

Distribution of the genera *Coquillettidia*, *Orthopodomyia* and *Uranotaenia* in Europe

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Abstract

Maps and distribution data are presented for the species of *Coquillettidia*, *Orthopodomyia* and *Uranotaenia* recognised in Europe.

Introduction

Two species of *Coquillettidia*, one of *Orthopodomyia* and one of *Uranotaenia* are recognised in Europe. Their recorded distribution in Europe is given in as much detail as is currently available and plotted on the accompanying maps.

Of the four species, *Coquillettidia richiardii* has the widest distribution in Europe and had been recorded from nearly every country, whereas the other three species have restricted distributions. *Orthopodomyia pulcripalpis* and *Uranotaenia unguiculata* are found only in the southern parts of the continent with *Or. pulcripalpis* extending through northern France into southern Britain. The most restricted distribution is shown by *Coquillettidia buxtoni*, which is confined to central southern areas of the continent.

***Coquillettidia buxtoni* (Edwards, 1923)**

This species is found in the Middle East, northern Africa and central southern Europe. *Cq. buxtoni* larvae and pupae penetrate the roots of sweet flag (*Acorus* spp.) and bulrushes (*Typha* spp.) (Gutsevich *et al.*, 1974), and possibly this species is found only where there are permanent waters inhabited by these plant species.

In Europe it has been recorded from: **France** (Ain, Aude, Bouche-du-Rhône, Charente-Maritime, Haute-Garonne, Gironde, Hérault, Isère, Rhône, Savoie, Corsica) (Moussiegt, 1986; Schaffner, 1998; Besnard, 2000), **Italy** (north, south, Sicily, Sardinia) (Coluzzi & Sabatini, 1995) (rarer than *Cq. richiardii* according to Romi *et al.*, 1997), **Romania** (Cernica Forest, Eastern Danube plain, Neptun/coast) (Nicolescu, 1995), **Spain** (Gerona, Empordà (Ebro delta) and Baix Llobregat areas) (Encinas Grandes, 1982; Lucientes, 1996; Eritja *et al.*, 2000), **Ukraine** (Chernovtsy) (Gutsevich *et al.*, 1971).

***Coquillettidia richiardii* (Ficalbi, 1889)**

A widely distributed species, *Cq. richiardii* is present in much of Europe from the extreme south to southern Scandinavia and Karelia, and from the Atlantic coast to western Siberia and the Middle East. As with *Cq. buxtoni*, its larvae and pupae live permanently below the water surface and obtain oxygen by piercing the roots and stems of submerged plants with their modified larval siphons or pupal trumpets. *Cq. richiardii* has been found in association with *Acorus*, *Glyceria*, *Ranunculus*, *Typha* and *Phragmites* (Shute, 1933; Cousserans & Guille, 1974; Guille, 1976). Almost a year elapses between oviposition and adult emergence (Guille, 1976) and this species is found only where there are permanent waters inhabited by these plants.

