, 1930  
 Aedes (Aedimorphus) vexans (Meigen, 1830)  
 Aedes (Finlaya) geniculatus (Olivier, 1791)  
 Aedes (Hulecoeteomyia) japonicus (Theobald, 1901)  
 Aedes (Ochlerotatus) annulipes (Meigen, 1830)  
 Aedes (Ochlerotatus) cantans (Meigen, 1818)  
 Aedes (Ochlerotatus) caspius (Pallas, 1771)  
 Aedes (Ochlerotatus) cataphylla (Dyar, 1916)  
 Aedes (Ochlerotatus) communis (De Geer, 1776)  
 Aedes (Ochlerotatus) cyprius (Ludlow, 1920)  
 Aedes (Ochlerotatus) detritus (Haliday, 1833)  
 Aedes (Ochlerotatus) diantaeus (Howard, Dyar & Knab, 1913)  
 Aedes (Ochlerotatus) dorsalis (Meigen, 1830)  
 Aedes (Ochlerotatus) excrucians (Walker, 1856)  
 Aedes (Ochlerotatus) flavescens (Müller, 1764)  
 Aedes (Ochlerotatus) hexodontus (Dyar, 1916)  
 Aedes (Ochlerotatus) hungaricus (Mihályi, 1955)  
 Aedes (Ochlerotatus) intrudens (Dyar, 1919)  
 Aedes (Ochlerotatus) leucomelas (Meigen, 1804)  
 Aedes (Ochlerotatus) nigrinus (Eckstein, 1918)  
 Aedes (Ochlerotatus) pullatus (Coquillett, 1904)  
 Aedes (Ochlerotatus) punctor (Kirby, 1837)  
 Aedes (Ochlerotatus) refiki (Medschid, 1928)  
 Aedes (Ochlerotatus) riparius (Dyar & Knab, 1907)  
 Aedes (Ochlerotatus) rusticus (Rossi, 1790)  
 Aedes (Ochlerotatus) sticticus (Meigen, 1838)  
 Aedes (Stegomyia) aegypti (Linnaeus, 1762)  
 Aedes (Stegomyia) albopictus Skuse, 1895  
 Coquillettidia (Coquillettidia) richiardii (Ficalbi, 1889)  
 Culex (Barraudius) modestus Ficalbi, 1889  
 Culex (Culex) pipiens pipiens Linnaeus, 1758  
 Culex (Culex) pipiens pipiens *biotype molestus* Forskal, 1775  
 Culex (Culex) torrentium Martini, 1925  
 Culex (Neoculex) hortensis Ficalbi, 1889  
 Culex (Neoculex) martinii Medschid, 1930  
 Culex (Neoculex) territans Walker, 1856

Culiseta (Allotheobaldia) longiareolata (Macquart, 1838)  
Culiseta (Culicella) fumipennis (Stephens, 1825)  
Culiseta (Culicella) litorea (Shute, 1928)  
Culiseta (Culicella) morsitans (Theobald, 1901)  
Culiseta (Culicella) ochroptera (Peus, 1935)  
Culiseta (Culiseta) alaskaensis (Ludlow, 1906)  
Culiseta (Culiseta) annulata (Schrank, 1776)  
Culiseta (Culiseta) glaphyroptera (Schiner, 1864)  
Culiseta (Culiseta) subochrea (Edwards, 1921)  
Orthopodomyia (Orthopodomyia) pulcripalpis (Rondani, 1872)  
Uranotaenia (Pseudoficalbia) unguiculata Edwards, 1913

## Key to Larvae and Pupae from Central and Western Europe

Wolfgang Lechthaler & Manfred Car

2023



**Title:** Simuliidae - Key to Larvae and Pupae from Central and Western Europe; DVD-Edition  
**Authors:** Wolfgang Lechthaler & Manfred Car (2023)

**Copyright:** 2023 by Wolfgang Lechthaler; Eutaxa; lechthaler@eutaxa.com; www.eutaxa.com

**ISBN:** 978-3-9501839-1-7; Made and printed in Austria

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### Authors

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### ISBN

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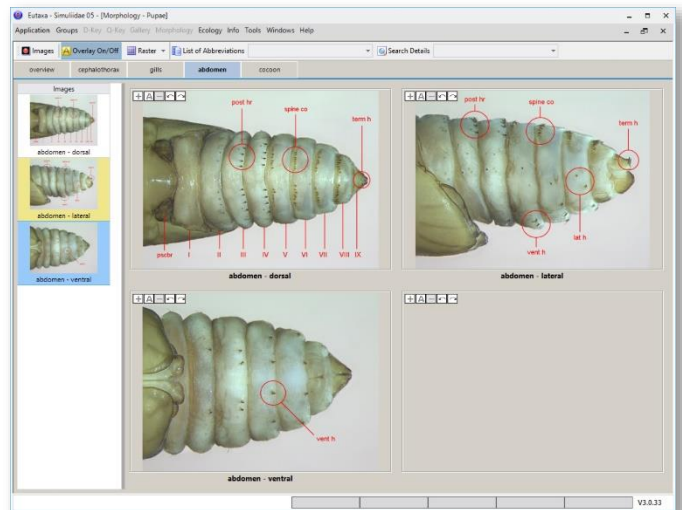
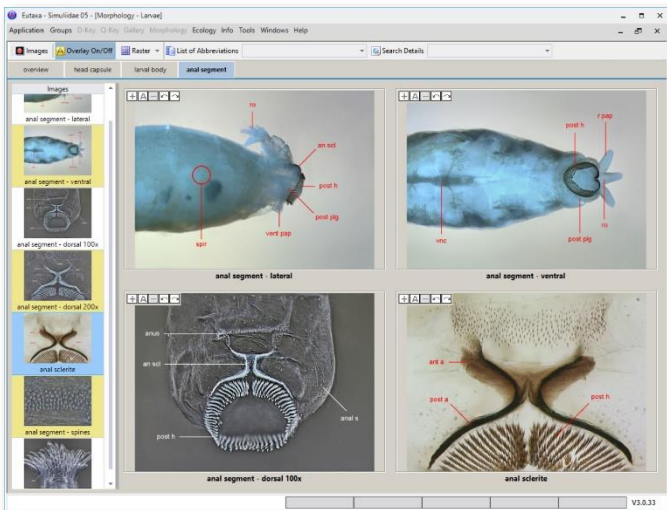
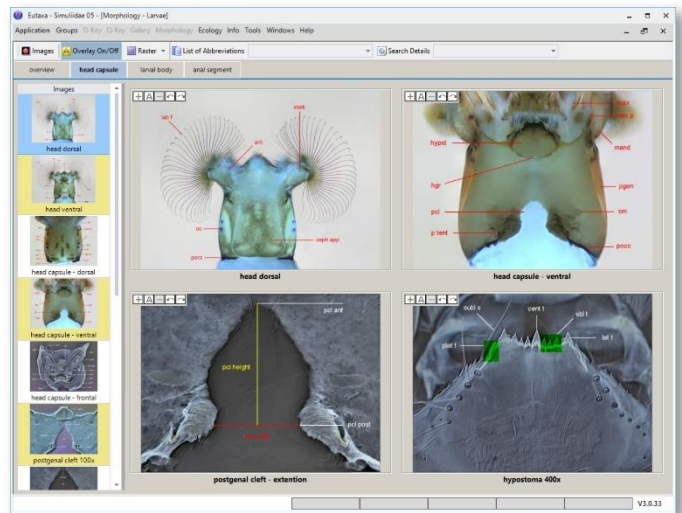
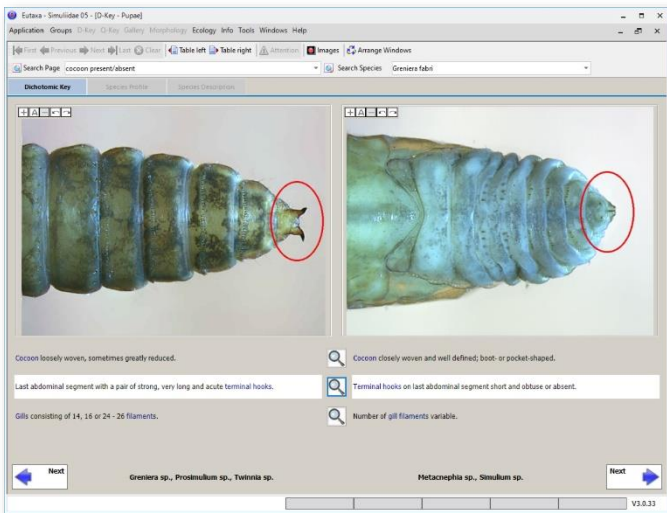
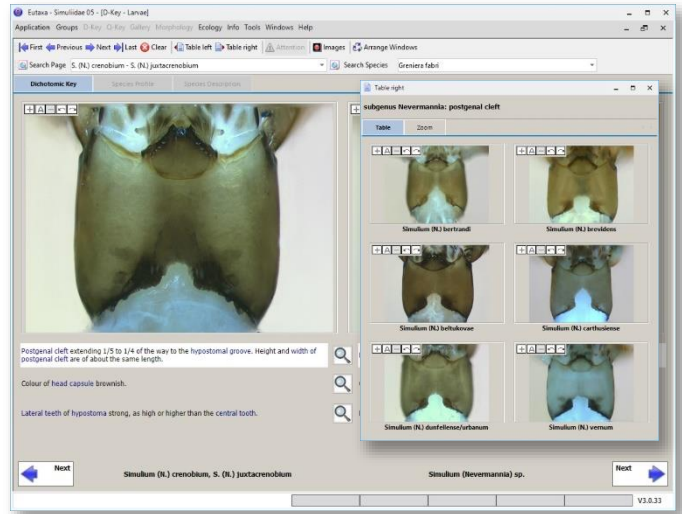
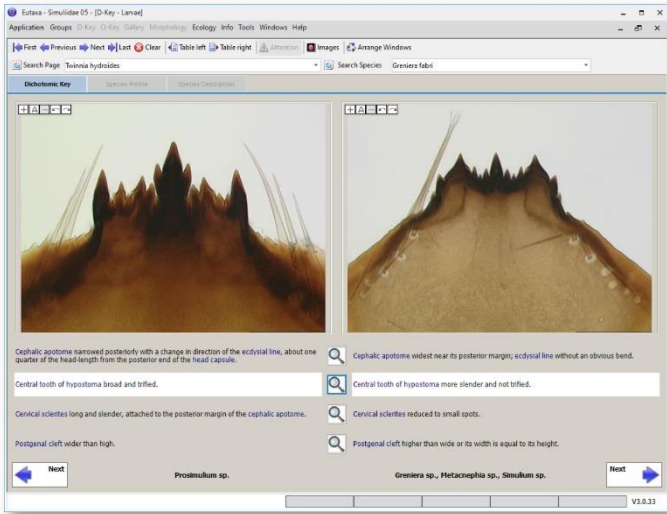
This product offers a versatile application for identifying larvae and pupae of the family Simuliidae (O. Diptera, SO. Nematocera). 68 species of Central- and Western Europe, including the British Isles, are documented in detail and numerous illustrations of relevant morphological characters can be queried from an extensive picture database and compared with each other. A range of ecological and systematic dates shall enhance the knowledge of this invertebrate group, significant for the classification of running waters and important as vectors of serious diseases to humans and livestock.

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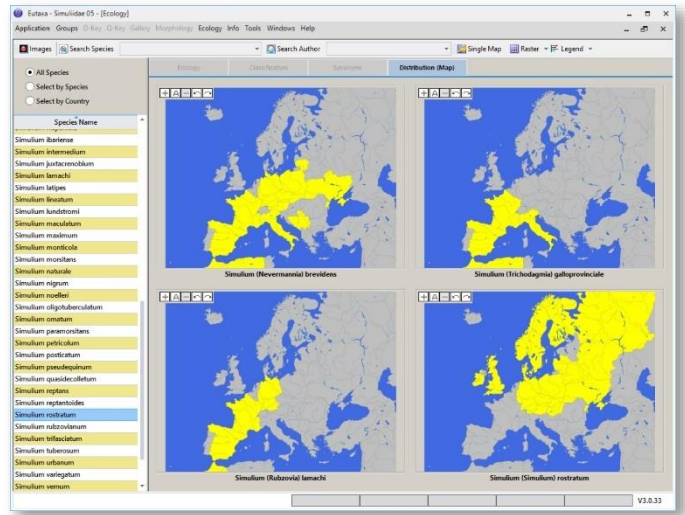
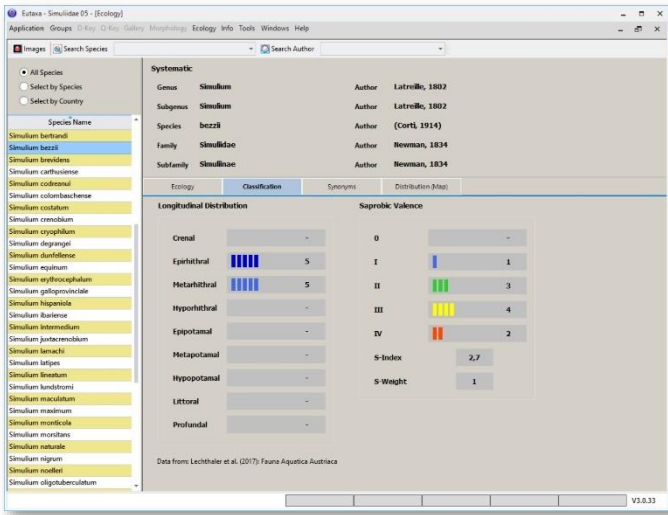
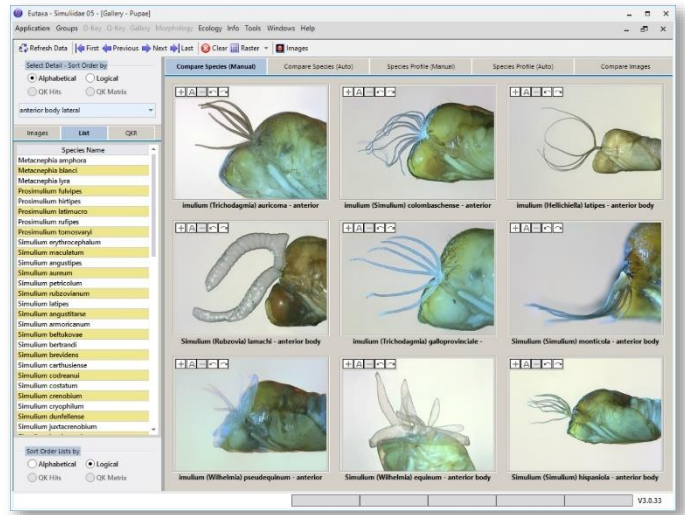
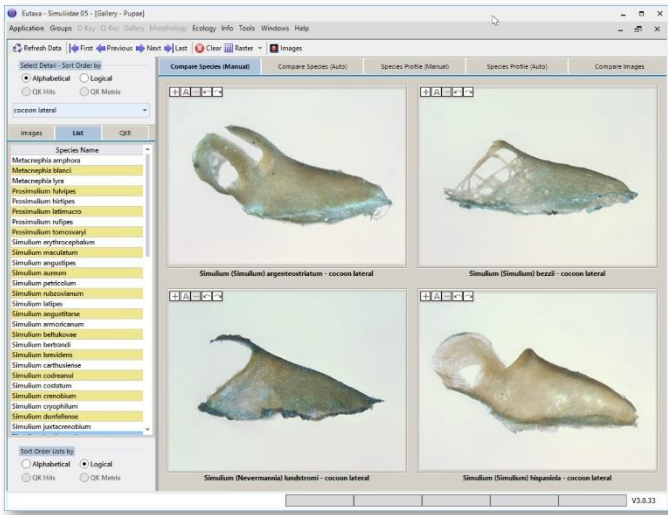
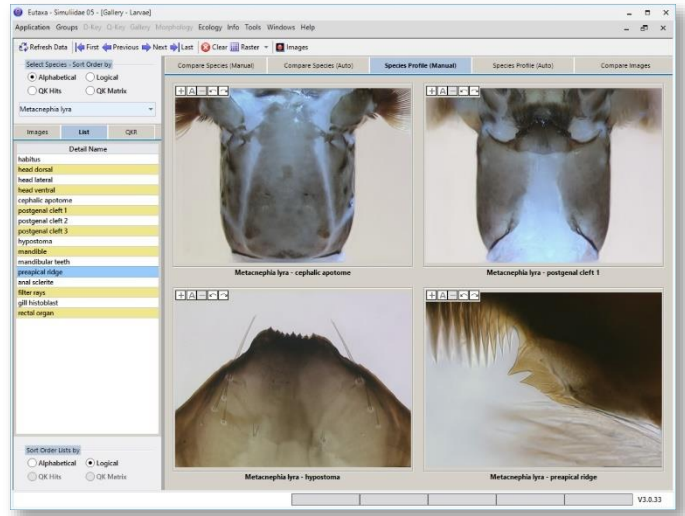
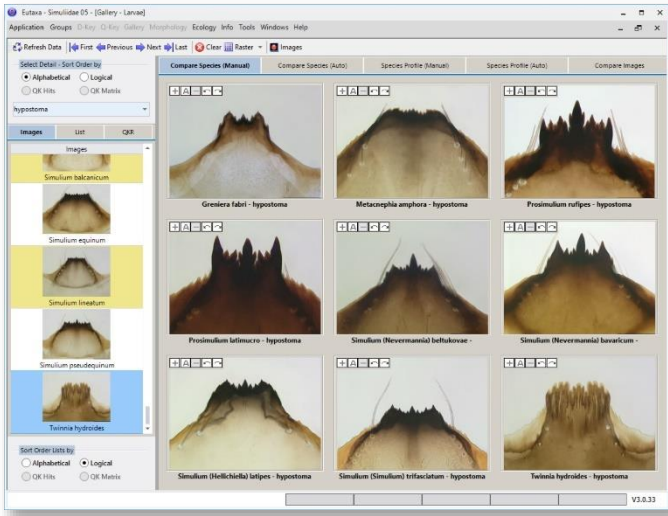
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## Software Images: D-Key, Morphology



