

Species dossier:

# *Potamanthus luteus*

Yellow mayfly

April 2011



Female imago of *Potamanthus luteus*

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***Potamanthus luteus* (Linnaeus, 1758)**  
**Yellow mayfly**  
**(Ephemeroptera: Potamanthidae)**

## Introduction

The Yellow mayfly (*Potamanthus luteus*) is a priority species within the UK Biodiversity Action Plan. The purpose of this dossier is to draw together all available information on its ecology and distribution in the UK, in order to assist Government Agencies, Planning Authorities, landowners and conservation practitioners with the implementation of action to conserve this species.

The Yellow mayfly is classified as Vulnerable (pRDB2) in the review of rare and scarce Ephemeroptera and Plecoptera (Bratton, 1990) however it is not listed in the British Red Data Book (Shirt, 1987). It has no formal legal protection, and is not listed in any Schedule of the Wildlife and Countryside Act or in annexes to EU Directives. The Yellow mayfly is thought to be declining across Europe, with the UK at the edge of its range. It is listed as vulnerable in Germany and Switzerland, however in 1999 it was found for the first time in Scandinavia (Finland) (Vuori, 1999).

## Summary

The Yellow mayfly (*Potamanthus luteus*) is one of Britain's rarest mayflies. Its stronghold is the River Wye but there are also historical records from the River Usk (Macan, 1970; Brooker and Morris, 1980) and River Thames (McLachlan, 1878). Since the early 1980s it has been recorded from the River Wye and in recent years it has suffered a significant decline in this watercourse. Recently there have been a small number of records from other watercourses however further investigation is needed to determine whether they are from viable populations.

## Ecology

The Yellow mayfly is a mayfly species which has been found in a small number of watercourses in Britain. The larvae typically live in silt trapped amongst stones on the bed of the river and can be found in side channels and pools following flood events. They are good swimmers and they feed by gathering fine particles from the bed. Larvae grow to between 15 and 17mm (Macan, 1970; Obrdlik, et al, 1979), however recent studies in the UK indicate that the range is 12 to 14mm (Hammett, M., pers. comm.). There is one generation a year which overwinters as larvae in the UK, however in north western Italy it overwinters in the egg stage or possibly as very small larvae (Fenoglio, et al., 2008).

Brooker and Morris (1980) collected larvae from depths of 0.11 to 0.35 metres and current velocities of 0.15 to 0.78 metres per second. The highest density of larvae was found at sites with deeper, slower-flowing water with substrata of consolidated gravel. Hammett (2009) states that larvae in the River Wye are found under loose stones, preferring mobile sections of shingle or a mixture of larger stones with loose shingle such as those found downstream of bridges or at the confluence of tributaries.

The larvae are tolerant of high water temperatures, albeit with a decrease in both abundance and biomass (Obrdlik, et al., 1979). Upstream of a discharge from a power station the average abundance of *P. luteus* larvae was 360 individuals per m<sup>2</sup>. Immediately downstream of the discharge the average was 31 individuals per m<sup>2</sup>. Biomass ranged from 1.2 g.m<sup>-2</sup> upstream of the discharge to 0.2 g.m<sup>-2</sup> immediately downstream. Studies on a river recovering from gross pollution by industrial and municipal effluents revealed that larvae of *P. luteus* were tolerant of pollution from organochlorines and dioxins, however in larvae collected from the most badly contaminated sites the gills were darkened (Vuori, 1999)

The adults are short-lived, with peak emergence typically in July. The flight period however extends from late May to late October in some years. Emergence typically takes place at dusk and the adults usually emerge from the surface of the water, however the nymphs may also climb up stones or plant stems to emerge partially or entirely out of the water (Hammett, 2009; unpublished data, C.J.Bennett). Adults are positively phototactic and are readily attracted to bankside lights (Bratton, 1990). Verrier (1948) suggests that adults can migrate as far as 3 kilometres upstream following emergence, while Hammett (2009) suggests that this migration might be as far as 12km and that they can fly overland to adjacent river valleys. The subimago stage typically lasts for 6 to 9 hours followed by 24 to 48 hours for the imago (Fenoglio, 2008) however depending on the ambient temperature and humidity, the sub-imago stage can last up to 72 hours (Hammett, M., pers. comm.). The number of eggs carried by each female range from 3000 to 5000 and each egg measures 170µm (excluding the attachment structures at each end) (unpublished data, C.J.Bennett). The male has distinctive genitalia with three segmented forceps and a complex penis.