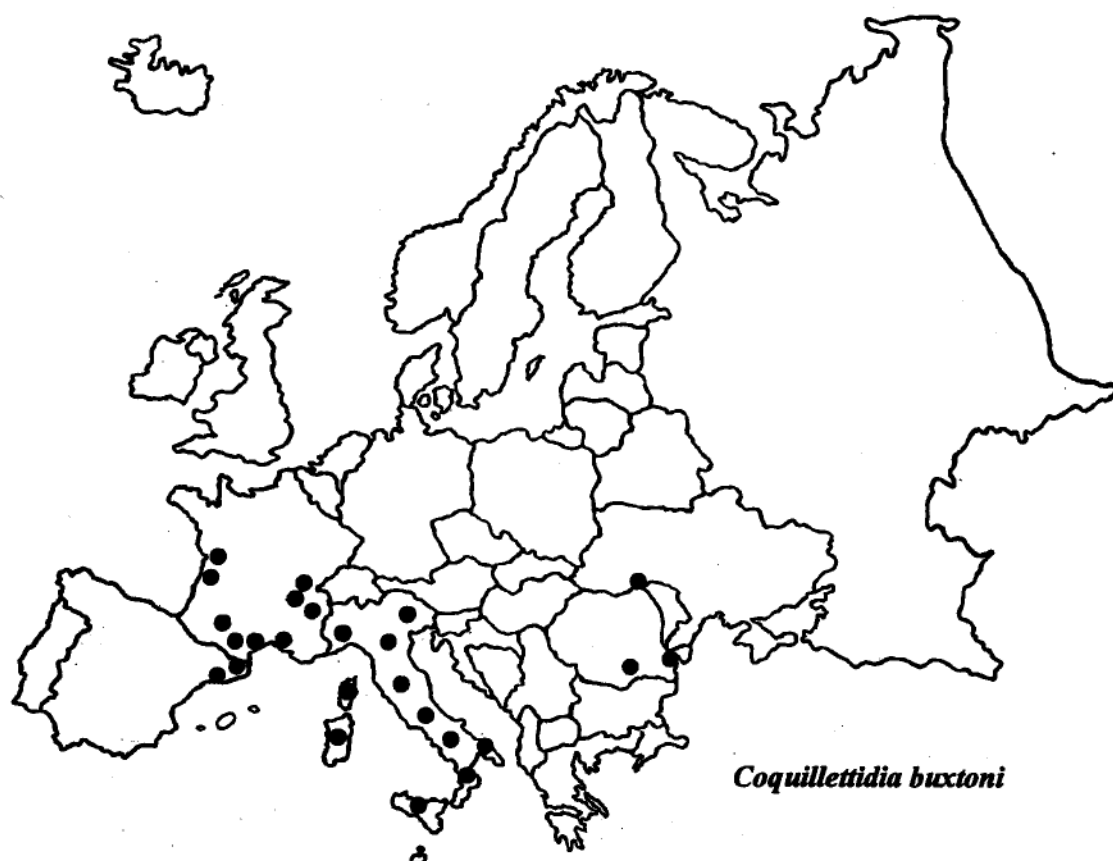
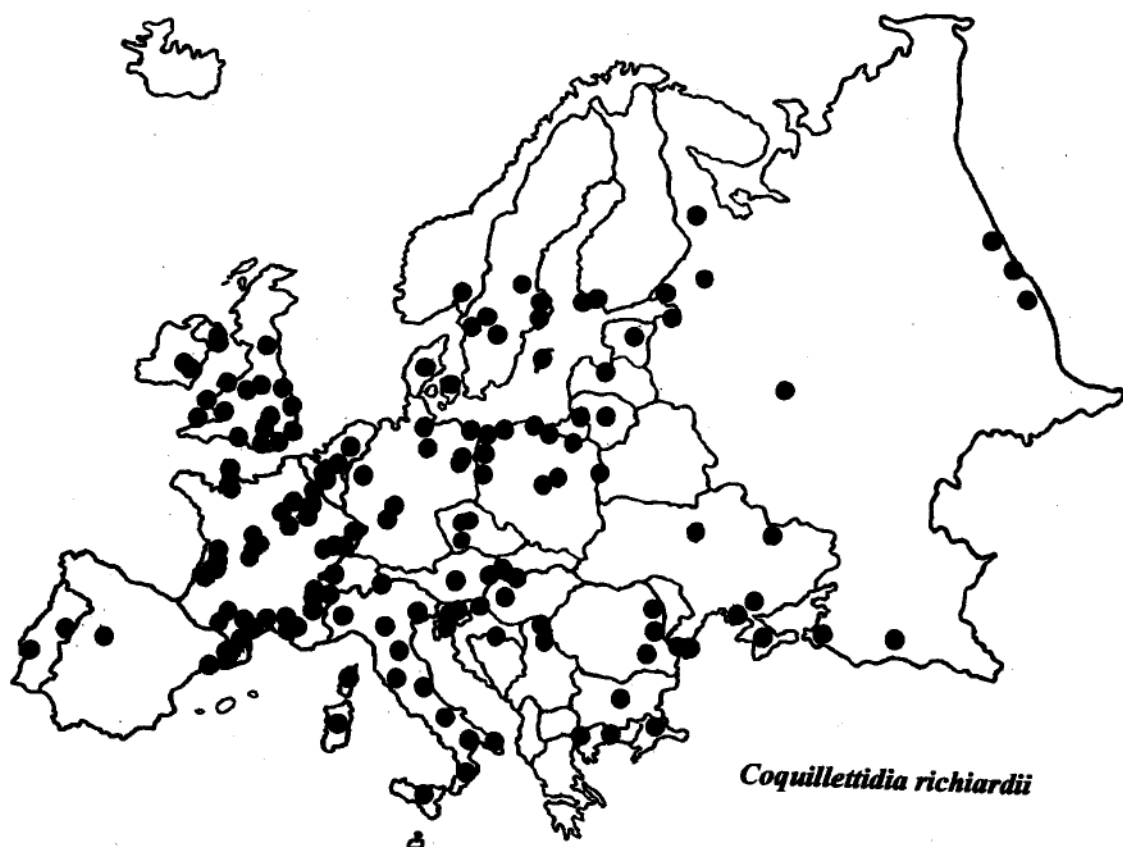
European records are from: **Austria** (Freistadt, Neusiedler See) (Natvig, 1948; Aspöck, 1968; Moog, 1995), **Belgium** (Mont-St-Amand, Gand and Destelbergen in Flanders, Postel in Campine, Forêt de Soignies, Weerpède, Anderlecht, Genval) (Goetghebuer, 1925), **Britain** (Cambridge, Cheshire, Dorset, Durham, Essex, Hampshire, Hertford, Kent, London, Norfolk, Oxford, Surrey, Sussex, Yorkshire, Glasgow area, north and south Wales) (Snow *et al.*, 1998), **Bulgaria** (Natvig, 1948; Gecheva, 1998), **Croatia** (Hrvatska, Pupuk highlands) (Merdić, 1995; 1997), **Czech Republic** (Mělník, Podebrady in