## Software Images: Gallery, Ecology



**List of Species, covered by the Key**

Prosimulium fulvipes (Edwards, 1921)  
 Prosimulium hirtipes (Fries, 1824) (complex)  
 Prosimulium latimucro (Enderlein, 1925)  
 Prosimulium rufipes (Meigen, 1830)  
 Prosimulium tomosvaryi (Enderlein, 1921)  
 Greniera fabri Doby & David, 1959  
 Metacnephia amphora Ladle & Bass, 1975  
 Metacnephia blanci (Grenier & Theodorides, 1953)  
 Metacnephia lyra (Lundström, 1911)  
 Simulium (Boophthora) erythrocephalum (De Geer, 1776)  
 Simulium (Byssodon) maculatum (Meigen, 1804)  
 Simulium (Eusimulium) angustipes Edwards, 1915  
 Simulium (Eusimulium) aureum Fries, 1824  
 Simulium (Eusimulium) petricolum (Rivosecchi, 1963)  
 Simulium (Eusimulium) rubzovianum (Sherban, 1961)  
 Simulium (Hellichiella) latipes (Meigen, 1804)  
 Simulium (Nevermannia) angustitarse (Lundström, 1911)  
 Simulium (Nevermannia) armoricanum Doby & David, 1961  
 Simulium (Nevermannia) bavaricum Seitz & Adler, 2009  
 Simulium (Nevermannia) beltukovae (Rubtsov, 1956)  
 Simulium (Nevermannia) bertrandi Grenier & Dorier, 1959  
 Simulium (Nevermannia) brevidens (Rubtsov, 1956)  
 Simulium (Nevermannia) carthusiense Grenier & Dorier, 1959  
 Simulium (Nevermannia) codreanui (Sherban, 1958)  
 Simulium (Nevermannia) costatum Friedrichs, 1920  
 Simulium (Nevermannia) crenobium (Knoz, 1961)  
 Simulium (Nevermannia) cryophilum (Rubtsov, 1959) (complex)  
 Simulium (Nevermannia) dunfellense Davies, 1966  
 Simulium (Nevermannia) juxtacrenobium Bass & Brockhouse, 1990  
 Simulium (Nevermannia) lundstromi (Enderlein, 1921)  
 Simulium (Nevermannia) naturale Davies 1966  
 Simulium (Nevermannia) oligotuberculatum (Knoz, 1965)  
 Simulium (Nevermannia) quasidocolletum (Crosskey, 1988)  
 Simulium (Nevermannia) urbanum Davies, 1966  
 Simulium (Nevermannia) vernum Macquart, 1826 (complex)  
 Simulium (Rubzovia) lamachi Doby & David, 1960  
 Simulium (Schoenbaueria) nigrum (Meigen, 1804)  
 Simulium (Simulium) argenteostriatum Strobl, 1898  
 Simulium (Simulium) argyreatum Meigen, 1838  
 Simulium (Simulium) bezzii (Corti, 1914)  
 Simulium (Simulium) colombaschense (Fabricius, 1787)  
 Simulium (Simulium) degrangei Dorier & Grenier, 1960  
 Simulium (Simulium) hispaniola Grenier & Bertrand, 1954  
 Simulium (Simulium) ibariense Zivkovich & Grenier, 1959  
 Simulium (Simulium) intermedium Roubaud, 1906  
 Simulium (Simulium) maximum (Knoz, 1961)  
 Simulium (Simulium) monticola Friedrichs, 1920  
 Simulium (Simulium) morsitans Edwards, 1915  
 Simulium (Simulium) noelleri Friedrichs, 1920  
 Simulium (Simulium) ornatum Meigen, 1818 (complex)  
 Simulium (Simulium) paramorsitans Rubtsov, 1956  
 Simulium (Simulium) posticatum Meigen, 1838  
 Simulium (Simulium) reptans Linnaeus, 1758  
 Simulium (Simulium) reptantoides Carlsson, 1962  
 Simulium (Simulium) rostratum (Lundström, 1911)

Simulium (Simulium) trifasciatum Curtis, 1839  
Simulium (Simulium) tuberosum (Lundström, 1911)  
Simulium (Simulium) variegatum Meigen, 1818  
Simulium (Simulium) voilense Sherban, 1960  
Simulium (Simulium) vulgare Dorogostaisky, Rubtsov & Vlasenko, 1935  
Simulium (Simulium) xanthinum Edwards, 1933  
Simulium (Trichodagmia) auricoma Meigen, 1818  
Simulium (Trichodagmia) galloprovinciale Giudicelli, 1963  
Simulium (Wilhelmia) balcanicum (Enderlein, 1924)  
Simulium (Wilhelmia) equinum (Linnaeus, 1758)  
Simulium (Wilhelmia) lineatum (Meigen, 1804)  
Simulium (Wilhelmia) pseudequinum Séguy, 1921  
Twinnia hydroides (Novák, 1956)

## Key to Larvae from Central Europe

Wolfgang Lechthaler  
Wolfram Stockinger



**Title:** Trichoptera - Key to Larvae from Central Europe; DVD-Edition  
**Authors:** Wolfgang Lechthaler & Wolfram Stockinger (2023)

**Copyright:** 2023 by Lechthaler Wolfgang, Eutaxa; lechthaler@eutaxa.com; www.eutaxa.com

**ISBN:** 978-3-9501839-2-4; Made and printed in Austria

## Trichoptera 23 - Product Information

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DVD-Edition/Download, Austria

### Authors

Lechthaler Wolfgang, Stockinger Wolfram

### ISBN

978-3-9501839-2-4

### Price

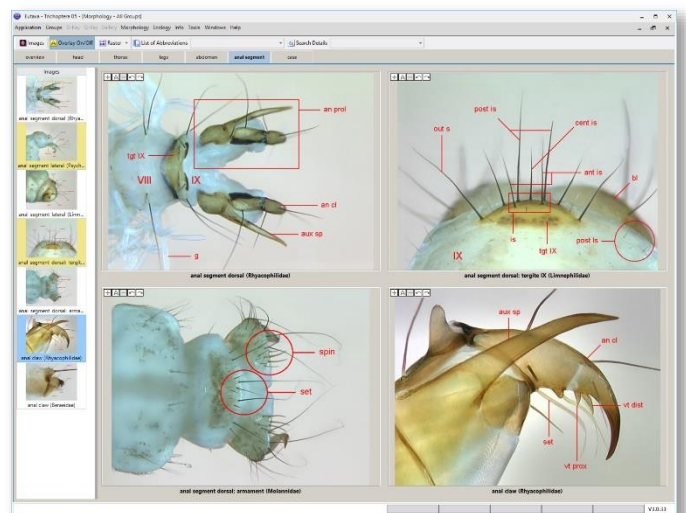
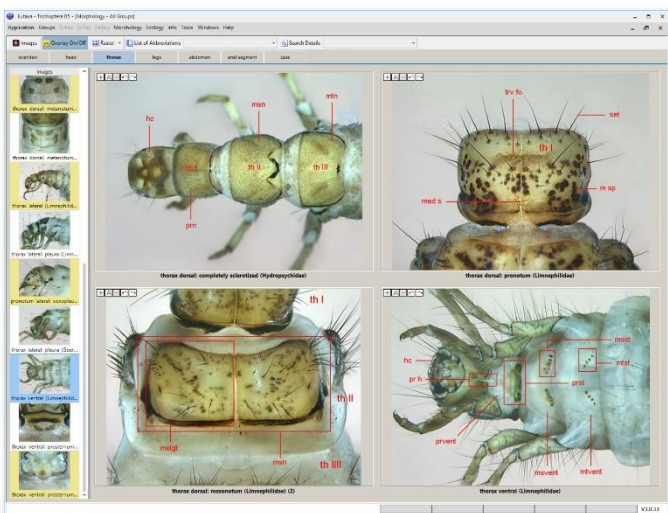
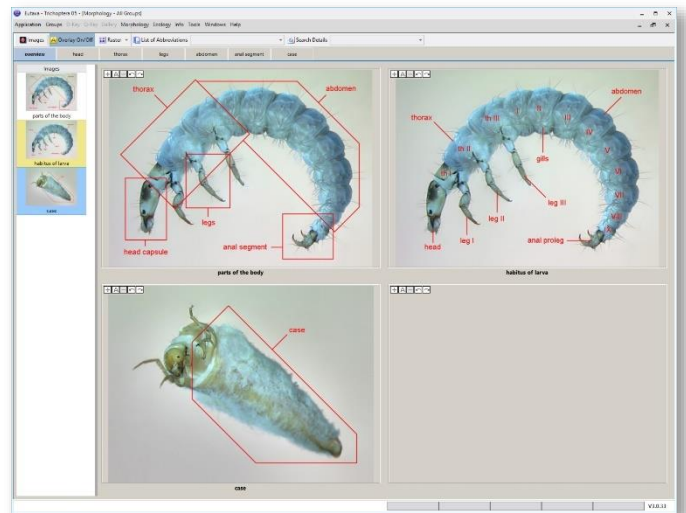
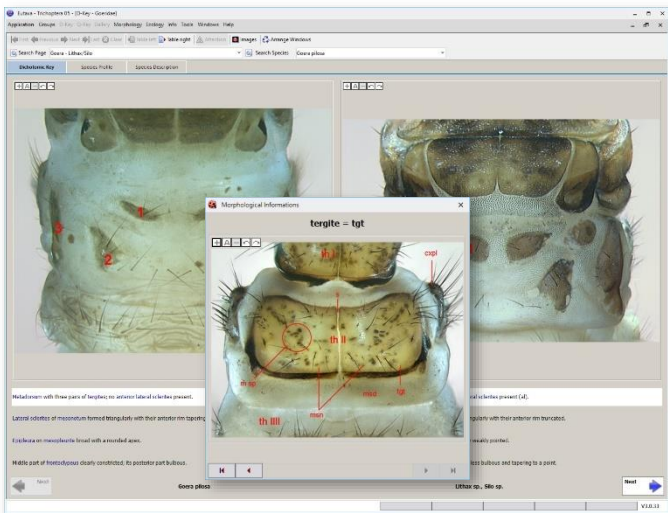
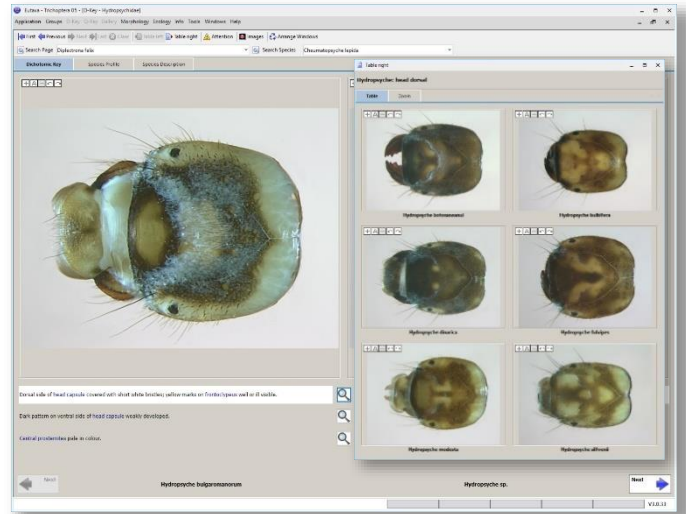
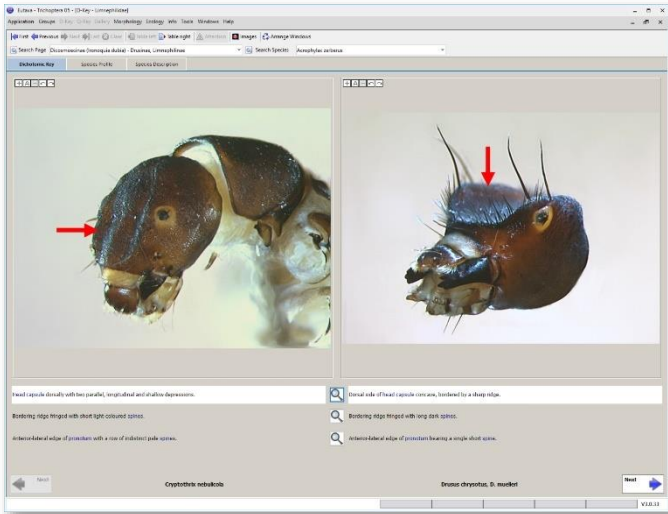
€ 600,00

This product offers a versatile application for the identification of last instar larvae of the order Trichoptera (Cl. Insecta). About 292 species of Central Europe are documented precisely and numerous illustrations of relevant morphological characters can be queried from an extensive picture database and compared with each other. A range of ecological and systematic dates shall enhance the knowledge of this invertebrate group, significant for the classification of standing or running waters.