**Egg of *Potamanthus luteus***



**Male genitalia of *Potamanthus luteus***

Surveys on the River Wye have shown that population density can fluctuate markedly with some locations suffering significant declines before recovering in subsequent years (Hammett, 2009).

### **History in Britain**

The Yellow mayfly has always been a rare mayfly in Britain, with few river systems holding populations of this species. In the nineteenth century there were only two records of this species: in 1835 in the 'metropolitan district' (Stephens, 1835) and from the Thames in 1878 (McLachlan, 1878).

During the twentieth century, *P. luteus* has been recorded from the River Wye (Macan, 1970; Brooker and Morris, 1980) and River Usk (Macan, 1970; Brooker and Morris, 1980); Hammett (2009), with an erroneous record from the River Itchin (Lucas, 1906) and unconfirmed records from the Chichester Canal (Brooker and Morris, 1980) and New Reservoir at Colne in Lancashire (Bainbridge, 1933).

A record from Aylesbeare and Harpford Common in 1978 is also unconfirmed. No suitable habitat was found during a visit to the site in 2005 and it is likely that this record is incorrect (C. Macadam, pers. comm.). Two records from a pond at Fford-fawr are intriguing. The pond in question is situated in a meander of the River Wye downstream of Glasbury. These records relate to larval specimens collected during the National Pond Survey in the early 1990s. No specimens were found during a visit to the pond in spring 2010, and it is unlikely that the pond could now support *P. luteus*. During the same visit specimens were found in the nearby River Wye and it is likely that larvae found in the pond were part of an adventives population resulting from opportunistic egg-laying or an earlier flood event.

An adult was collected from the banks of the River Test, Hampshire in 2005; however subsequent surveys have not yet located a breeding population (C. Bennett, pers. comm., C. Macadam, pers. comm.).

Recent records by the Environment Agency (EA) include two from the Usk catchment (Olway Brook and Sor Brook). These records may indicate that *P. luteus* is still present in the Usk, albeit very localised. Other EA records from Wales include one from the Nant Clydach, a tributary of the River Taff. This record is particularly interesting as the River Taff rises close to the source of the River Usk. It is not inconceivable that *P. luteus* might occur in the River Taff, however the absence of records from routine monitoring by the EA would suggest that if it does occur there it has a highly localised distribution. A nearby record from the River Waycock in Glamorgan may also indicate another localised population. Recent specimens taken during routine EA monitoring of the River Teme at Knightsford Bridge are the first verified records of *P. luteus* from the River Severn catchment. The site was visited in 2010 and despite unfavourable river conditions, two larvae of *P. luteus* were found. The continued presence of *P. luteus* at this site would suggest that a small population of this species may be persisting at this site (Macadam, C. pers. comm.). These records from the River Severn represent an important expansion to the range of this species.

## European distribution

The Fauna Europaea website lists this species from the following countries and major regions, listed alphabetically: Austria; Bosnia and Herzegovina; Britain I. (Incl. Shetlands, Orkneys, Hebrides and Man Is.); Bulgaria; Croatia; Czech Republic; European Turkey (Incl. Imroz I. - Gokceada, but not those in the Sea of Marmara); French mainland; Germany; Greek mainland (Incl. Andikithira I., Evvia I., Ionian Is., Samothraki I., Northern Sporades Is., Thasos I.); Hungary; Italian mainland; Latvia; Lithuania; Luxembourg; Macedonia; Poland; Romania; Russia (Central, East, North, Northwest); Slovakia; Slovenia; Spanish mainland (Incl. Alboran I.); Switzerland; The Netherlands and Ukraine. This species is also found in East Palaearctic and The Near East.

## Recent survey work

Surveys of the River Wye were undertaken by the Environment Agency during 1995 as part of the National river quality survey. The Yellow mayfly was found to be distributed widely over approximately 110km of the main river. A repeat survey during 1999 (Hammett, M., pers. comm.) found that this species had been almost completely lost from the upper Welsh reaches of the river and is now restricted to lower reaches (approx. 50km downstream of King's Cuple). Recent searches have failed to find this species in the River Usk.