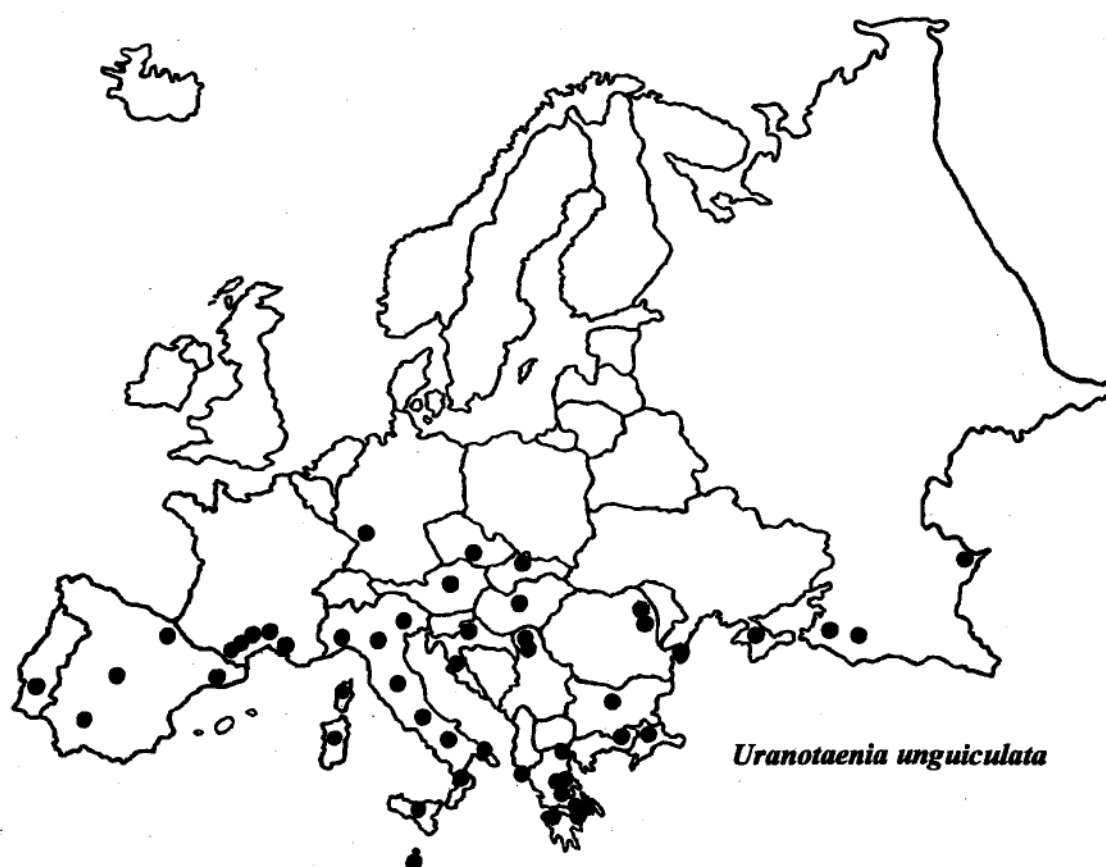
Labe valley, Trebon basin) (Rettich, 1973; 1979; 1982; Rettich *et al.*, 1978; Minář & Halgoš, 1997), **Denmark** (Jutland, Sjaelland) (Natvig, 1948; Nielsen & Pedersen, 1997), **Estonia** (Remm, 1957), **Finland** (Espoo, Tvärminne, Nauvo) (Natvig, 1948; Utrio, 1979), **France** (Ain, Aisne, Ardennes, Aude, Bas-Rhin, Bouche-du-Rhône, Charente-Maritime, Drôme, Gard, Gironde, Haut-Rhin, Haut-Savoie, Haute-Garonne, Haute-Saône, Hérault, Indre-et-Loire, Isère, Manche, Marne, Oise, Pyrénées-Orientales, Rhône, Savoie, Seine-et-Marne, Vienne, Yvelines, territoire de Belfort, Paris region, Corsica) (Moussiegt, 1986; Schaffner, 1998), **Germany** (Mannheim, Hamburg, Grosshansdorf, Eppendorf, Krefeld, Valdenkirchen/Nettegebiet, Frankfurt-am-Main, Tiefenwerder/Berlin, Werbellinsee, Spreewald, Plagefenn-bei-Chorin, Mellensee-Mark, Werder/Havel, Berlin/Steglitz, Bellinchen/Oder, Prierow, Zinnowitz, Griefswald, Liebenberg-Westlich-Eberswald) (Mohrig, 1969; Becker, 1997), **Greece** (Salonica, east Macedonia) (Waterston, 1918; Joyeux, 1918; Pandazis, 1935; Peus, 1954; Samanidou-Voyadjaglou & Darsie, 1993), **Hungary** (Balaton, Keszthely) (Mihalyi, 1955; Saringer *et al.*, 1998), **Ireland** (Belfast, Down, Kildare, Newbridge Fen, Wicklow, Arklow district) (Ashe *et al.*, 1991), **Italy** (Piemonte, north, south, Sicily, Sardinia) (Aitken, 1954; Coluzzi & Sabatini, 1995; Pollono *et al.*, 1998) (rare according to Romi *et al.