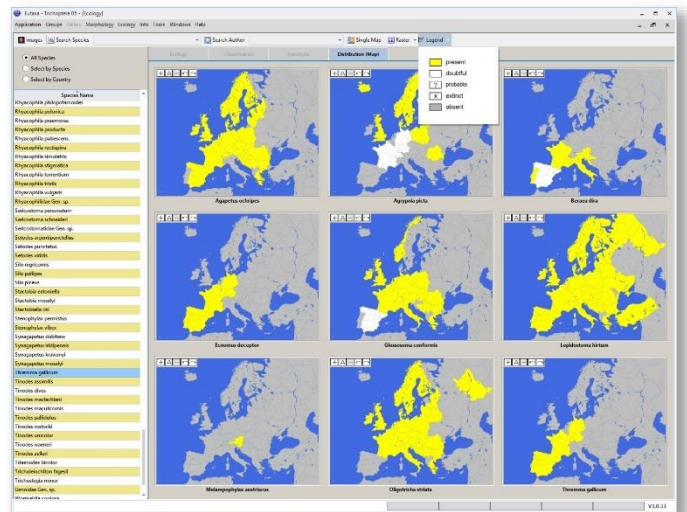
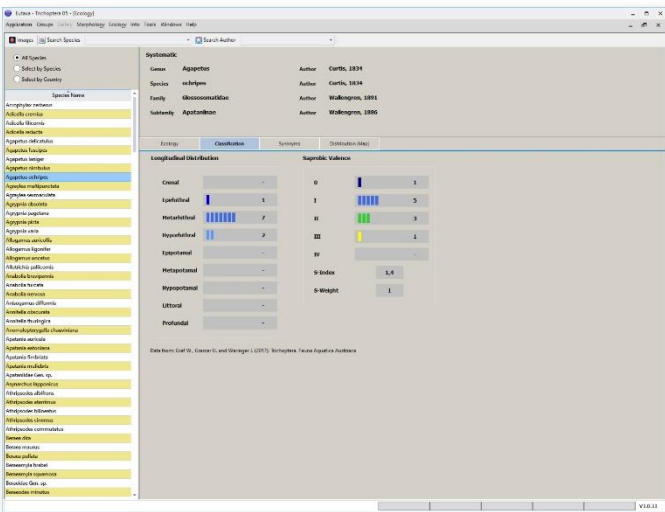
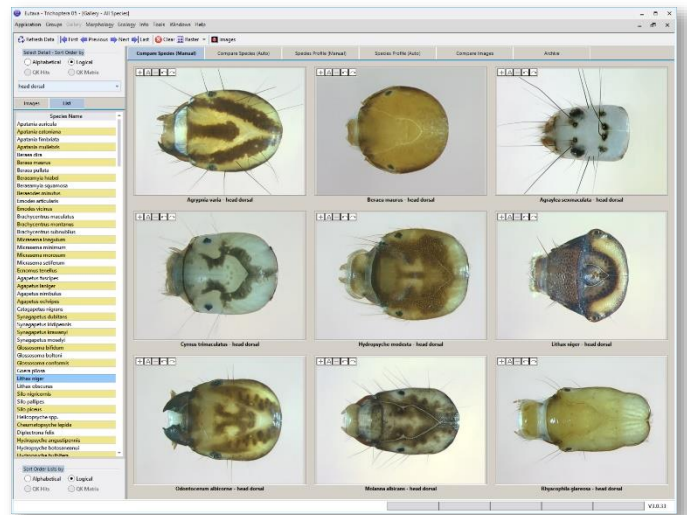
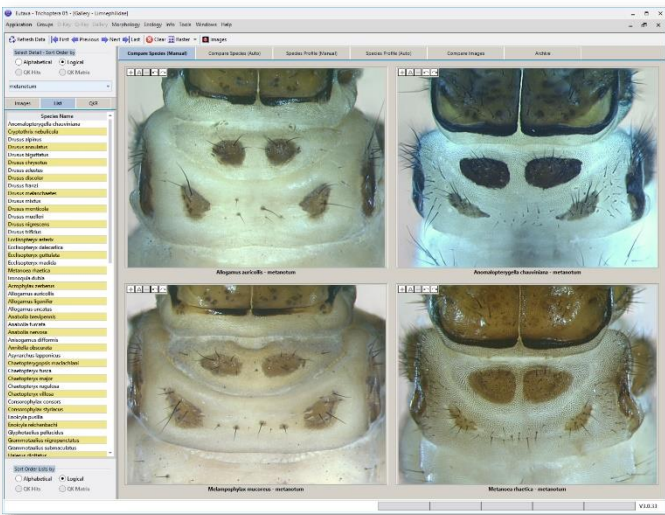
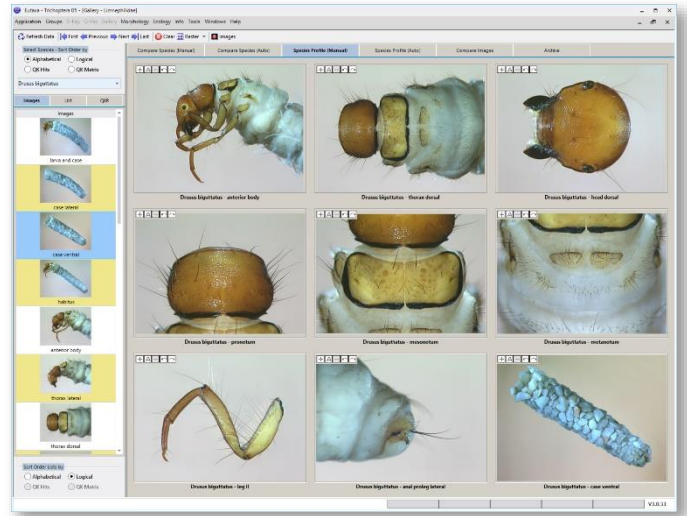
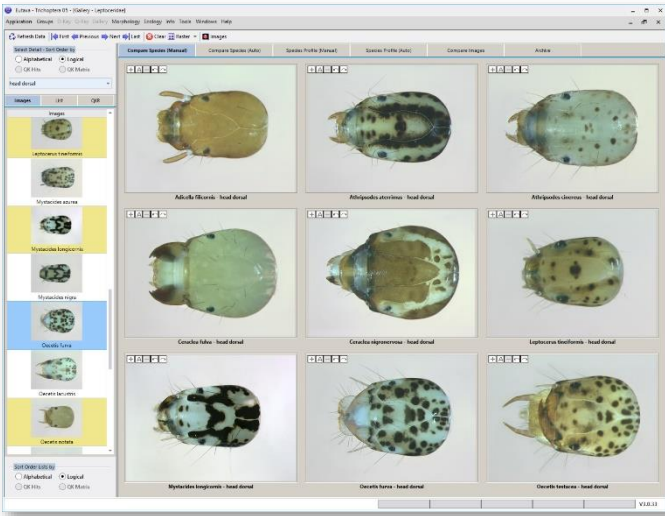
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**Software Images: D-Key, Morphology**



## Software Images: Gallery, Ecology



**List of Species, covered by the Key****Family Apataniidae**

*Apatania auricula* (Forsslund, 1930)  
*Apatania eatoniana* McLachlan, 1880  
*Apatania fimbriata* (Pictet, 1834)  
*Apatania muliebris* McLachlan, 1866

**Family Beraeidae**

*Beraea dira* McLachlan, 1875  
*Beraea maurus* (Curtis, 1834)  
*Beraea pullata* (Curtis, 1834)  
*Beraeamyia hrabei* Mayer, 1937  
*Beraeamyia squamosa* Mosely, 1930  
*Beraeodes minutus* (Linnaeus, 1761)  
*Ernodes articularis* (Pictet, 1834)  
*Ernodes vicinus* (McLachlan, 1879)

**Family Brachycentridae**

*Brachycentrus maculatus* (Fourcroy, 1785)  
*Brachycentrus montanus* Klapálek, 1892  
*Brachycentrus subnubilus* Curtis, 1834  
*Micrasema longulum* McLachlan, 1876  
*Micrasema minimum* McLachlan, 1876  
*Micrasema morosum* (McLachlan, 1868)  
*Micrasema setiferum* (Pictet, 1834)

**Family Ecnomidae**

*Ecnomus deceptor* McLachlan, 1884  
*Ecnomus tenellus* (Rambur, 1842)

**Family Glossosomatidae**

*Agapetus delicatulus* McLachlan, 1884  
*Agapetus fuscipes* Curtis, 1834  
*Agapetus laniger* (Pictet, 1834)  
*Agapetus nimbulus* McLachlan, 1879  
*Agapetus ochripes* Curtis, 1834  
*Catagapetus nigrans* McLachlan, 1884  
*Glossosoma bifidum* McLachlan, 1879  
*Glossosoma boltoni* Curtis, 1834  
*Glossosoma conformis* Neboiss, 1963  
*Glossosoma intermedium* Klapálek, 1892  
*Synagapetus dubitans* McLachlan, 1879  
*Synagapetus iridipennis* McLachlan, 1879  
*Synagapetus krawanyi* Ulmer, 1938  
*Synagapetus moselyi* Ulmer, 1938

**Family Goeridae**

*Goera pilosa* (Fabricius, 1775)  
*Lithax niger* (Hagen, 1859)  
*Lithax obscurus* (Hagen, 1859)  
*Silo nigricornis* (Pictet, 1834)  
*Silo pallipes* (Fabricius, 1781)  
*Silo piceus* (Brauer, 1857)

**Family Helicopsychidae**

*Helicopsyche* spp.

**Family Hydropsychidae**

*Cheumatopsyche lepida* (Pictet, 1834)  
*Diplectronea felix* McLachlan, 1878  
*Hydropsyche angustipennis* (Curtis, 1834)  
*Hydropsyche botosaneanui* Marinkovic-G., 1966  
*Hydropsyche bulbifera* McLachlan, 1878  
*Hydropsyche bulgaromanorum* Malicky, 1977  
*Hydropsyche contubernalis* McLachlan, 1865  
*Hydropsyche dinarica* Marinkovic-G., 1979  
*Hydropsyche exocellata* Dufour, 1841  
*Hydropsyche fulvipes* (Curtis, 1834)  
*Hydropsyche guttata* Pictet, 1834  
*Hydropsyche incognita* Pitsch, 1993  
*Hydropsyche instabilis* (Curtis, 1834)  
*Hydropsyche modesta* Navas, 1925  
*Hydropsyche ornatula* McLachlan, 1878  
*Hydropsyche pellucidula* (Curtis, 1834)  
*Hydropsyche saxonica* McLachlan, 1884  
*Hydropsyche silfvenii* Ulmer, 1906  
*Hydropsyche siltalai* Doehler, 1963  
*Hydropsyche tenuis* Navas, 1932

**Family Hydroptilidae**

*Agraylea multipunctata* Curtis, 1834  
*Agraylea sexmaculata* Curtis, 1834  
*Allotrichia pallicornis* (Eaton, 1873)  
*Hydroptila* spp.  
*Ithytrichia lamellaris* Eaton, 1873  
*Microptila minutissima* Ris, 1897  
*Orthotrichia costalis* (Curtis, 1834)  
*Oxyethira* spp.  
*Stactobia eatoniella* McLachlan, 1880  
*Stactobia moselyi* Kimmins, 1949  
*Stactobiella risi* (Felber, 1908)  
*Tricholeiochiton fagesii* (Guinard, 1879)

**Family Lepidostomatidae**

*Crunoecia irrorata* (Curtis, 1834)  
*Crunoecia kempnyi* Morton, 1901  
*Lepidostoma basale* (Kolenati, 1848)  
*Lepidostoma hirtum* (Fabricius, 1775)

**Family Leptoceridae**

*Adicella cremisa* Malicky, 1972  
*Adicella filicornis* (Pictet, 1834)  
*Adicella reducta* (McLachlan, 1865)  
*Athripsodes albifrons* (Linnaeus, 1758)  
*Athripsodes aterrimus* (Stephens, 1836)  
*Athripsodes bilineatus* (Linnaeus, 1758)  
*Athripsodes cinereus* (Curtis, 1834)  
*Athripsodes commutatus* (Rostock, 1874)  
*Ceraclea albimacula* (Rambur, 1842)  
*Ceraclea annulicornis* (Stephens, 1836)  
*Ceraclea dissimilis* (Stephens, 1836)  
*Ceraclea fulva* (Rambur, 1842)



*Ceraclea nigronervosa* (Retzius, 1783)  
*Ceraclea senilis* (Burmeister, 1839)  
*Erotasis baltica* McLachlan, 1877  
*Leptocerus interruptus* (Fabricius, 1775)  
*Leptocerus lusitanicus* (McLachlan, 1884)  
*Leptocerus tineiformis* (Curtis, 1834)  
*Mystacides azurea* (Linnaeus, 1761)  
*Mystacides longicornis* (Linnaeus, 1758)  
*Mystacides nigra* (Linnaeus, 1758)  
*Oecetis furva* (Rambur, 1842)  
*Oecetis lacustris* (Pictet, 1834)  
*Oecetis notata* (Rambur, 1842)  
*Oecetis ochracea* (Curtis, 1825)  
*Oecetis testacea* (Curtis, 1834)  
*Oecetis tripunctata* (Fabricius, 1793)  
*Setodes argentipunctellus* McLachlan, 1877  
*Setodes punctatus* (Fabricius, 1793)  
*Setodes viridis* (Fourcroy, 1785)  
*Triaenodes bicolor* (Curtis, 1834)  
*Ylodes conspersus* (Rambur, 1842)  
*Ylodes reuteri* (McLachlan, 1880)  
*Ylodes simulans* (Tjeder, 1929)

### Family Limnephilidae

*Acrophylax zerberus* Brauer, 1867  
*Allogamus auricollis* (Pictet, 1834)  
*Allogamus ligonifer* (McLachlan, 1876)  
*Allogamus uncatatus* (Brauer, 1857)  
*Anabolia brevipennis* (Curtis, 1834)  
*Anabolia furcata* Brauer, 1857  
*Anabolia nervosa* (Curtis, 1834)  
*Anisogamus difformis* (McLachlan, 1867)  
*Annitella obscurata* (McLachlan, 1876)  
*Annitella thuringica* (Ulmer, 1909)  
*Anomalopterygella chauviniana* (Stein, 1874)  
*Asynarchus lapponicus* (Zetterstedt, 1840)  
*Chaetopterygopsis maclachlani* Stein, 1874  
*Chaetopteryx fusca* Brauer, 1857  
*Chaetopteryx major* McLachlan, 1876  
*Chaetopteryx rugulosa* Kolenati, 1848  
*Chaetopteryx villosa* (Fabricius, 1789)  
*Conorophylax consors* McLachlan, 1880  
*Conorophylax styriacus* Botosaneanu, 1967  
*Cryptothrix nebulicola* McLachlan, 1867  
*Drusus adustus* (McLachlan, 1867)  
*Drusus alpinus* (Meyer-Duer, 1875)  
*Drusus annulatus* (Stephens, 1837)  
*Drusus biguttatus* (Pictet, 1834)  
*Drusus chrysotus* (Rambur, 1842)  
*Drusus discolor* (Rambur, 1842)  
*Drusus franzi* Schmid, 1956  
*Drusus melanchaetes* McLachlan, 1876  
*Drusus mixtus* (Pictet, 1834)  
*Drusus monticola* McLachlan, 1876  
*Drusus muelleri* McLachlan, 1868  
*Drusus nigrescens* Meyer-Duer, 1875  
*Drusus trifidus* McLachlan, 1868

*Ecclisopteryx asterix* Malicky, 1979  
*Ecclisopteryx dalearlica* Kolenati, 1848  
*Ecclisopteryx guttulata* (Pictet, 1834)  
*Ecclisopteryx madida* (McLachlan, 1867)  
*Enoicyla pusilla* (Burmeister, 1839)  
*Enoicyla reichenbachi* (Kolenati, 1848)  
*Glyphotaelius pellucidus* (Retzius, 1783)  
*Grammotaulius nigropunctatus* (Retzius, 1783)  
*Grammotaulius nitidus* (Mueller, 1764)  
*Grammotaulius submaculatus* (Rambur, 1842)  
*Halesus digitatus* (Schrank, 1781)  
*Halesus radiatus* (Curtis, 1834)  
*Halesus rubricollis* (Pictet, 1834)  
*Halesus tessellatus* (Rambur, 1842)  
*Hydatophylax infumatus* (McLachlan, 1865)  
*Ironoquia dubia* (Stephens, 1837)  
*Leptotaulius gracilis* Schmid, 1955  
*Limnephilus affinis* Curtis, 1834  
*Limnephilus auricula* Curtis, 1834  
*Limnephilus binotatus* Curtis, 1834  
*Limnephilus bipunctatus* Curtis, 1834  
*Limnephilus borealis* (Zetterstedt, 1840)  
*Limnephilus centralis* Curtis, 1834  
*Limnephilus coenosus* Curtis, 1834  
*Limnephilus decipiens* (Kolenati, 1848)  
*Limnephilus elegans* Curtis, 1834  
*Limnephilus extricatus* McLachlan, 1865  
*Limnephilus flavicornis* (Fabricius, 1787)  
*Limnephilus fuscicornis* (Rambur, 1842)  
*Limnephilus fuscinervis* (Zetterstedt, 1840)  
*Limnephilus germanus* McLachlan, 1875  
*Limnephilus griseus* (Linnaeus, 1758)  
*Limnephilus hirsutus* (Pictet, 1834)  
*Limnephilus ignavus* McLachlan, 1865  
*Limnephilus incisus* Curtis, 1834  
*Limnephilus lunatus* Curtis, 1834  
*Limnephilus luridus* Curtis, 1834  
*Limnephilus marmoratus* Curtis, 1834  
*Limnephilus nigriceps* (Zetterstedt, 1840)  
*Limnephilus politus* McLachlan, 1865  
*Limnephilus rhombicus* (Linnaeus, 1758)  
*Limnephilus sparsus* Curtis, 1834  
*Limnephilus stigma* Curtis, 1834  
*Limnephilus subcentralis* Brauer, 1857  
*Limnephilus vittatus* (Fabricius, 1798)  
*Melampophylax austriacus* Malicky, 1990  
*Melampophylax melampus* (McLachlan, 1876)  
*Melampophylax mucoreus* (Hagen, 1861)  
*Melampophylax nepos* (McLachlan, 1880)  
*Mesophylax aspersus* (Rambur, 1842)  
*Mesophylax impunctatus* McLachlan, 1884  
*Metanoea flavipennis* (Pictet, 1834)  
*Metanoea rhaetica* Schmid, 1955  
*Micropterna lateralis* (Stephens, 1837)  
*Micropterna nycterobia* McLachlan, 1875  
*Micropterna sequax* McLachlan, 1875  
*Micropterna testacea* (Gmelin, 1789)  
*Nemotaulius punctatolineatus* (Retzius, 1783)

*Parachiona picicornis* (Pictet, 1834)  
*Potamophylax cingulatus* (Stephens, 1837)  
*Potamophylax latipennis* (Curtis, 1834)  
*Potamophylax luctuosus* (Piller & Mitterp., 1783)  
*Potamophylax nigricornis* (Pictet, 1834)  
*Potamophylax rotundipennis* (Brauer, 1857)  
*Pseudopsilopteryx zimmeri* (McLachlan, 1876)  
*Rhadicoleptus alpestris* (Kolenati, 1848)  
*Stenophylax permistus* McLachlan, 1895  
*Stenophylax vibex* (Curtis, 1834)