The National River Authority and latterly the Environment Agency have routinely monitored the aquatic macro-invertebrate fauna of the rivers in England and Wales for water quality purposes. *P. luteus* has regularly been encountered during these surveys on the River Wye. A recent review of Environment Agency records has turned up records from a small number of other watercourses (see above).

## Survey methods

Adults fly at dusk and are positively phototactic; they can therefore be attracted to light. Moth traps operated on the banks of a river during June and July are likely to produce specimens if the species is present. Adults can also be swept from bankside vegetation or beaten from nearby trees.

The larvae of this mayfly can be found by 'kick-sampling'. This is a standard technique employed by biologists to sample aquatic invertebrates and entails disturbing a section of the riverbed. Invertebrates are dislodged and collected in a standard pond net held just downstream.

The Countryside Commission for Wales has recently published a Common Standards Monitoring methodology for monitoring the River Wye population of *P. luteus* (Hammett, 2009).

## Identification

The Yellow mayfly is a large species with three tails and large hindwings. The male dun (or sub-imago) has a dull yellowish-orange body with a distinctive broad coral pink stripe along the back of the body. This stripe is highly visible in ultra-violet light and may function as a sexual attractant (Hammett, 2009). The body is also marked with a pair of pale lines and dots on the upper surface of each segment and a single dark dot on the side of each segment. The wings are dull yellow and the cross-veins are a dark reddish colour, particularly at the wing tip. The spinner (or imago) is similar to the dun however the wings are brighter yellow and the dorsal stripe is darker, becoming claret red and finally dull brown with age (Hammett, M., pers. comm.). The nymphs or larvae are streamlined and have seven pairs of thick, feathery gills that are held at the sides of the body. The first gill is however often greatly reduced, or in some cases completely absent.

If in doubt it is best to refer to specialist keys. There are a number of identification guides available: Elliott, et al. (1983) for adults; Elliott, et al. (1988) for larvae; Harker (1990) and unpublished data, C.R.Macadam and C.J.Bennett for both adults and larvae.

If you are in any doubt over the identification of adults or larvae, please contact Buglife – The Invertebrate Conservation Trust, who can arrange for them to be checked by an expert.



**Larvae of *Potamanthus luteus***



**Female sub-imago of *Potamanthus luteus***



**Female imago of *Potamanthus luteus***

## Threats

Recent localised declines on the River Wye are likely to have been caused by dredging operations and sheep dip pollution (Hammett, 2009). In common with other Ephemeroptera, this species relies upon good water quality. It is also thought that this species will be affected by low flows.

The main threats include:

1. Poor water quality - both persistent and catastrophic pollution events
2. Changes to the structure and management of marginal and riparian vegetation
3. Low flows caused by abstraction
4. High levels of suspended silt
5. Unsympathetic dredging
6. Neglect of river channels, leading to choking with vegetation
7. Removal of side channels through river engineering work

As the adults of this species are attracted to light, the positioning of bankside lights, such as road lights, may also have a deleterious effect on breeding populations.

## Action Plan for the Yellow mayfly (*Potamanthus luteus*)

- 1 Undertake research into the factors causing the decline in this species. Establish project by 2009.
- 2 Produce advice for Rivers HAP group on the requirements of *Potamanthus luteus* by the end of 2009.
- 3 Engage with local government and planning authorities to ensure that this species is afforded adequate consideration and, where possible, it and its associated habitats are protected from damaging development through the planning process.
- 4 Ensure that sites for the species are designated as being for nature conservation in Local Plans.
- 5 Ensure that this species is represented on all relevant LBAPs.
- 6 Review all historical records of this species and produce an annotated list of records by end 2009.
- 7 Monitor the River Wye population of this species on an annual basis.
- 8 Undertake surveys in the River Usk, River Severn, River Taff and River Test to determine whether populations of *P. luteus* are present.
- 9 Identify areas of potentially suitable habitat for this species. Undertake a minimum of five surveys per year to establish where this species is present.
- 10 Establish a captive breeding and release programme to re-establish this species in the River Usk and to re-enforce the River Wye population. By 2010.



## References

**Bennett, C.J. (2009)** Report on *Potamanthus luteus* on the River Wey. Unpublished report for the Riverfly Partnership. 3pp.

**Bratton J.H. (1990)** A review of the scarcer Ephemeroptera and Plecoptera of Great Britain. Nature Conservancy Council, Peterborough, UK. Research & survey in Nature Conservation no. 29:1-39.