*, 1997), **Latvia** (Riga, Zarnikau [Carnikava]) (Natvig, 1948; Spungis, 2000), **Lithuania** (Podenaite, 1959), **Netherlands** (de Meijere, 1950), **Norway** (Østfold) (Natvig, 1948; Moresi & Mehl, 1990), **Poland** (Bialowieza, coastal Darlowo to Wejherowo, Gdansk, Gizycko, Kampinos Forest, Mazovia/Warsaw) (Skierska, 1960; 1961; Dabrowska-Prot, 1964; Wegner, 1979; 1982; Okroy-Rysop *et al.*, 1991; Kubica-Biernat, 1997; 1999), **Portugal** (Lisbon, Pinhel) (Ribeiro *et al.*, 1988; Ribeiro & Ramos, 1999), **Romania** (Cernica Forest, Valea Mosistei and Brăila Marsh of eastern plain, Danube Delta, Tulcea, Jassy [Iasi]) (Nicolescu, 1995), **Russia** (St Petersburg region north to Priozersk, Karelia, Moscow, Central Urals, Mosdorsk in north Caucasus, Kuban, Petrozavodsk) (Natvig, 1948; Gutsevich *et al.*, 1971; Utrio, 1979; Gornostaeva, 2000), **Slovakia** (Bratislava, Čalovo) (Čepelák *et al.*, 1984; Minář & Kramar, 1987; Minář & Halgoš, 1997; Jalili *et al.*, 2000), **Slovenia** (Srednja Bistrica on Mura River, Jurišča near Postojna, Ljubljana, Dynarsche Karst (Trpiš & Tovornik, 1958; Tovornik, 1983), **Spain** (Barcelona, Gerona, Salamanca, Tarragona) (Encinas Grandes, 1982; Lucientes, 1996; Eritja *et al.*, 2000), **Sweden** (Skåne, Småland, Öland, Bohuslän, Södermanland, Uppland, Hälsingland) (Dahl, 1977; Jaenson *et al.*, 1986; Jaenson, 1990), **Switzerland** (Lausanne) (Briegel, 1973), **Turkey** (Alten *et al.*, 2000; Ramsdale *et al.*, 2001), **Ukraine** (Crimea, Jazchenko, Kharkov, Kiev, Dnepr basin, Kherson, Ukrainian lowlands) (Natvig, 1948; Gutsevich *et al.*, 1971; Artemenko & Ponomerenko, 1974; Zarechnaya *et al.*, 1989), **Yugoslavia** (Potisje, Vojvodine, Vršac Mountains) (Božićić, 1985; 1988; Srdić *et al.*, 1986).