#### Family Molannidae

*Molanna albicans* (Zetterstedt, 1840)  
*Molanna angustata* Curtis, 1834  
*Molannodes tinctus* (Zetterstedt, 1840)

#### Family Odontoceridae

*Odontocerum albicorne* (Scopoli, 1763)

#### Family Philopotamidae

*Chimarra marginata* (Linnaeus, 1767)  
*Philopotamus ludificatus* McLachlan, 1878  
*Philopotamus montanus* (Donovan, 1813)  
*Philopotamus variegatus* (Scopoli, 1763)  
*Wormaldia copiosa* (McLachlan, 1868)  
*Wormaldia occipitalis* (Pictet, 1834)  
*Wormaldia subnigra* McLachlan, 1865

#### Family Phryganeidae

*Agrypnia obsoleta* (Hagen, 1864)  
*Agrypnia pagetana* Curtis, 1835  
*Agrypnia picta* Kolenati, 1848  
*Agrypnia varia* (Fabricius, 1793)  
*Hagenella clathrata* (Kolenati, 1848)  
*Oligostomis reticulata* (Linnaeus, 1761)  
*Oligotricha striata* (Linnaeus, 1758)  
*Phryganea bipunctata* Retzius, 1783  
*Phryganea grandis* Linnaeus, 1758  
*Trichostegia minor* (Curtis, 1834)

#### Family Polycentropodidae

*Cyrnus crenaticornis* (Kolenati, 1859)  
*Cyrnus flavidus* McLachlan, 1864  
*Cyrnus insolutus* McLachlan, 1878  
*Cyrnus trimaculatus* (Curtis, 1834)  
*Holocentropus dubius* (Rambur, 1842)  
*Holocentropus picicornis* (Stephens, 1836)  
*Holocentropus stagnalis* (Albarda, 1874)  
*Neureclipsis bimaculata* (Linnaeus, 1758)  
*Plectrocnemia brevis* McLachlan, 1871  
*Plectrocnemia conspersa* (Curtis, 1834)  
*Plectrocnemia geniculata* McLachlan, 1871  
*Polycentropus excisus* Klapálek, 1894  
*Polycentropus flavomaculatus* (Pictet, 1834)  
*Polycentropus irroratus* Curtis, 1835  
*Polycentropus kingi* McLachlan, 1881

#### Family Psychomyiidae

*Lype phaeopa* (Stephens, 1836)  
*Lype reducta* (Hagen, 1868)  
*Psychomyia fragilis* (Pictet, 1834)  
*Psychomyia klapaleki* Malicky, 1995  
*Psychomyia pusilla* (Fabricius, 1781)  
*Tinodes assimilis* McLachlan, 1865  
*Tinodes dives* (Pictet, 1834)  
*Tinodes maclachlani* Kimmins, 1966  
*Tinodes maculicornis* (Pictet, 1834)  
*Tinodes pallidulus* McLachlan, 1878  
*Tinodes rostocki* McLachlan, 1878  
*Tinodes unicolor* (Pictet, 1834)  
*Tinodes waeneri* (Linnaeus, 1758)  
*Tinodes zelleri* McLachlan, 1878

#### Family Ptilocolepidae

*Ptilocolepus granulatus* (Pictet, 1834)

#### Family Rhyacophilidae

*Rhyacophila aurata* Brauer, 1857  
*Rhyacophila bonaparti* Schmid, 1947  
*Rhyacophila dorsalis* (Curtis, 1834)  
*Rhyacophila evoluta* McLachlan, 1879  
*Rhyacophila fasciata* Hagen, 1859  
*Rhyacophila glareosa* McLachlan, 1867  
*Rhyacophila hirticornis* McLachlan, 1879  
*Rhyacophila intermedia* McLachlan, 1868  
*Rhyacophila laevis* Pictet, 1834  
*Rhyacophila munda* McLachlan, 1862  
*Rhyacophila nubila* (Zetterstedt, 1840)  
*Rhyacophila obliterata* McLachlan, 1863  
*Rhyacophila pascoei* McLachlan, 1879  
*Rhyacophila philopotamoides* McLachlan, 1879  
*Rhyacophila polonica* McLachlan, 1879  
*Rhyacophila praemorsa* McLachlan, 1879  
*Rhyacophila producta* McLachlan, 1879  
*Rhyacophila pubescens* Pictet, 1834  
*Rhyacophila rectispina* McLachlan, 1884  
*Rhyacophila simulatrix* McLachlan, 1879  
*Rhyacophila stigmatica* Kolenati, 1859  
*Rhyacophila torrentium* Pictet, 1834  
*Rhyacophila tristis* Pictet, 1834  
*Rhyacophila vulgaris* Pictet, 1834

#### Family Sericostomatidae

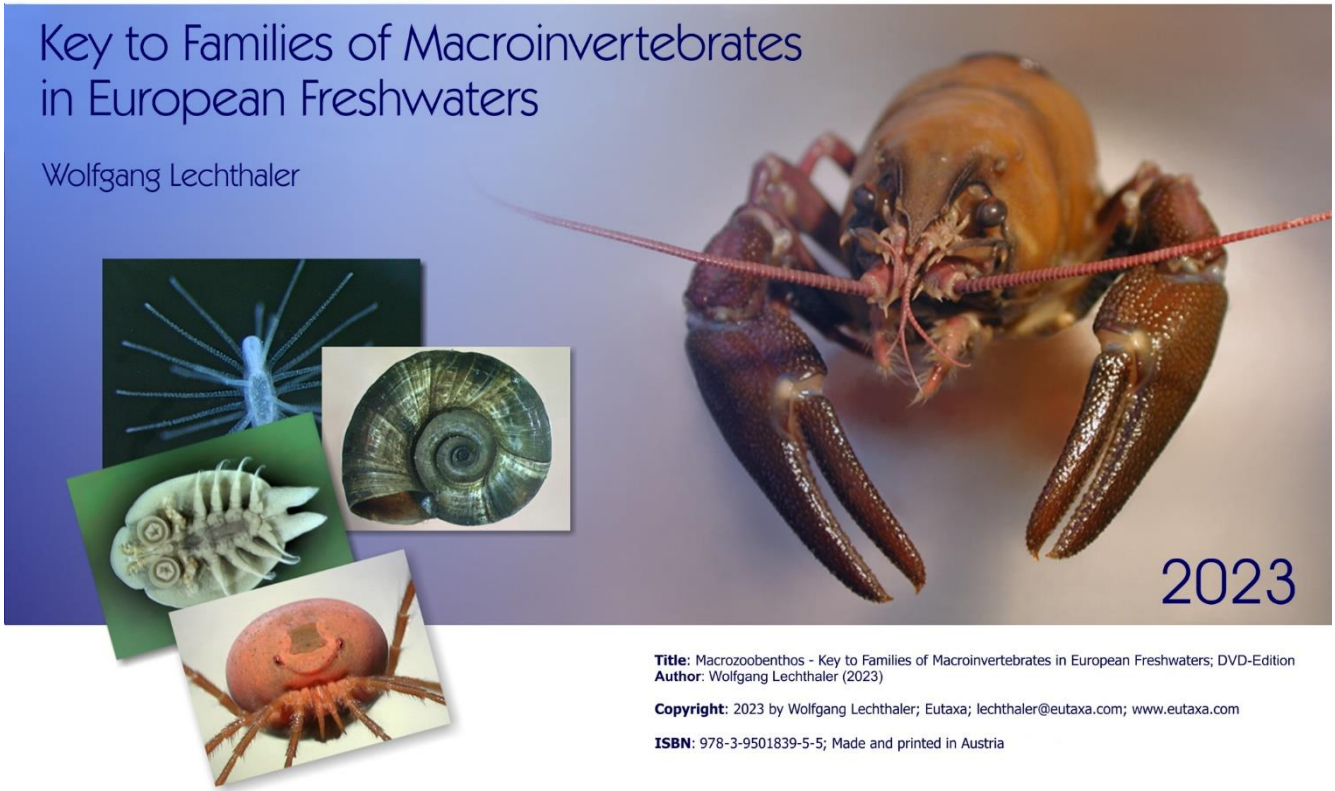
*Notidobia ciliaris* (Linnaeus, 1761)  
*Oecismus monedula* (Hagen, 1859)  
*Sericostoma personatum* (Kirby & Spence, 1826)  
*Sericostoma schneideri* Kolenati, 1848