**Elliott, J.M. & Humpesch, U.H. (1983)** A key to the Adults of the British Ephemeroptera with notes on their ecology. Scientific Publications of the Freshwater Biological Association, No. 47, 101pp.

**Elliott, J.M., Humpesch, UH. & Macan, TT. (1988)** Larvae of the British Ephemeroptera: a key with ecological notes. Scientific Publications of the Freshwater Biological Association, No. 49, 145pp.

**Hammett, M.J. (1999)** Interim report on survey of macroinvertebrates in the River Wye and its tributaries. Unpublished manuscript.

**Hammett, M.J. (2009)** Conservation objective for the mayfly *Potamanthus luteus* on the River Wye (Lower Wye) SSSI. Report for the Countryside Council for Wales (FC 73-01-555). 6pp.

**Harker J.E. (1989)** Naturalists' Handbooks 13. Mayflies. Richmond Publishing. 56pp.

**Macadam, C.R. & Bennett, C.J.** A pictorial guide to the British Ephemeroptera. Field Studies Council, Shrewsbury.

**Macan T.T. (1979)** A key to the nymphs of British Ephemeroptera with notes on their ecology. Third edition. Freshwater Biological Association Scientific Publication No. 20. 80 pp.

**Shirt, D.B. (ed.) (1987)** British Red Data Books: 2. Insects. Nature Conservancy Council, Peterborough, UK.

## Appendix 1 – Annotated list of literature relating to *Potamanthus luteus*

**Bae Y.J. & McCafferty W.P. (1991) Phylogenetic systematics of the Potamanthidae (Ephemeroptera). Transactions of the American Entomological Society 117(3-4):1-143.**

A comprehensive review of the Potamanthidae which recognises 23 valid species. Recognised *P. ferreri* Pictet as a synonym of *P. luteus* (Linnaeus). Also recognised two subspecies of *P. luteus*: *P. luteus luteus* and *P. luteus oriens*. Gives descriptions for larva, sub-imago and imago and a list of synonyms.

**Bainbridge W.G. (1933) Northern records of stone flies, may flies and caddis flies. North Western Naturalist, 8:121-123.**

Record of *Potamanthus luteus* from New Reservoir, Colne, South Lancashire.

**Bennett, C.J. (2009) Report on *Potamanthus luteus* on the River Wey. Unpublished report for the Riverfly Partnership. 3pp.**

Report on visits to the River Wye during 2009 and subsequent captive rearing experiments. Provides brief details of gut content analysis; number of eggs per female; emergence of sub-imago; and effect of temperature on emergence.

**Blair K.G. (1927) A note on *Potamanthus luteus* L. [Ephemeroptera]. The Entomologist 60: 99-100.**

Corrects erroneous record of *Potamanthus luteus* in Lucas (1906). Also details a specimen collected by W.C. Boyd, probably from Low Marlow on the Thames.

**Bratton J. (1990). A review of the scarcer Ephemeroptera and Plecoptera of Great Britain. Research and Survey in Nature Conservation No. 29. Nature Conservancy Council, Peterborough pp 13-14.**

Review of the status of *Potamanthus luteus* in the UK.

**Brooker M.P. & Morris D.L. (1980) *Potamanthus luteus* (Linnaeus) (Ephemeroptera: Potamanthidae) in the River Wye. Entomol. Gaz. 31(4):247-251.**

Undertook surveys of the Rivers Wye and Usk between 1975 and 1979. *Potamanthus luteus* was found in the River Wye downstream of Builth Wells. There were no specimens found in tributaries of the Wye, however a single specimen was collected from the Usk at Abergavenny. A list of other known records of *P. luteus* is also included.

**Clifford H.F. (1982) Life cycles of mayflies (Ephemeroptera), with special reference to voltinism. Quaestiones Entomologicae 18(1-4):15-90.**

**Curtis J. (1834) Descriptions of some nondescript British species of May-flies of anglers. London and Edinburgh Philosophical Magazine and Journal of Science. (3)4(20):120-125, (21)212-218.**

One of the first records of *Potamanthus luteus* (= *Baetis mellea*) from the British Isles, however no details for the location of the record are given.

**Eaton A.E. (1868) An outline of a re-arrangement of the genera of Ephemeridae. Entomologist's Monthly Magazine 5:82-91.**

Gives features for separating *Potamanthus* from other genera of Ephemeroptera.