Orthopodomyia pulcripalpis (Rondani, 1872)

The distribution of this species covers the countries surrounding the Mediterranean, areas of northwestern Europe, Asia Minor and Georgia and Azerbaijan in Transcaucasia. It becomes rarer with increasing latitude but may be found as far north as the southern parts of the boreoarctic sub-region (Rioux, 1958). This is a tree-hole species and hence is found only where there are mature trees such as forests, woodlands, parks, roadsides and established gardens. It has been recorded developing in beech (*Fagus sylvatica*), elm (*Ulmus* spp.) and horse chestnut (*Aesculus hippocastanum*) (Cranston *et al.*, 1987).

In Europe it has been recorded from: **Albania** (Marshall, 1938), **Britain** (Buckingham, Cambridge, Essex, Hampshire, London, Surrey) (Snow *et al.*, 1998), **Croatia** (Merdić, 1997), **Bulgaria** (Gecheva, 1998), **France** (Aude, Bouche-du-Rhône, Charente-Maritime, Côte-d'Or, Gard, Hérault, Indre-et-Loire, Oise, Pyrénées-Orientales, Seine-et-Marne, Var, Yvelines, Paris Region, and Corsica) (Rioux, 1958; Moussiegt, 1986; Schaffner, 1998), **Greece** (Athens, Macedonia, Olympus area, Thessaly, Corfu) (Pandazis, 1935; Stephanides, 1938; Peus, 1954; Samanidou-Voyadaglou & Darsie, 1993), **Hungary** (Mihalyi, 1955), **Italy** (common in north, south, Sicily, Sardinia) (Aitken, 1954; Coluzzi & Sabatini, 1995; Romi *et al.*, 1997), **Portugal** (Aguas de Moura) (Ramos, 1983; Ribeiro *et al.*, 1988; Ribeiro & Ramos, 1999), **Romania** (Cernica Forest, Cloșani Cave) (Nicolescu, 1995), **Russia** (Black Sea coast) (Gutsevich *et al.*, 1971; Gornostaeva, 2000), **Spain** (Asturias, Barcelona, Cuenca, Madrid, Salamanca, Segovia, Valencia, Zaragoza) (Encinas Grandes, 1982; Lucientes, 1996; Eritja *et al.*, 2000), **Switzerland** (Magadino Plain) (Fouque *et al.*, 1991; Briegel, 1998), **Turkey** (Alten *et al.*, 2000), **Ukraine** (Crimea) (Gutsevich *et al.*, 1971), **Yugoslavia** (Vojvodine) (Srdić *et al.*, 1986).