#### Family Uenoidae

*Thremma gallicum* McLachlan, 1880

## Key to Families of Macroinvertebrates in European Freshwaters

Wolfgang Lechthaler



**Title:** Macrozoobenthos - Key to Families of Macroinvertebrates in European Freshwaters; DVD-Edition  
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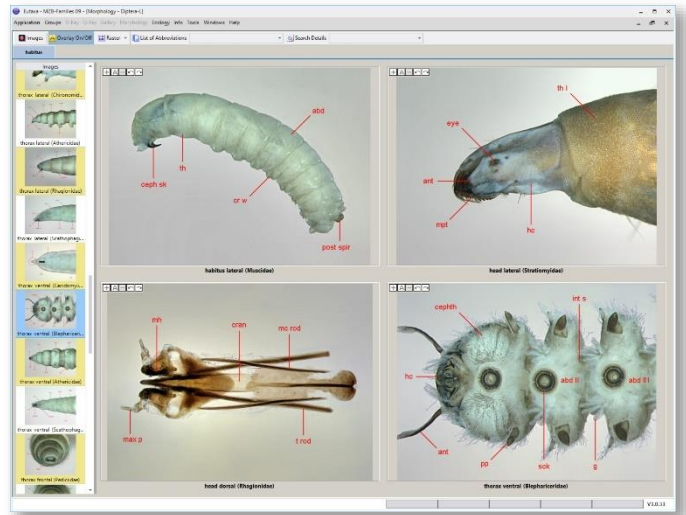
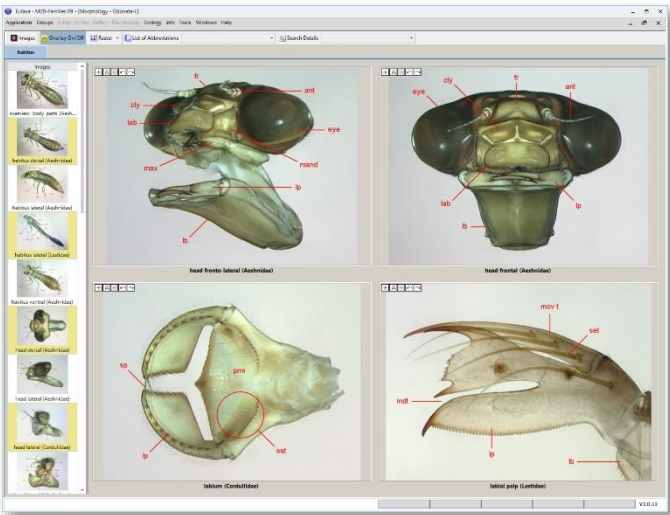
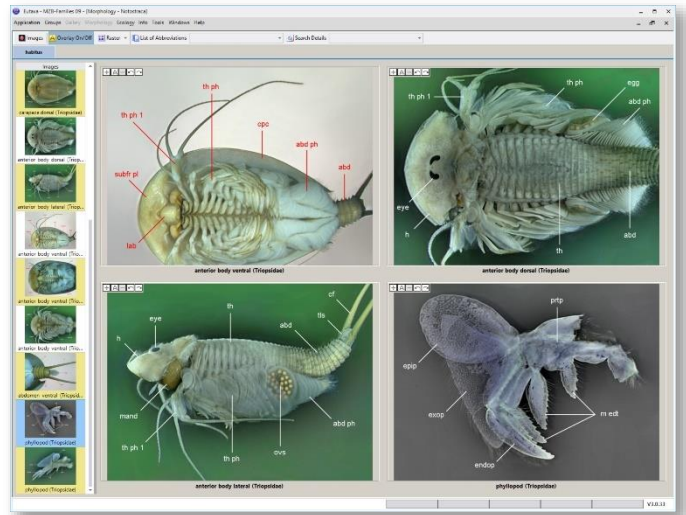
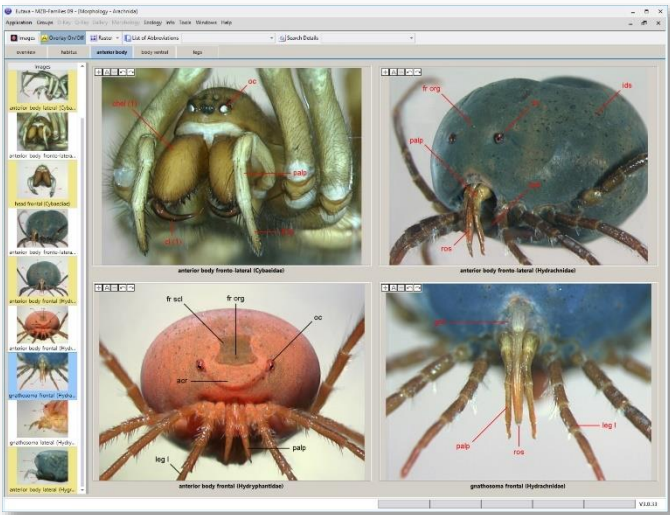
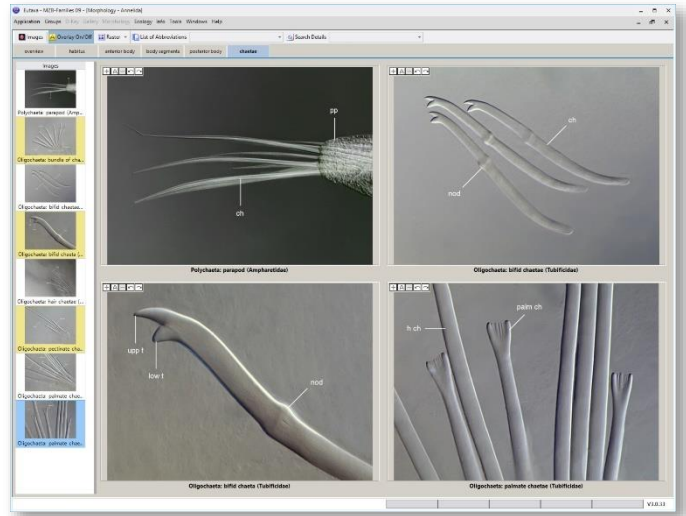
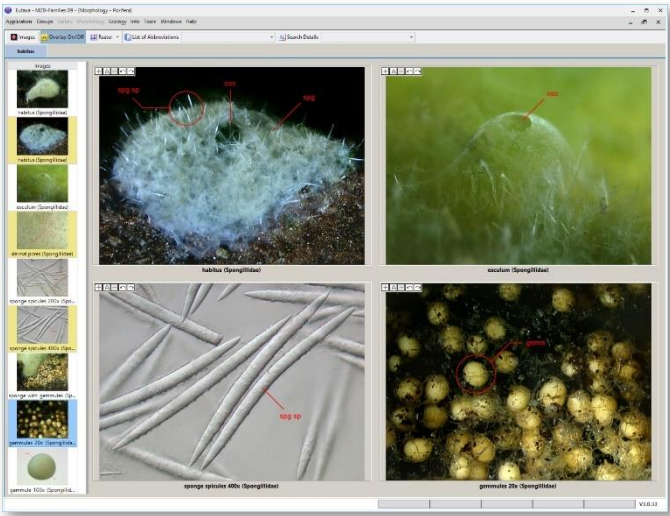
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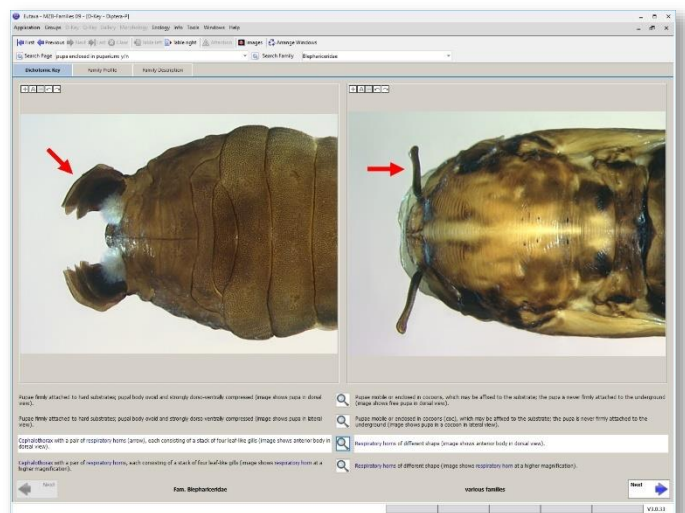
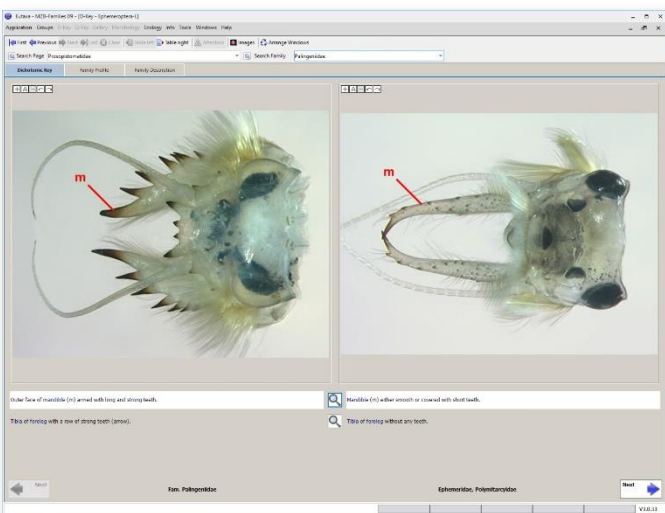
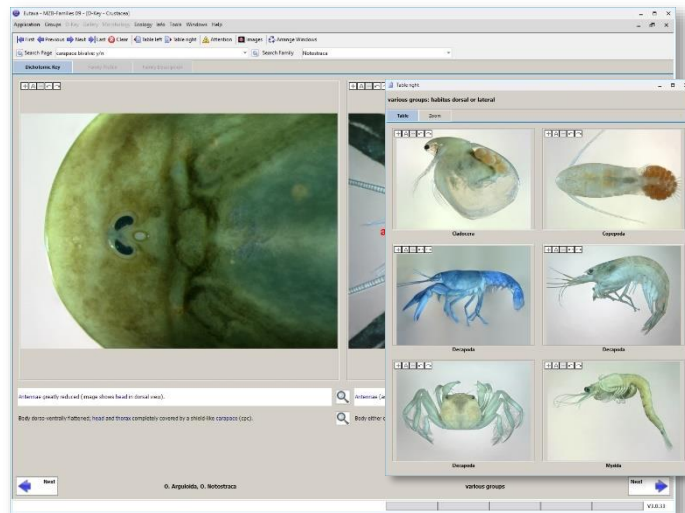
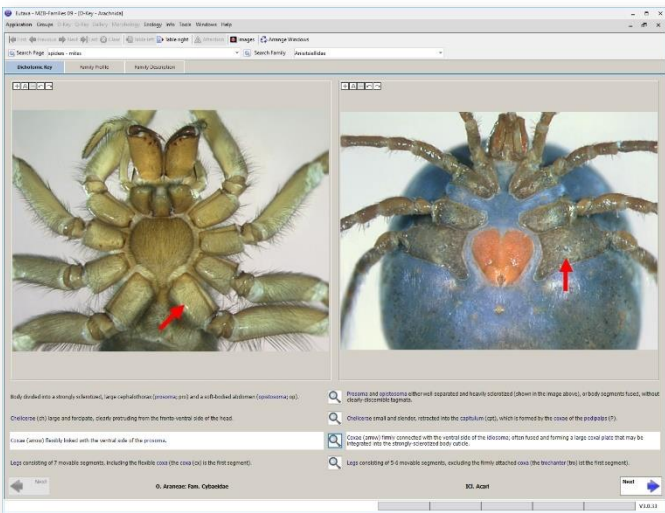
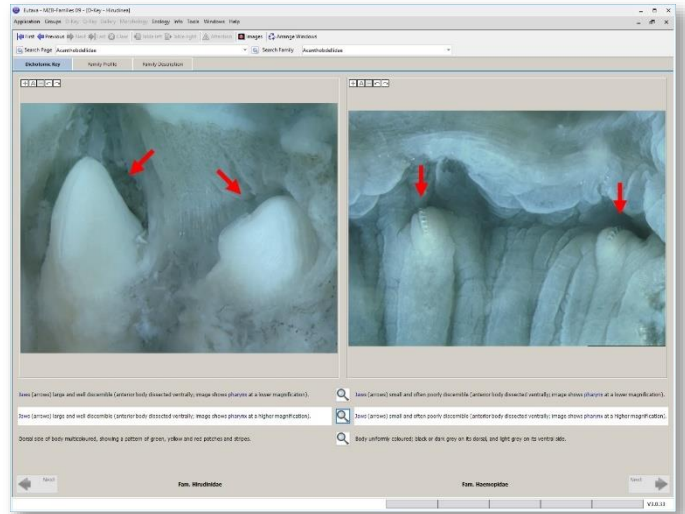
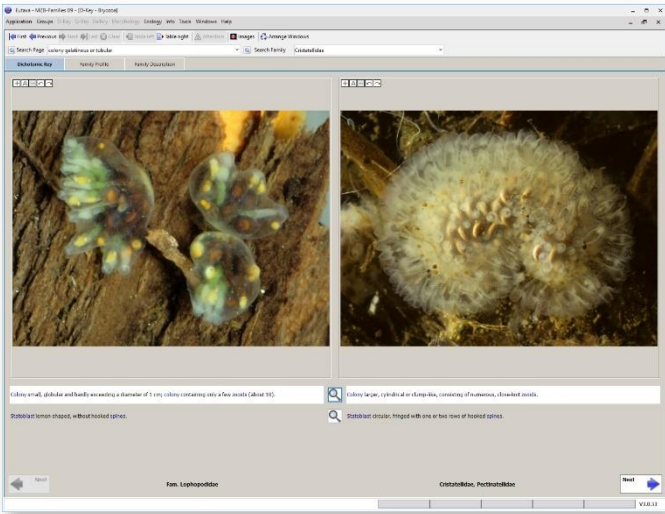
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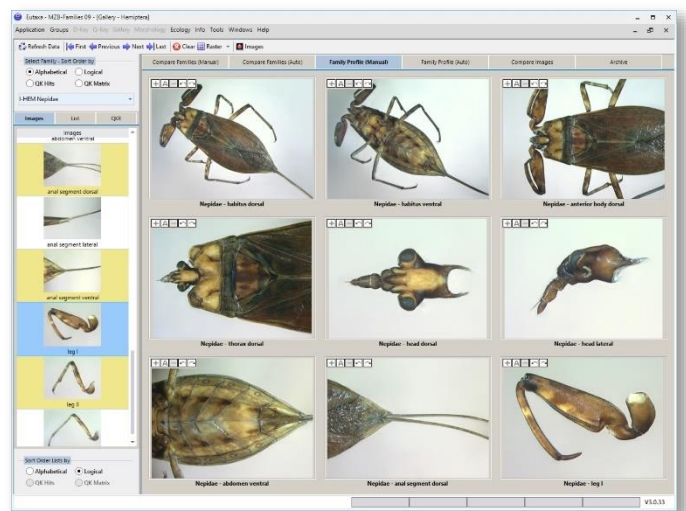
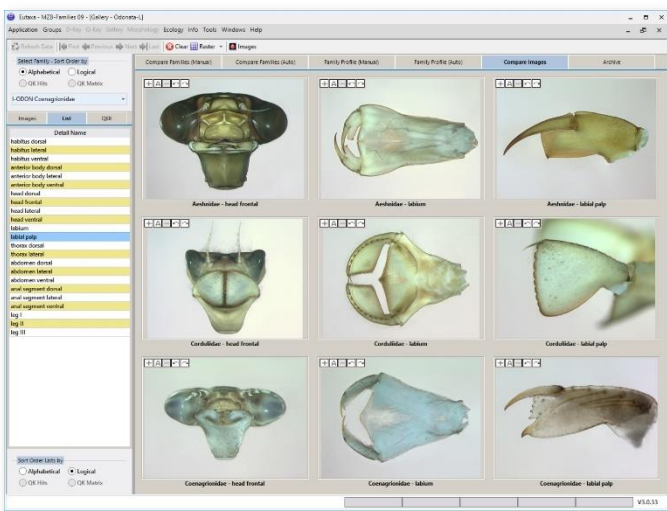
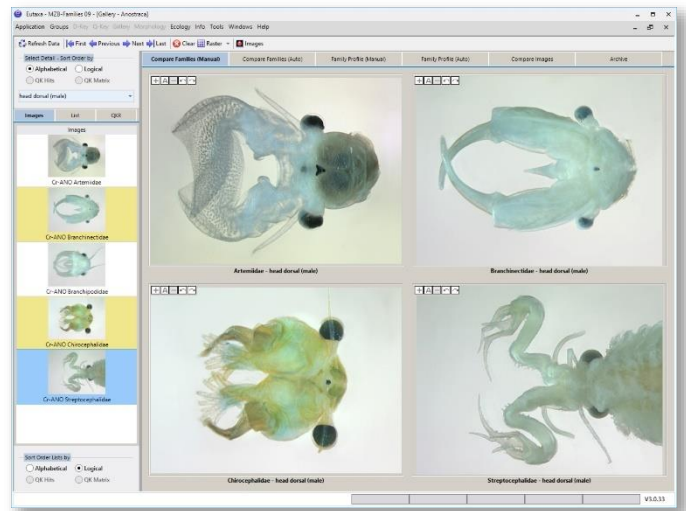
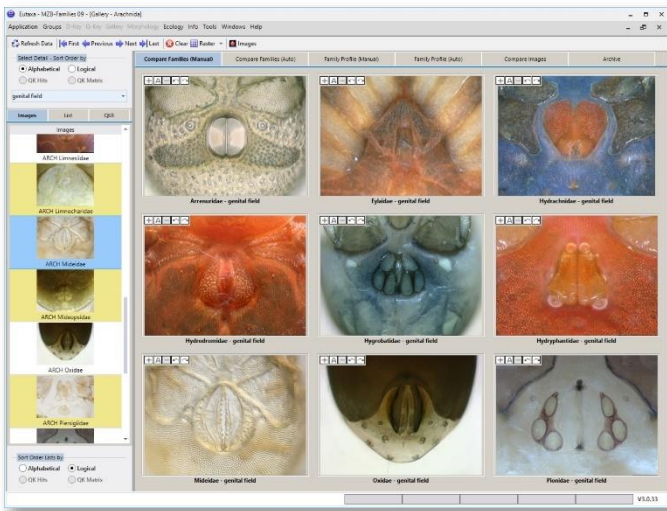
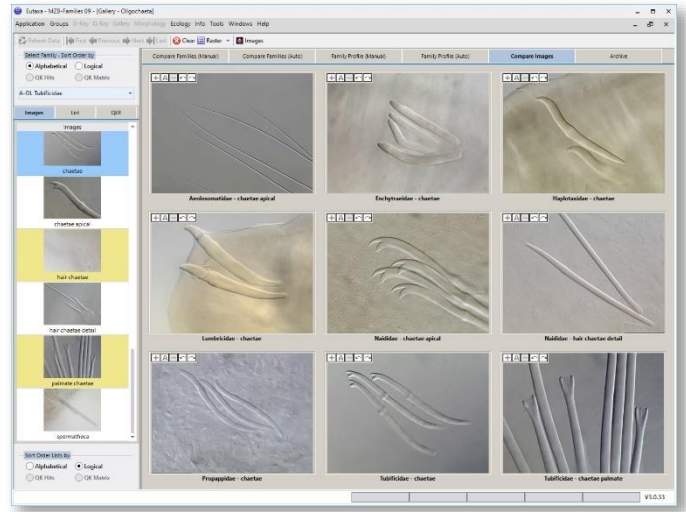
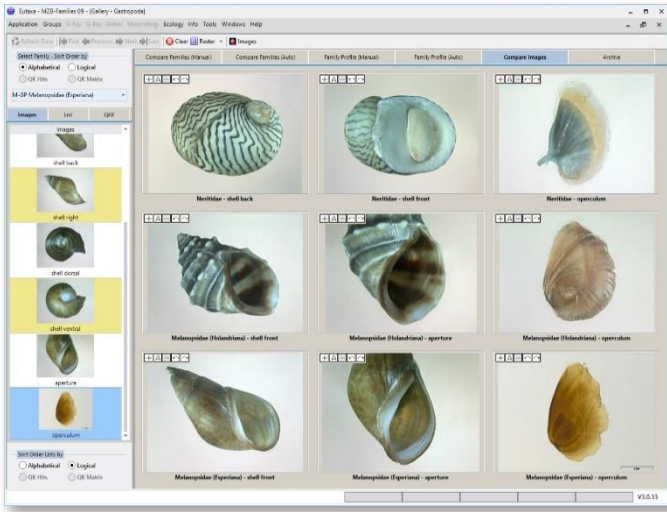
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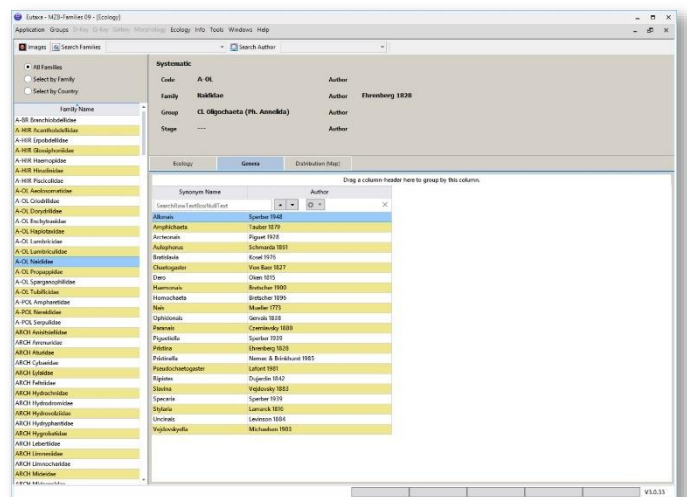
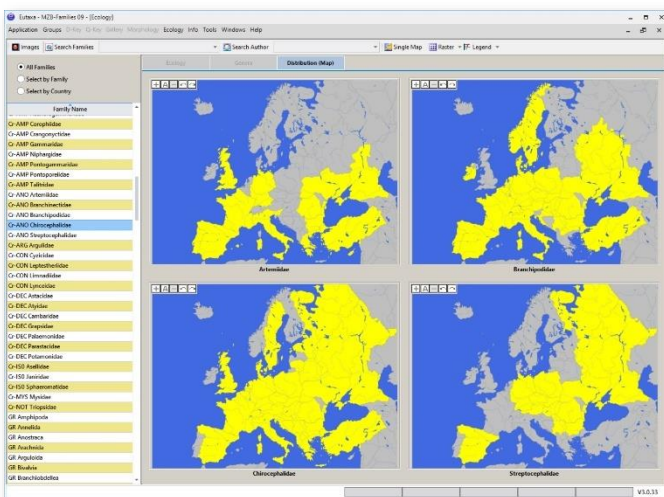
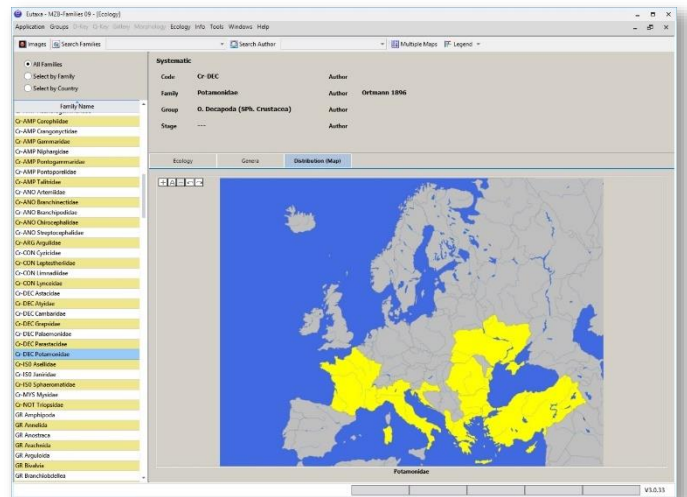
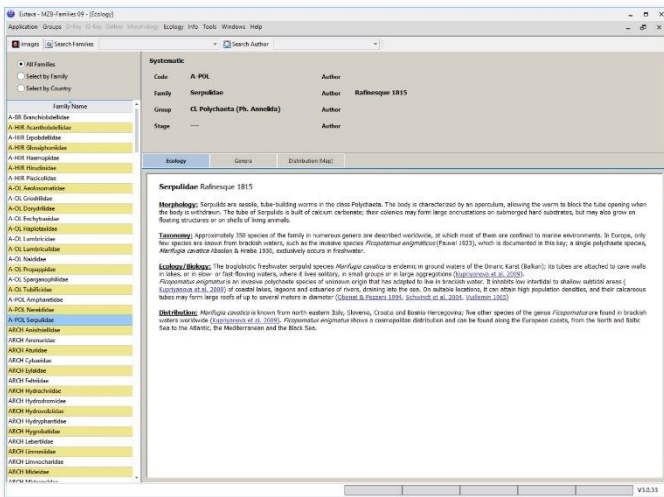
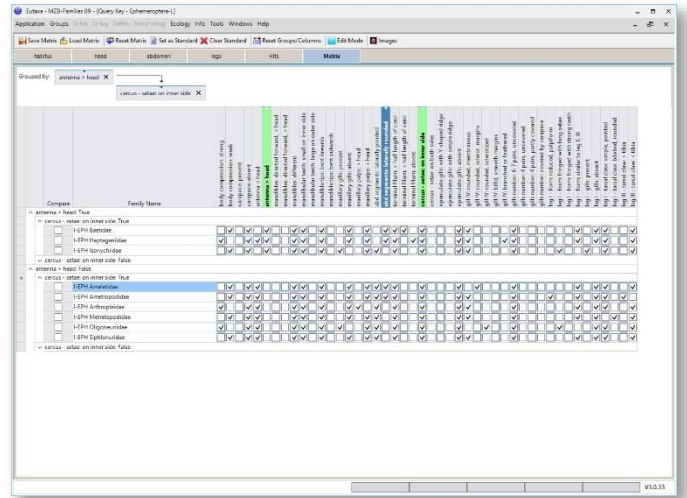
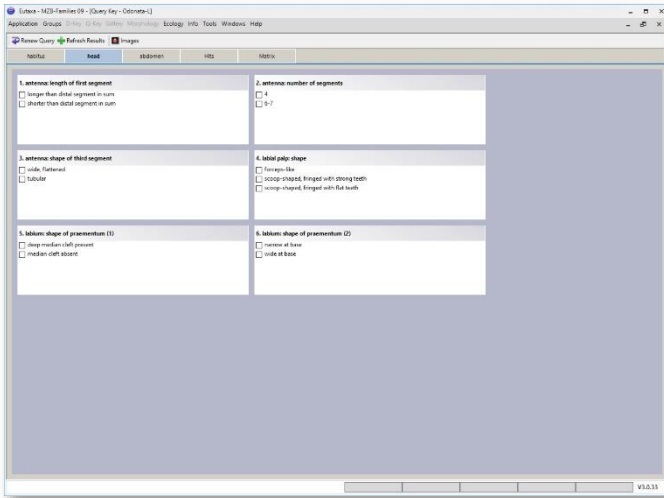
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## Software Images: Gallery (Reference Collection)