**Eaton A.E. (1883-1888) A revisional monograph of recent Ephemeridae or mayflies. Transactions of the Linnean Society of London, Second Series, Zoology 3:78-80**

Description of sub-imago and imago of *Potamanthus luteus* including list of synonyms and references. Nymph reported as "harbouring under stones in gently flowing water at the borders of rapids". Records known at the time of writing are included together

with a note that “the scarcity of this species in collections is probably due more to its time of flight than its actual rarity”.

**Elpers C. & Tomka I. (1994) Structure of mouthparts and feeding habits of *Potamanthus luteus* (Linne) (Ephemeroptera: Potamanthidae). Archiv fuer Hydrobiologie Supplementband 99:73-96.**

**Elpers C. (1997) Comparative morphology of the mandibles of seven genera of Ephemeroidea (Ephemeroptera). pp311-316 in Landolt P; Sartori M. (eds). 1997. Ephemeroptera and Plecoptera: Biology-Ecology-Systematics. Mauron + Tinguely & Lachat, SA. Fribourg.**

Compares the mouthparts of *Potamanthus luteus* with species from six other genera (including *Ephemera danica*). Discusses ecological and phylogenetic significance of the differences in the mandibles.

**Fenoglio S., Bo T., Tierno de Figueroa J.M. & Cucco M. (2008). Nymphal growth, life cycle, and feeding habits of *Potamanthus luteus* (Linnaeus, 1767) (Insecta: Ephemeroptera) in the Bormida River, Northwestern Italy. Zoological Studies 47(2):185-190.**

A good all-round summary of the autecology of *Potamanthus luteus*. Adult life is 6 to 9 hours for the sub-imago followed by 24 to 48 hours for the imago. Larval growth was for three months only – larvae appeared in samples in March and emerged as adults in June (however in other accounts and in the River Wye the nymphs overwinter). Not clear whether eggs remained in diapause during the winter (as in *Serratella ignita*) or whether very small nymphs overwinter in the hyporheic zone.

**Hammett, M.J. (2009) Conservation objective for the mayfly *Potamanthus luteus* on the River Wye (Lower Wye) SSSI. Report for the Countryside Council for Wales (FC 73-01-555). 6pp.**

Background information on the status of *Potamanthus luteus* in the River Wye. Includes standardised sampling methods and conservation objectives for monitoring the population of *P. luteus* in the River Wye (Lower Wye) SSSI.

**Harrisson C.M.H. (1958) Some recent records of *Ephemera lineata* Eaton and *Potamanthus luteus* (L.) (Ephemeroptera). Entomologists Monthly Magazine 94:280.**

Describes the micro-habitat of *Potamanthus luteus* in the River Wye as “small pools floored with stones and fine silt”. Suggests that these pools are “nearly, but not quite, cut off from the main river”. Also reports that T.T. Macan found nymphs in similar situations in the River Usk.

**Landa V. (1968) Development cycles of Central European Ephemeroptera and their interactions. Acta entomologica bohemoslovaca 65:276-284.**

Describes *Potamanthus luteus* as a species whose larvae “develop in the autumn and then cease growing during the winter (apparently entering a state of diapause) until late spring or summer when...they quickly complete their development and reach maturity in the course of 2 to 3 months”.

**Lestage J.-A. (1935) Contribution à l'étude des Éphéméroptères. XI. - L'appareil trachéo-branchial des larves des *Potamanthus*. Bulletin et Annales de la Société Entomologique de Belgique 75:312-314.**

Investigates contradictions in the description of the larvae of *Potamanthus luteus*, in particular, whether there are six or seven pairs of gills. There are typically seven pairs, however the first pair are often extensively reduced until just a short stump is left, or sometimes they are completely absent.

**Lestage J.A. (1931) Contribution à l'étude des larves des Éphéméroptères. VII. - Le groupe Potamanthidien. Mémoires de la Société Entomologique de Belgique 23:73-146.**

A detailed account of the species in the Potamanthidae known from around the world at the time.