Uranotaenia unguiculata Edwards, 1913

This species is reported from north Africa, southwestern Asia, south and central Europe. Larvae and pupae are found in shaded areas of small, stagnant pools overgrown with vegetation, often *Lemna* spp. The immature stages prefer fresh water and avoid water with salinity greater than 0.1-0.2‰ (Gutsevich *et al.*, 1974).

European records are from **Austria** (Moog, 1995), **Bulgaria** (Gecheva, 1998), **Croatia** (Merdić, 1997), **Czech Republic** (Moravia) (Minář & Kramar, 1987; Minář & Halgoš, 1997), **France** (Aude, Bouche-du-Rhone, Gard, Herault, Pyrenees-Orientales, Corsica) (Moussiegt, 1986; Schaffner, 1998), **Germany** (Upper Rhineland) (Becker & Kaiser, 1995), **Greece** (Marathon, Zarkos, Klokotos, Agea Marina (Lamia), Phthiotis District, Sperchios Valley, Attiki District – all in central Greece, Mouria in Peloponnese, Corfu, Macedonia, Thrace) (Joyeux, 1918; Waterston, 1918; Pandazis, 1935; Stephanides, 1937; Peus, 1954; Samanidou-Voyadjaglou & Darsie, 1993), **Hungary** (Mihalyi, 1955), **Italy** (rare in the northern regions while common in the central-south, Sicily and Sardinia) (Coluzzi & Sabatini, 1995; Romi *et al.*, 1997), **Malta** (Wied il-Qlejgha, Wied Ghajn Rihana) (Gatt, 1996), **Portugal** (Ferreira do Alentejo) (Ribeiro *et al.*, 1988; Ribeiro & Ramos, 1999), **Romania** (Danube Delta, Iasi, Moldavian Plain) (Ungureanu, 1942; Nicolescu, 1995), **Russia** (Volga Delta, north Caucasus) (Gutsevich *et al.*, 1971; Gornostaeva, 2000), **Slovakia** (Minář & Halgoš, 1997; Jalili *et al.*, 2000), **Spain** (Barcelona, Cordoba, Madrid, Navarra) (Encinas Grandes, 1982; Lucientes, 1996; Eritja *et al.*, 2000), **Turkey** (Alten *et al.*, 2000), **Ukraine** (Crimea) (Gutsevich *et al.*, 1971), **Yugoslavia** (Potisje, Vojvodine) (Božičić, 1985; Srdić *et al.*, 1986).

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European Mosquito Control Association

The European Mosquito Control Association (EMCA) was launched in 2000 with Raymond Gruffaz as its first President and with Norbert Becker, Paul Schädler and Françoise Pfirsch as officers. The current President is Paul Schädler.

The overall objective of the EMCA is to "promote control of mosquitoes and related subjects in the broadest sense and to disseminate affiliated information to its members and others in Europe and neighbouring regions."

To join the EMCA please contact the EMCA Office. The annual membership fee is currently 50 Euros.

NEWS

➡ Election of the president for 2002

The President for 2002 will be Giorgio Celli of the University of Bologna. Prof Celli was elected unanimously in March by a written ballot of the EMCA membership.

➡ General Meeting

The next General Meeting, open to all EMCA members, will be held in Barcelona on Friday 21 September 2001. It will be hosted by the SOVE Meeting (for further details please visit the website at <http://www.sove2001.org>).

➡ **EMCA Workshop**

The second EMCA workshop will take place in Bologna, Italy from 14-17 March 2002 and will be organised by Romeo Bellini (email: rbellini@caa.it).

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