## Software Images: Query Key, Ecology (Description, Distribution, Genera)



**List of Families, covered by the Key****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

**Class Gastropoda**

Acroloxidae Thiele, 1931

Assimineidae H. &amp; A. Adams, 1856

Bithyniidae Troschel, 1857

Ellobiidae Pfeiffer, 1854

Emmericiidae Brusina, 1870

Hydrobiidae Troschel, 1857

Lymnaeidae Lamarck, 1812

Melanopsidae Adams &amp; Adams, 1854

Neritidae Lamarck, 1809

Physidae Fitzinger, 1833

Planorbidae Rafinesque, 1815

Succineidae Beck, 1837

Thiaridae Troschel, 1857

Valvatidae Gray, 1840

Viviparidae Lamarck, 1809

**Class Bivalvia**

Corbiculidae Gray, 1847

Dreissenidae Gray, 1840

Margaritiferidae Haas, 1940

Sphaeriidae Deshayes, 1854

Unionidae Rafinesque, 1820

**Phylum Annelida****Class Polychaeta**

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Nereididae Blainville, 1818

Serpulidae Rafinesque, 1815

**Class 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

**Class Branchiobdellea**

Branchiobdellidae Grube, 1851

**Class Hirudinea**

Acanthobdellidae Grube, 1851

Erpobdellidae Blanchard, 1894

Glossiphoniidae Vaillant, 1890

Haemopidae Richardson, 1969

Hirudinidae Whitman, 1886

Piscicolidae Johnston, 1865

**Phylum Arthropoda****Class 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****Order Anostraca**

Artemiidae Grochowski, 1896

Branchinectidae Daday, 1910

Branchipodidae Simon, 1886

Chirocephalidae Daday, 1910

Streptocephalidae Daday, 1910



**Order Conchostraca**

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

**Order Notostraca**

Triopsidae Keilhack, 1909

**Order Arguloidea**

Argulidae Leach, 1819

**Order Mysida**

Mysidae Haworth, 1825

**Order 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

**Order Isopoda**

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

**Order Decapoda**

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

**Class Insecta****Order Ephemeroptera (nymphs)**

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)

**Order Odonata (nymphs)**

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

**Order Plecoptera (nymphs)**

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

**Order Hemiptera (adults)**

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

**Order Megaloptera (larvae)**

Sialidae Leach, 1815

**Order Neuroptera (larvae)**

Osmylidae Leach, 1815  
 Sisyridae Handlirsch, 1908

**Order Coleoptera (larvae & adults)**

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

**Order Trichoptera (larvae)**

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

**Order Lepidoptera (larvae)**

Crambidae Latreille, 1810

**Order Diptera (larvae & pupae)**

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

## Key to Larvae from Central Europe

Ernst Bauernfeind  
Wolfgang Lechthaler



**Title:** Ephemeroptera - Key to Larvae from Central Europe; DVD-Edition  
**Authors:** Ernst Bauernfeind & Wolfgang Lechthaler (2023)

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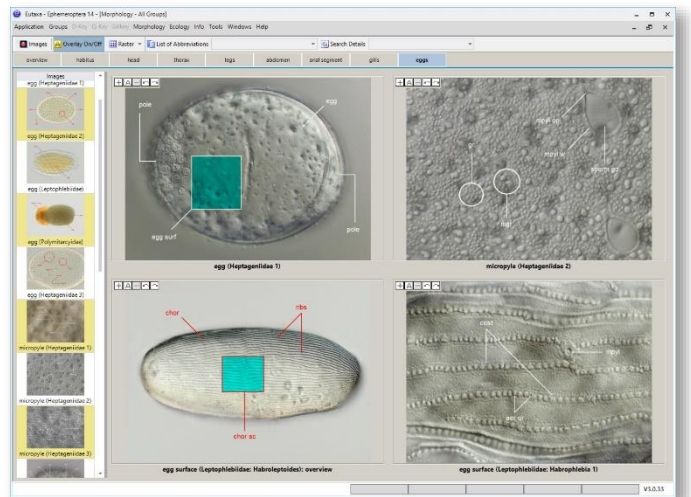
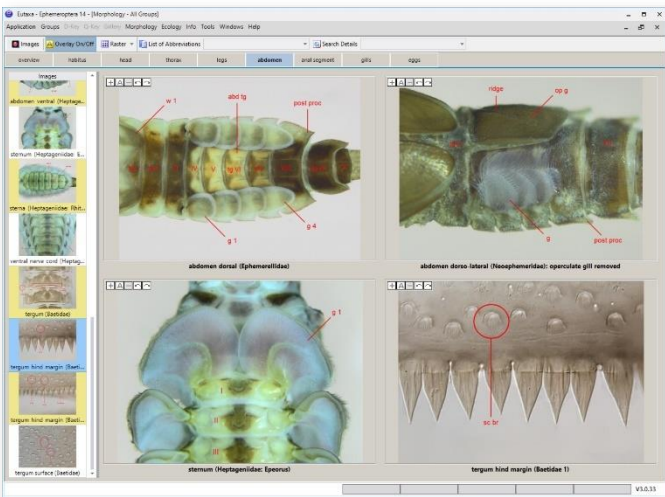
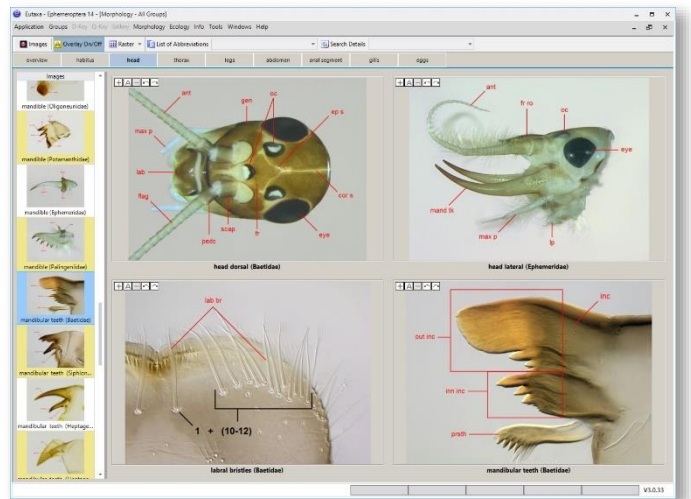
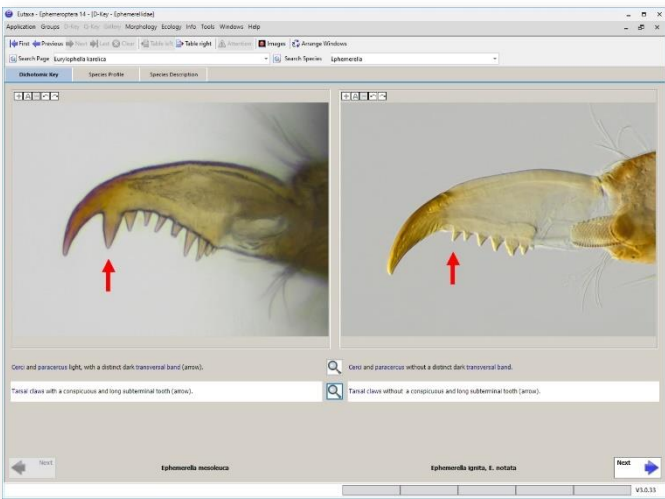
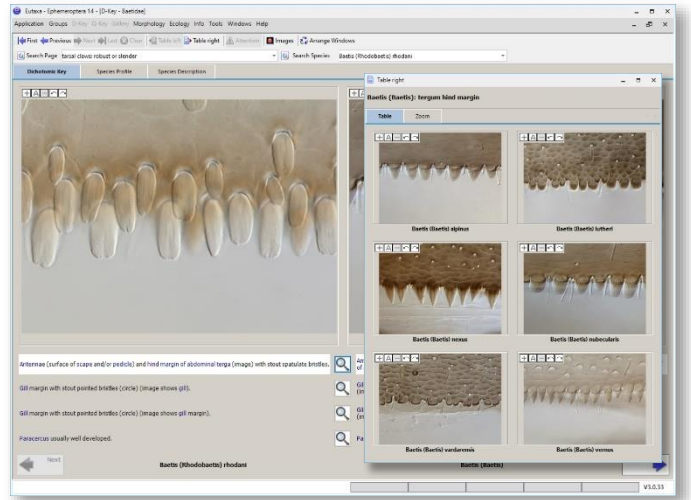
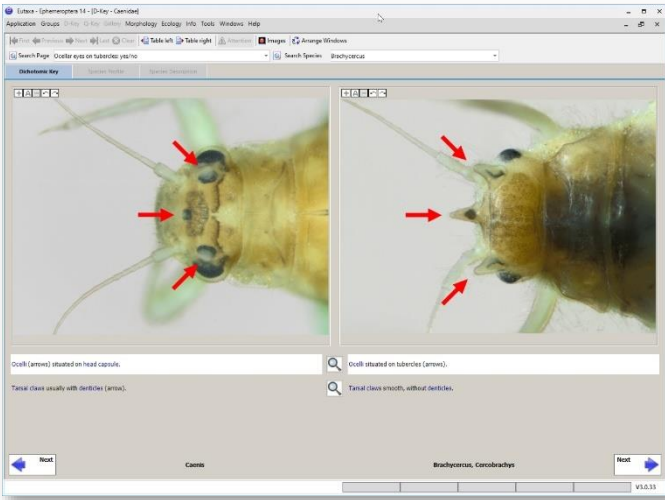
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This product offers a versatile application for the identification of last instar larvae of the order Ephemeroptera (Cl. Insecta). About 140 species of Central Europe are documented precisely and numerous illustrations of relevant morphological characters can be queried from an extensive picture database and compared with each other. A range of ecological and systematic dates shall enhance the knowledge of this invertebrate group, significant for the classification of standing or running waters.

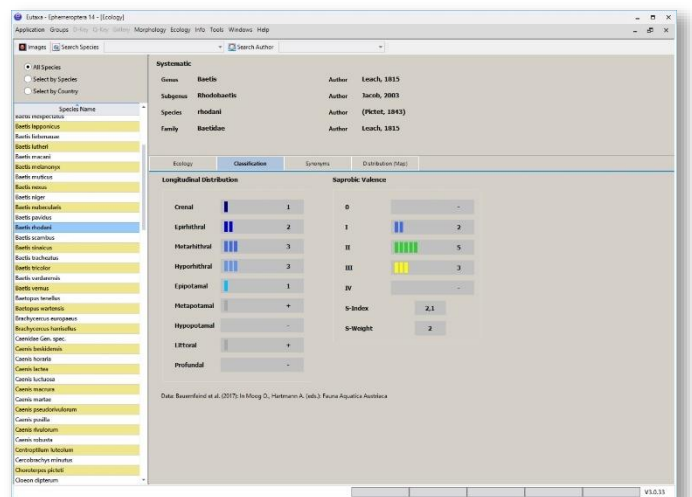
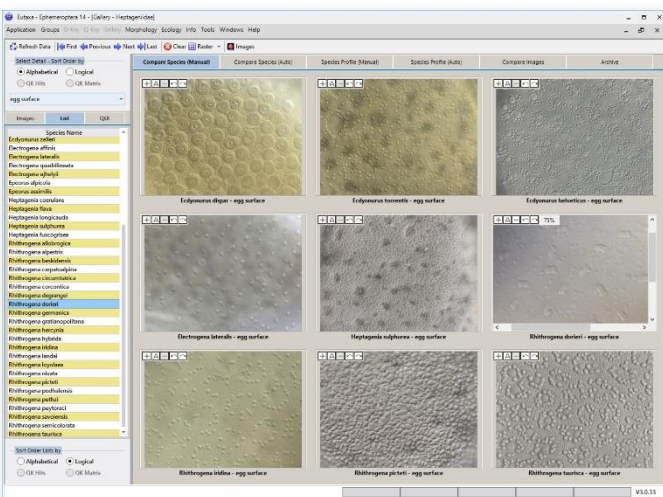
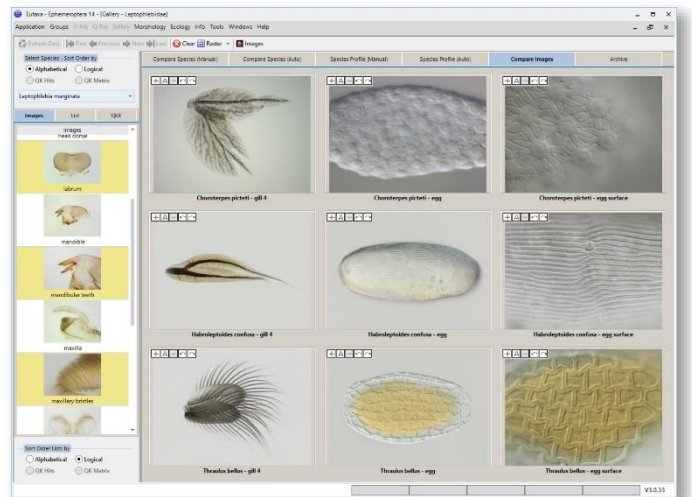
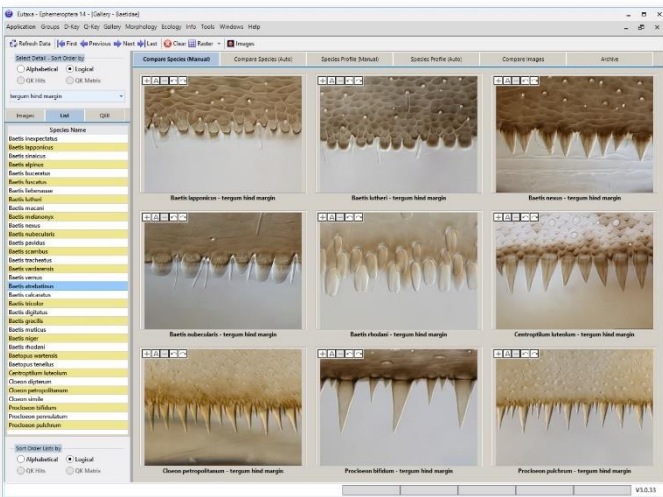
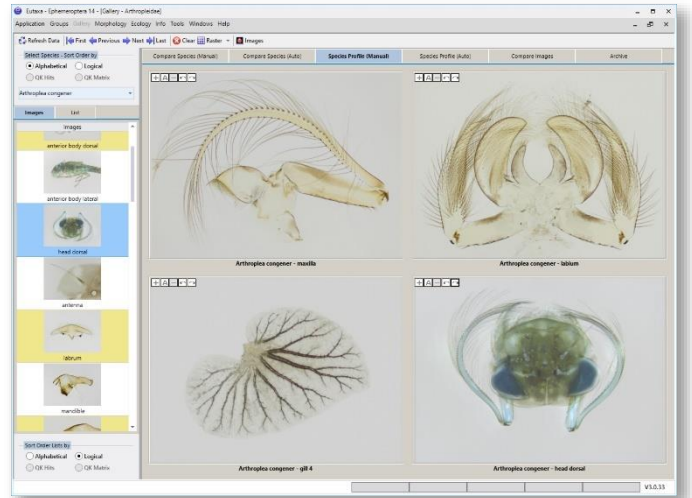
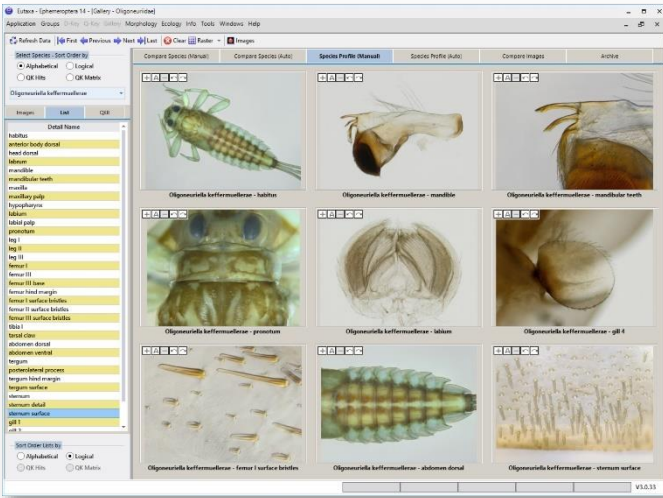
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## Software Images: D-Key, Morphology