**Linnaeus C. (1761). Fauna Svecica sistens Animalia Sveciae regni: mammalia, aves, amphibia, pisces, insecta, vermes. Distributa per classes & ordines, genera & species, cum differentiis specierum, synonymis auctorum, nominibus incolarum, locis natalium, descriptionibus insectorum. Editio altera, auctior. Stockholmiae: Sumtu & Literis Direct. Laurentii Salvii.**

Original description of *Ephemera lutea* (= *Potamanthus luteus*).

**Lucas W.J. (1906) Potamanthus luteus. The Entomologist 39:288.**

A specimen of *Potamanthus luteus* collected from the River Itchin near Eastleigh. Blair (1927) later re-identified this specimen as *Serratella ignita*.

**McLachlan R. (1878) Potamanthus luteus at Weybridge. Entomologist's Monthly Magazine 15:92.**

Report on the capture of a single female imago of *Potamanthus luteus* from near the Thames at Weybridge.

**Obrdlík P., Adámek Z. & Zahrádka J. (1979) Mayfly fauna (Ephemeroptera) and the biology of the species Potamanthus luteus (L.) in a warmed stretch of the Oslava River. Hydrobiologia 67(2):129-140.**

*Potamanthus luteus* contributed 30 to 40% of total abundance and biomass of mayflies in the Oslava River. Highest abundance of larvae was observed during the spring, decreasing through the summer before increasing again in the autumn. The productivity of *P. luteus* was depressed in stretches of the Oslava River warmed by power station cooling waters. Upstream of the cooling water discharge the average abundance was 360 individuals per metre<sup>2</sup>. Immediately downstream of the discharge the average was 31 individuals per metre<sup>2</sup>. The maximum length of mature larvae found was 17mm. Concludes that *P. luteus* can tolerate relatively high temperatures, however there are significant effects on both abundance and productivity.

**Schoenemund E. (1930) Eintagsfliegen oder Ephemeroptera. Die Tierwelt Deutschlands 19:1-106.**

Description of the adult and larvae of *Potamanthus luteus*. Describes the larvae as living under stones and feeding upon organic mud.

**Sowa R. (1975) Ekologia i biogeografia jetek (Ephemeroptera) wód plynacych w polskiej czesci Karpat. 2. Cykle zyciowe. Ecology and biogeography of mayflies (Ephemeroptera) of running waters in the Polish part of the Carpathians. 2. Life Cycles. Acta Hydrobiologica 17(4):319-353.**

Describes the life cycle of *Potamanthus luteus* as univoltine with eggs laid in the summer. Larvae grow steadily in autumn and then growth slows considerably or even stops during the winter. In spring the larvae grow quickly to maturity. Indicates that adults can be found from the end of May to the start of October.

**Stephens J.F. (1835) Illustrations of British Entomology, Mandibulata, 6: 53-70.**

One of the first records of *Potamanthus luteus* (= *Ephemera lutea*) from Great Britain. Described as "found, but not commonly, within the Metropolitan district".

**Ubero-Pascal N.A & Puig M.A. (2007) Egg morphology update based on new chorionic data of Potamanthus luteus (Linnaeus), Ephemera danica Müller and Oligoneuriella**

**rhenana (Imhoff) (Insecta, Ephemeroptera) obtained by scanning electron microscopy. Zootaxa 1465:15-29.**

Description of the eggs of *Potamanthus luteus*.

**Verrier M-L. (1945) Les Potamanthus (Éphéméroptères) d'Auvergne et leurs variations. Bulletin de la Société Zoologique de France 70:111-116.**

Continued the discussion of Lestage (1935) and extended it to also look at variations in the wing venation of *Potamanthus luteus*.

**Verrier M-L. (1948) Migrations en Auvergne de Potamanthus luteus L. (Éphéméroptère). La Feuille des naturalistes N.S. 3:93-94.**

Suggests that *Potamanthus luteus* can migrate as much as 3 kilometres upstream following emergence. Also suggests that *P. luteus* is attracted to light and it may display positive thermotropism (ie it is attracted to warmth).

**Vuori K-M. (1999) Potamanthus luteus L. (Ephemeroptera, Ephemeridae) found for the first time in Finland: notes on the morphology and habitats of the nymphs. Entomologica Fennica 10:171-174.**

Study on river recovering from gross pollution by industrial and municipal effluents. Suggests that *Potamanthus luteus* is not particularly sensitive to pollution (in this case the main pollutants were organochlorines and dioxins). Notes that gills were darkened in specimens collected from the most heavily contaminated sites.