## Software Images: Gallery, Ecology



**List of Species, covered by the Key****Family Ameletidae**

Ameletus inopinatus Eaton, 1887  
 Metreletus balcanicus (Ulmer, 1920)

**Family Ametropodidae**

Ametropus fragilis Albarda, 1878

**Family Arthropleidae**

Arthroplea congener Bengtsson, 1908

**Family Baetidae**

Baetis (Acentrella) inexpectatus (Tshernova 1928)  
 Baetis (Acentrella) lapponicus (Bengtsson, 1912)  
 Baetis (Acentrella) sinaicus (Bogoescu, 1931)  
 Baetis (Baetis) alpinus (Pictet, 1843)  
 Baetis (Baetis) buceratus Eaton, 1870  
 Baetis (Baetis) fuscatus (Linnaeus, 1761)  
 Baetis (Baetis) liebenauae Keffermüller, 1974  
 Baetis (Baetis) lutheri Müller-Liebenau, 1967  
 Baetis (Baetis) macani Kimmins, 1957  
 Baetis (Baetis) melanonyx (Pictet, 1843)  
 Baetis (Baetis) nexus Navás, 1918  
 Baetis (Baetis) nubecularis Eaton, 1898  
 Baetis (Baetis) pavidus Grandi, 1951  
 Baetis (Baetis) scambus Eaton, 1870  
 Baetis (Baetis) tracheatus Kefferm. & Machel 1967  
 Baetis (Baetis) vardarensis Ikononov, 1962  
 Baetis (Baetis) vernus Curtis, 1834  
 Baetis (Labiobaetis) atrebatinus Eaton, 1870  
 Baetis (Labiobaetis) calcaratus Keffermüller, 1972  
 Baetis (Labiobaetis) tricolor Tshernova, 1928  
 Baetis (Nigrobaetis) digitatus Bengtsson, 1912  
 Baetis (Nigrobaetis) gracilis Bog. & Tabac., 1957  
 Baetis (Nigrobaetis) muticus (Linnaeus, 1758)  
 Baetis (Nigrobaetis) niger (Linnaeus, 1761)  
 Baetis (Rhodobaetis) rhodani (Pictet, 1843)  
 Baetopus (Baetopus) wartensis Kefferm., 1960  
 Baetopus (Raptobaetopus) tenellus (Alb., 1878)  
 Centroptilum luteolum (O.F. Müller, 1776)  
 Cloeon (Cloeon) dipterum (Linnaeus, 1761)  
 Cloeon (Intercl.) petropolitanum Kl. & Nov., 1992  
 Cloeon (Similicloeon) simile Eaton, 1870  
 Procloeon (Procloeon) bifidum (Bengtsson, 1912)  
 Procloeon (Pseudocentr.) pennulatum (Eat., 1870)  
 Procloeon (Pseudocentr.) pulchrum (Eaton, 1885)

**Family Caenidae**

Brachycercus europaeus Kluge, 1991  
 Brachycercus harrisellus Curtis, 1834  
 Caenis beskidensis Sowa, 1973  
 Caenis horaria (Linnaeus, 1758)  
 Caenis lactea (Burmeister, 1839)  
 Caenis luctuosa (Burmeister, 1839)  
 Caenis macrura Stephens, 1836  
 Caenis martae Belfiore, 1984

Caenis pseudorivulorum Keffermüller, 1960  
 Caenis pusilla Navás, 1913  
 Caenis rivulorum Eaton, 1884  
 Caenis robusta Eaton, 1884  
 Cercobrachys minutus (Tshernova, 1952)

**Family Ephemerellidae**

Ephemerella ignita (Poda, 1761)  
 Ephemerella mesoleuca (Brauer, 1857)  
 Ephemerella mucronata (Bengtsson, 1909)  
 Ephemerella notata Eaton, 1887  
 Eurylophella karelica (Tiensuu, 1935)  
 Torleya major (Klapálek, 1905)

**Family Ephemeridae**

Ephemera (Ephemera) danica O.F. Müller, 1764  
 Ephemera (Ephemera) lineata Eaton, 1870  
 Ephemera (Ephemera) vulgata Linnaeus, 1758  
 Ephemera (Sinephemera) glaucops Pictet, 1843

**Family Heptageniidae**

Ecdyonurus (Ecd.) aurantiacus (Burmeister, 1839)  
 Ecdyonurus (Ecd.) dispar (Curtis, 1834)  
 Ecdyonurus (Ecd.) insignis (Eaton, 1870)  
 Ecdyonurus (Ecd.) macani Thomas & Sowa, 1970  
 Ecdyonurus (Ecd.) ruffii Grandi, 1953  
 Ecdyonurus (Ecd.) starmachi Sowa, 1971  
 Ecdyonurus (Ecd.) submontanus Landa, 1969  
 Ecdyonurus (Ecd.) torrentis Kimmins, 1942  
 Ecdyonurus (Ecd.) venosus (Fabricius, 1775)  
 Ecdyonurus (Helv.) alpinus H., Tom. & Zur., 1987  
 Ecdyonurus (Helv.) austriacus Kimmins, 1958  
 Ecdyonurus (Helv.) helveticus Eaton, 1883  
 Ecdyonurus (Helv.) parahelveticus H. T. & Z. 1986  
 Ecdyonurus (Helv.) picteti (Meyer-Dür, 1864)  
 Ecdyonurus (Helv.) siveci Jacob & Braasch, 1984  
 Ecdyonurus (Helv.) subalpinus Klapálek, 1907  
 Ecdyonurus (Helv.) zelleri Eaton, 1885  
 Electrogena affinis (Eaton, 1887)  
 Electrogena lateralis (Curtis, 1834)  
 Electrogena quadrilineata (Landa, 1969)  
 Electrogena ujhelyii (Sowa, 1981)  
 Epeorus (Epeorus) assimilis Eaton, 1885  
 Epeorus (Ironopsis) alpicola (Eaton, 1871)  
 Heptagenia (Dacnogenia) coerulans Rostock, 1878  
 Heptagenia (Heptg.) flava Rostock, 1878  
 Heptagenia (Heptg.) longicauda (Stephens, 1836)  
 Heptagenia (Heptg.) sulphurea (O.F. Müller, 1776)  
 Heptagenia (Kageronia) fuscogrisea (Retz., 1783)  
 Rhithrogena allobrogica Sowa & Degrange, 1987  
 Rhithrogena alpestris Eaton, 1885  
 Rhithrogena beskidensis Alba-Terc. & Sowa, 1987  
 Rhithrogena carpatoalpina Kl., Ol., Sa. & W., 1987  
 Rhithrogena circumtratica Sowa & Soldán, 1986  
 Rhithrogena corcontica Sowa & Soldán, 1986

Rhithrogena degrangei Sowa, 1969  
 Rhithrogena dorieri Sowa, 1971  
 Rhithrogena germanica Eaton, 1885  
 Rhithrogena gratianopolitana Sowa, D. & S., 1986  
 Rhithrogena grischuna Sartori & Oswald, 1988  
 Rhithrogena hercynia Landa, 1969  
 Rhithrogena hybrida Eaton, 1885  
 Rhithrogena iridina (Kolenati, 1859)  
 Rhithrogena landai Sowa & Soldán, 1984  
 Rhithrogena loyolaea Navás, 1922  
 Rhithrogena nivata Eaton, 1871  
 Rhithrogena picteti Sowa, 1971  
 Rhithrogena podhalensis Sowa & Soldán, 1986  
 Rhithrogena puthzi Sowa, 1984  
 Rhithrogena puytoraci Sowa & Degrange, 1987  
 Rhithrogena savoiensis Alba-Terc. & Sowa, 1987  
 Rhithrogena semicolorata (Curtis, 1834)  
 Rhithrogena taurisca Bauernfeind, 1992

**Family Isonychiidae**

Isonychia ignota (Walker, 1853)

**Family Leptophlebiidae**

Choroterpes (Choroterpes) picteti (Eaton, 1871)  
 Habroleptoides auberti (Biancheri, 1954)  
 Habroleptoides confusa Sartori & Jacob, 1986  
 Habrophlebia eldae Jacob & Sartori, 1984  
 Habrophlebia fusca (Curtis, 1834)  
 Habrophlebia lauta Eaton, 1884  
 Leptophlebia marginata (Linné, 1767)  
 Leptophlebia vespertina (Linnaeus, 1758)

Paraleptophlebia cincta (Retzius, 1783)  
 Paraleptophlebia submarginata (Stephens, 1836)  
 Paraleptophlebia wernerii Ulmer, 1920  
 Thraululus bellus Eaton, 1881

**Family Neoephemeridae**

Neoephemera maxima (Joly, 1870)

**Family Oligoneuriidae**

Oligoneuriella keffermuelleriae Sowa, 1973  
 Oligoneuriella pallida (Hagen 1855)  
 Oligoneuriella rhenana (Imhoff, 1852)

**Family Palingeniidae**

Palingenia longicauda (Olivier, 1791)

**Family Polymitarciidae**

Ephoron virgo (Olivier, 1791)

**Family Potamanthidae**

Potamanthus luteus (Linné, 1767)

**Family Prosopistomatidae**

Prosopistoma pennigerum (O.F. Müller, 1785)

**Family Siphonuridae**

Siphonurus (Siphonurus) aestivalis Eaton, 1903  
 Siphonurus (Siphonurus) armatus Eaton, 1870  
 Siphonurus (Siphonurus) croaticus Ulmer, 1920  
 Siphonurus (Siphonurus) lacustris Eaton, 1870  
 Siphonurus (Siphonurus) alternatus (Say, 1824)

## Key to Larval, Juvenile and Adult Stages of Freshwater Fishes from Central Europe

Wolfgang Lechthaler & Wolfgang Hauer



2023



**Title:** Pisces - Key to Larval, Juvenile and Adult Stages of Freshwater Fishes from Central Europe; DVD-Edition  
**Authors:** Wolfgang Lechthaler & Wolfgang Hauer

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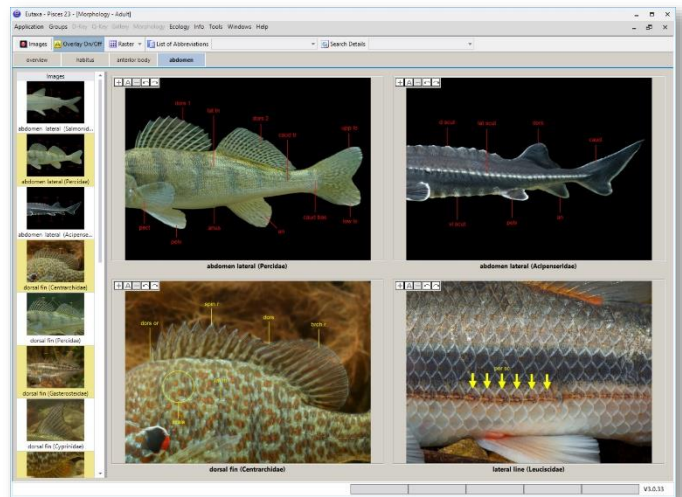
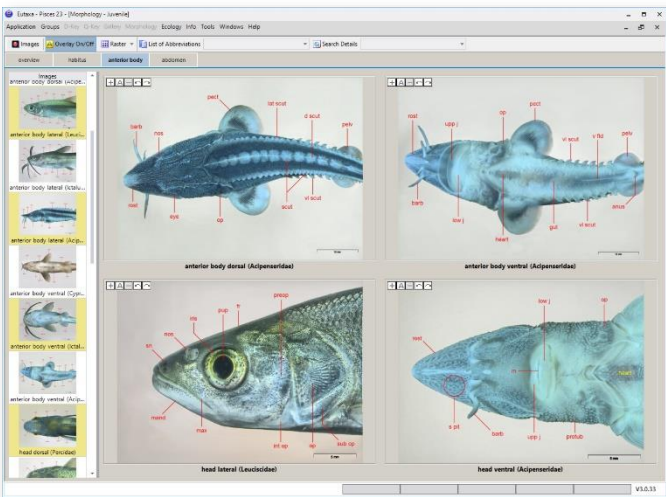
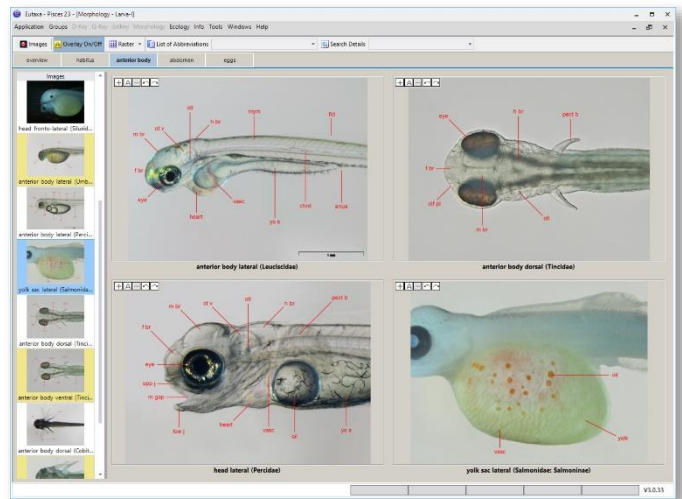
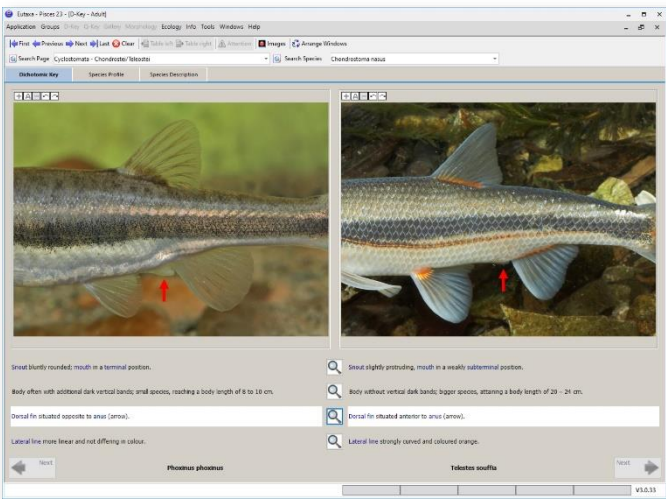
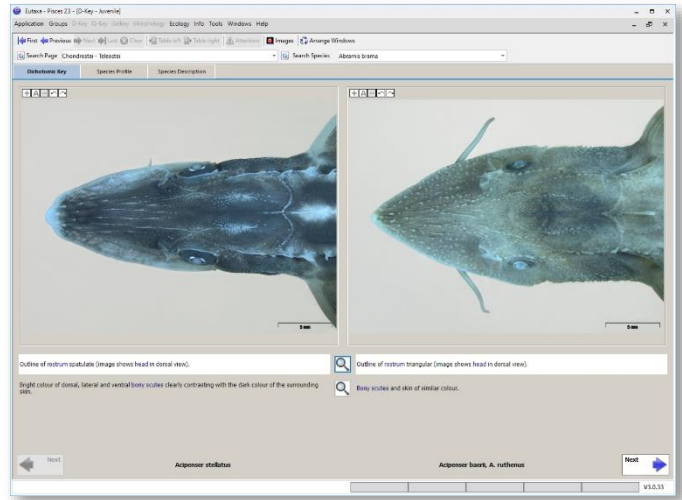
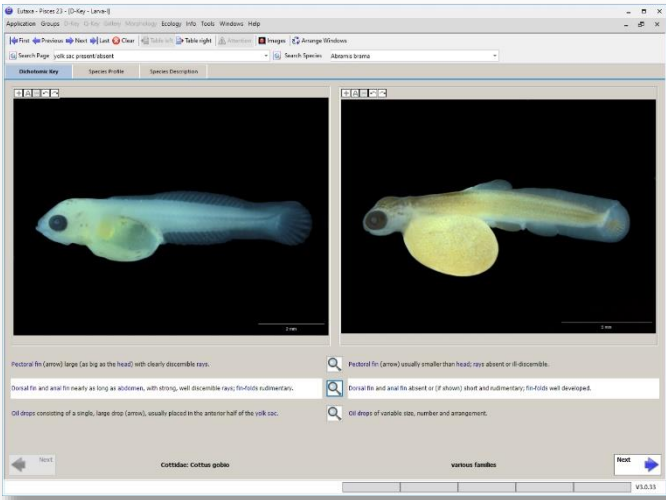
This product offers a versatile application for the identification of five larval stages (free embryos (I), young (II), intermediate (III) and older (IV) larvae, young juveniles (V)), one juvenile and one adult stage of freshwater fishes (Chondrostei, Teleostei) from Central Europe. About 90 species are documented precisely and several thousand illustrations of relevant morphological characters can be queried from an extensive picture database and compared with each other. A range of ecological and systematic dates shall enhance the knowledge of this vertebrate group, significant for the classification of standing or running waters.

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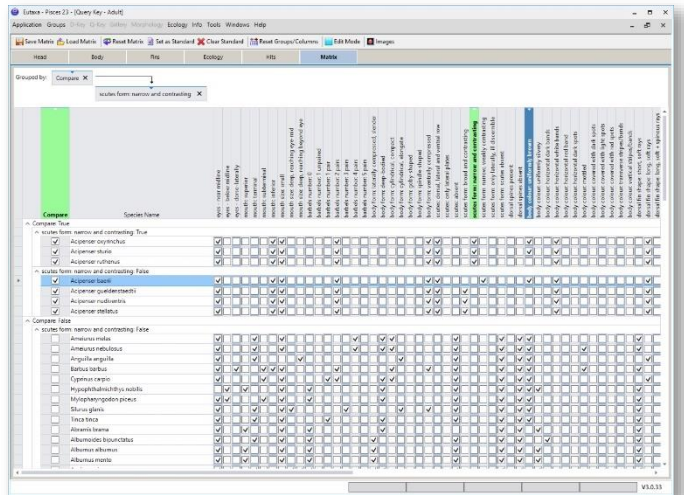
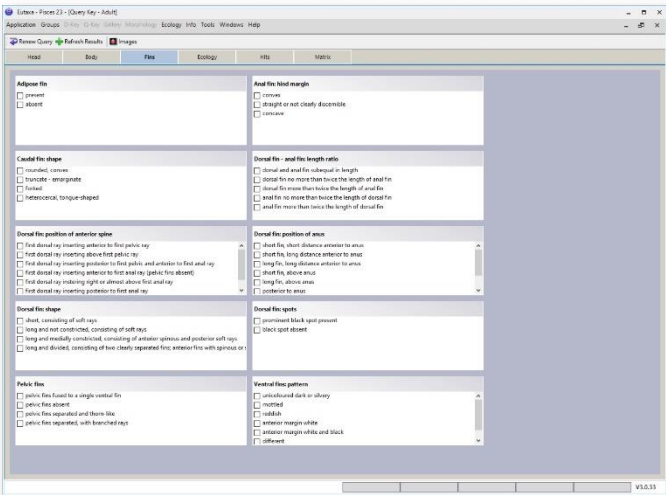
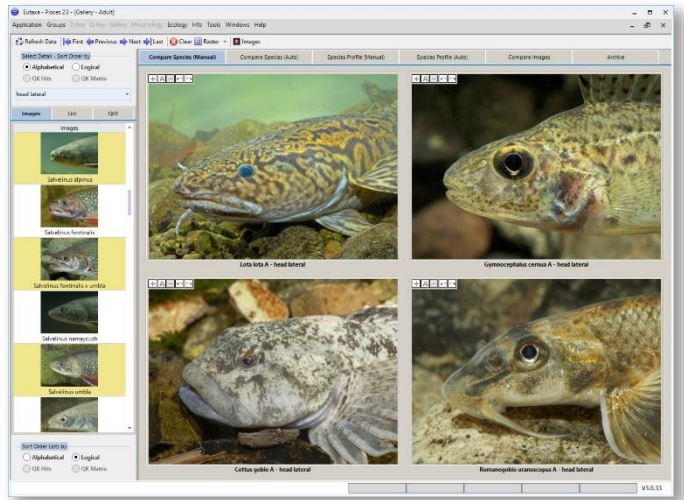
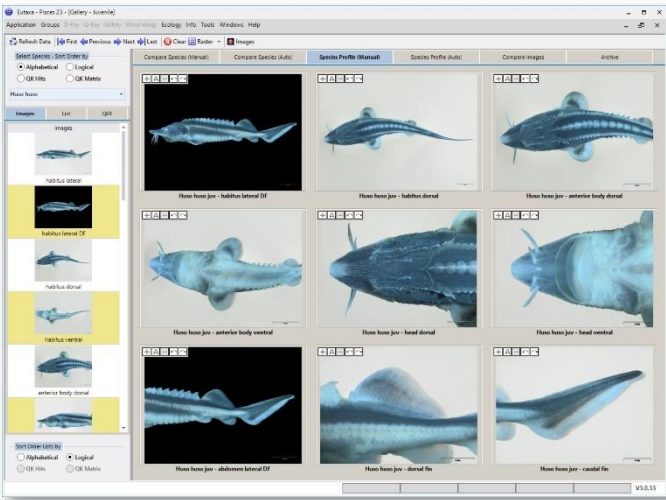
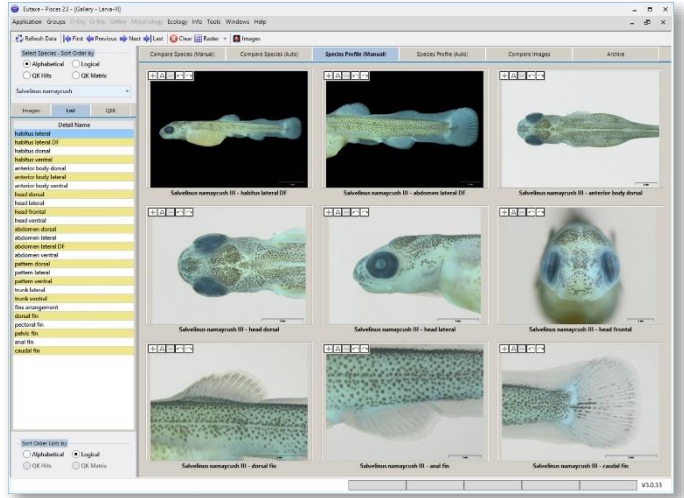
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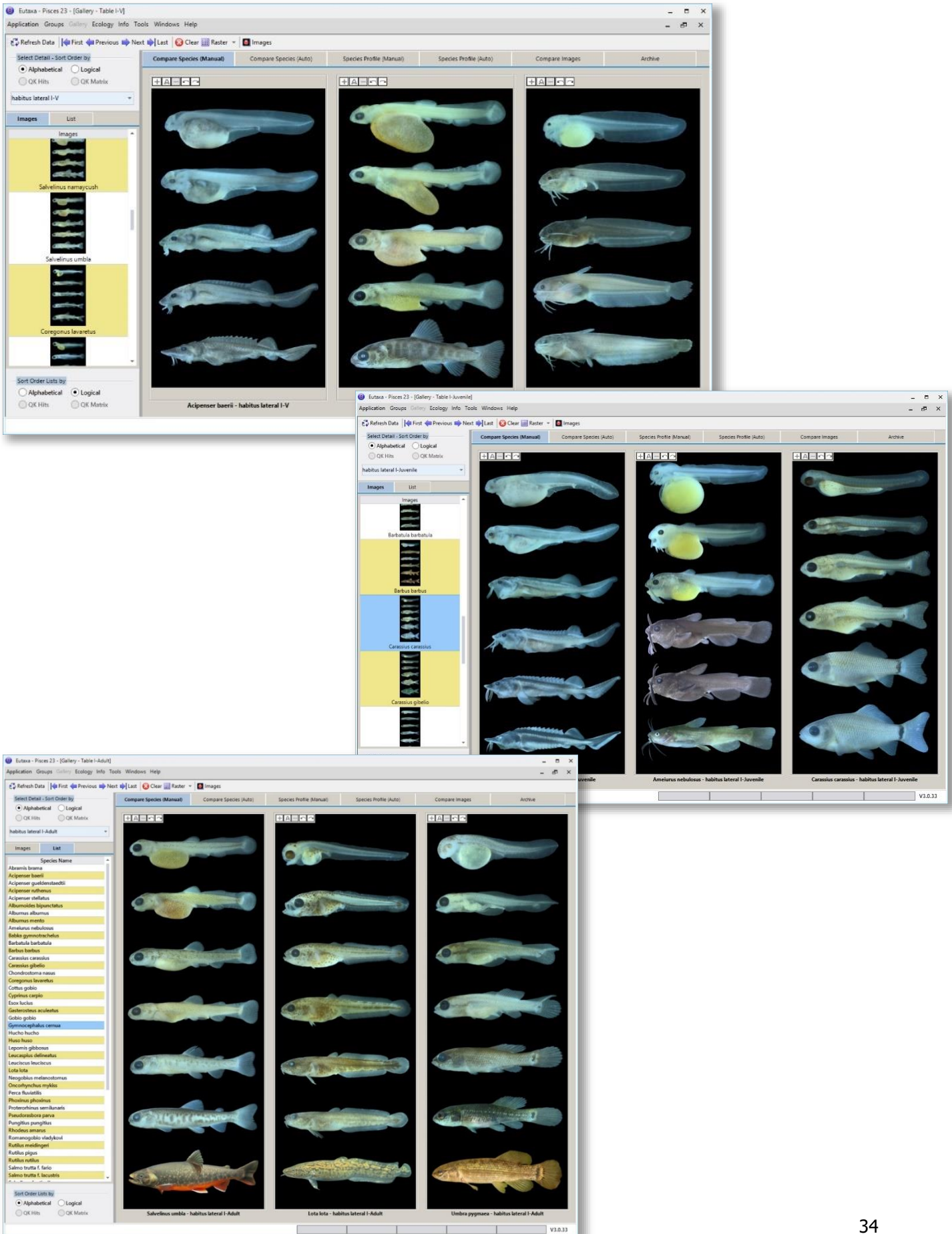
**Software Images: D-Key, Morphology**



## Software Images: Gallery, Query Key



## Software Images: Gallery – Stages



**List of Species, covered by the Key****Subclass Chondrostei****Family Acipenseridae**

Acipenser baerii Brandt, 1869  
 Acipenser gueldenstaedtii Brandt & Ratzeb., 1833  
 Acipenser nudiiventris Lovetzky, 1828  
 Acipenser oxyrinchus Mitchell, 1815  
 Acipenser ruthenus Linnaeus, 1758  
 Acipenser stellatus Pallas, 1771  
 Huso huso Linnaeus, 1758

**Subclass Teleostei****Family Acheilognathidae**

Rhodeus amarus (Bloch, 1782)

**Family Anguillidae**

Anguilla anguilla Linnaeus, 1758

**Family Bagridae**

Tachysurus fulvidraco (Richardson, 1846)

**Family Centrarchidae**

Lepomis gibbosus (Linnaeus, 1758)  
 Micropterus salmoides (Lacépède, 1802)

**Family Cobitidae**

Cobitis elongatoides Băcescu & Mayer, 1969  
 Cobitis taenia Linnaeus, 1758  
 Misgurnus fossilis (Linnaeus, 1758)  
 Misgurnus anguillicaudatus (Cantor, 1842)  
 Sabanejewia balcanica (S. L. Karaman, 1922)

**Family Cottidae**

Cottus gobio Linnaeus, 1758

**Family Cyprinidae**

Barbus balcanicus Kotlík et al., 2002  
 Barbus barbus (Linnaeus, 1758)  
 Carassius carassius (Linnaeus, 1758)  
 Carassius gibelio (Bloch, 1782)  
 Cyprinus carpio Linnaeus, 1758

**Family Esocidae**

Esox lucius Linnaeus, 1758

**Family Gasterosteidae**

Gasterosteus aculeatus Linnaeus, 1758  
 Pungitius pungitius (Linnaeus, 1758)

**Family Gobiidae**

Babka gymnotrachelus (Kessler, 1857)  
 Neogobius fluviatilis (Pallas, 1814)  
 Neogobius melanostomus (Pallas, 1814)  
 Ponticola kessleri (Günther, 1861)  
 Proterorhinus semilunaris (Heckel, 1837)

**Family Gobionidae**

Gobio gobio (Linnaeus, 1758)  
 Gobio obtusirostris Valenciennes, 1842  
 Pseudorasbora parva (Temminck & Schleg., 1846)  
 Romanogobio carpathorossicus (Vladykov, 1925)  
 Romanogobio skywalkeri Friedrich et al., 2018  
 Romanogobio uranoscopus (Agassiz, 1828)  
 Romanogobio vladkovi (Fang, 1943)

**Family Ictaluridae**

Ameiurus melas (Rafinesque, 1820)  
 Ameiurus nebulosus (Lesueur, 1819)

**Family Leuciscidae**

Abramis brama (Linnaeus, 1758)  
 Alburnoides bipunctatus (Bloch, 1782)  
 Alburnus alburnus (Linnaeus, 1758)  
 Alburnus mento (Heckel, 1837)  
 Aspius aspius (Linnaeus, 1758)  
 Ballerus ballerus (Linnaeus, 1758)  
 Ballerus sapa (Pallas, 1814)  
 Blicca bjoerkna (Linnaeus, 1758)  
 Chondrostoma nasus (Linnaeus, 1758)  
 Leucaspius delineatus (Linnaeus, 1758)  
 Leuciscus idus (Linnaeus, 1758)  
 Leuciscus leuciscus (Linnaeus, 1758)  
 Pelecus cultratus (Linnaeus, 1758)  
 Phoxinus phoxinus (Linnaeus, 1758)  
 Rutilus meidingeri (Heckel, 1851)  
 Rutilus pigus (Lacépède, 1803)  
 Rutilus rutilus (Linnaeus, 1758)  
 Scardinius erythrophthalmus (Linnaeus, 1758)  
 Squalius cephalus (Linnaeus, 1758)  
 Telestes souffia (Risso, 1826)  
 Vimba vimba (Linnaeus, 1758)

**Family Lotidae**

Lota lota (Linnaeus, 1758)

**Family Nemacheilidae**

Barbatula barbatula (Linnaeus, 1758)

**Family Odontobutidae**

Perccottus glenii Dybowski, 1877

**Family Percidae**

Gymnocephalus baloni Holčík & Hensel, 1974  
Gymnocephalus cernua (Linnaeus, 1758)  
Gymnocephalus schraetser (Linnaeus, 1758)  
Perca fluviatilis Linnaeus, 1758  
Sander lucioperca (Linnaeus, 1758)  
Sander volgensis (Gmelin, 1789)  
Zingel streber (Siebold, 1863)  
Zingel zingel (Linnaeus, 1758)

**Family Poeciliidae**

Gambusia affinis (Baird & Girard, 1853)  
Gambusia holbrooki Girard, 1859  
Poecilia reticulata Peters, 1859

**Family Salmonidae**

Coregonus lavaretus Linnaeus, 1758  
Hucho hucho (Linnaeus, 1758)  
Oncorhynchus mykiss (Walbaum, 1792)  
Salmo trutta f. fario Linnaeus, 1758  
Salmo trutta f. lacustris Linnaeus, 1758  
Salmo trutta x Salvelinus fontinalis  
Salvelinus alpinus (Linnaeus, 1758)  
Salvelinus fontinalis (Mitchill, 1814)  
Salvelinus fontinalis x S. umbla  
Salvelinus namaycush (Walbaum, 1792)  
Salvelinus umbla (Linnaeus, 1758)  
Thymallus thymallus (Linnaeus, 1758)

**Family Siluridae**

Silurus glanis Linnaeus, 1758

**Family Umbridae**

Umbra krameri Walbaum, 1792  
Umbra pygmaea (DeKay, 1842)

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Macrozoobenthos Families 23	550 €	385 €	275 €	140 €
Ephemeroptera 23	550 €	385 €	275 €	140 €
Pisces 23	780 €	545 €	390 €	195 €
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