**Zahradka J. (1979) Produkční biologie dvou druhu jepic – Potamanthus luteus (Linné, 1767) a Ephoron virgo (Olivier, 1791). The production biology of two species of mayflies – Potamanthus luteus (Linne, 1767) and Ephoron virgo (Olivier, 1791). Klub Prirodovedecký v Brně 1978-1979:67-72.**

Czech study on the production of *Potamanthus luteus*. Found that the annual production was 10.32 gm<sup>-2</sup>.

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## **Records of *Potamanthus luteus* from other European countries**

### Germany

Brinkmann R. (2000) Rediscovery of *Potamanthus luteus* (Ephemeroptera: Potamanthidae) in the Elbe, Saxony-Anhalt. Entomol. Mitt. Sachsen Anhalt 8(2): 66. (In German, English summary)

Hering D. and Eckstein R. (1990) Zum Vorkommen von *Oligoneuriella rhenana* (Imhoff, 1852) und *Potamanthus luteus* (LINNAEUS 1789) (Insecta: Ephemeroptera) in der Eder bei Felsberg. Hess. Faun. Briefe 10:(4):63.

### Italy

Bonali F. and Impieri A. (2000) Segnalazione di *Potamanthus luteus* L. ( Insecta - Ephemeroptera ) nel fiume Oglio ad Azzanello ( provincia di Cremona). Pianura 12:197-200.

Desio F. (1994) *Potamanthus luteus* (L. 1767) found in Friuli-Venezia Giulia (North-Eastern Italy) (Ephemeroptera, Potamanthidae). Gortania Atti del Museo Friulano di Storia Naturale 16:185-186.

### Estonia

Tolp O. (1962) *Potamanthus luteus* (Linné) 1767 (Ephemeroptera) Pärnu jõe Alamjooksul. Faunistilisi Märkmeid 1(3):213-214. [PDF](#)

### Spain

Torralba Burrial A. and Ocharan F.J. (2005) Distribución de *Potamanthus luteus* (Ephemeroptera: Potamanthidae) en Aragón (Noreste de España). Boletín Sociedad Entomológica Aragonesa 36:267-269. [PDF](#)

## Appendix 2 – Records of *Potamanthus luteus* from the UK

Date	Location	NGR	Stage	Recorder	Source
<b>06/07/1878</b>	<b>River Thames at Weybridge</b>		<b>Adult</b>	<b>R. McLachlan</b>	<b>McLachlan (1878)</b>
<b>1902</b>	<b>River Thames at Laleham</b>			<b>AE Eaton</b>	<b>Macan (1979); Kimmins (1972)</b>
<b>July 1902</b>	<b>River Thames at Little Marlow(?)</b>		<b>Adult</b>	<b>WC Boyd</b>	<b>Blair (1927)</b>
<b>1933</b>	<b>New Reservoir, Colne, South Lancashire</b>			<b>WG Bainbridge</b>	<b>Bainbridge (1933)</b>
<b>July 1954</b>	<b>River Usk at Monkswood</b>	<b>SO358027</b>	<b>Unknown</b>	<b>Unknown</b>	<b>Brooker and Morris (1980)</b>
<b>May 1955</b>	<b>River Usk at Monkswood</b>	<b>SO358027</b>	<b>Unknown</b>	<b>Unknown</b>	<b>Brooker and Morris (1980)</b>
Sept 1957	River Wye near Hereford		Adult	CMH Harrisson	Harrisson (1958)
1958	River Wye near Hereford		Unknown		Brooker and Morris (1980)
July 1959	River Wye near Hereford		Unknown		Brooker and Morris (1980)
<b>1969</b>	<b>Chichester Canal, West Sussex</b>		<b>Unknown</b>	<b>RER Mugridge</b>	<b>Brooker and Morris (1980)</b>
March 1975	River Wye at Bredwardine	SO336447	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1976	River Wye at Bredwardine	SO336447	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1977	River Wye at Glasbury Common	SO180394	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1977	River Wye at Redbrook	SO535101	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1977	River Wye at Goodrich	SO558182	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1977	River Wye at Bredwardine	SO336447	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1977	River Wye at Llanstephan	SO115414	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
Sept 1977	River Wye at Llanstephan	SO115414	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
Sept 1977	River Wye at Glasbury Common	SO180394	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
Sept 1977	River Wye at Redbrook	SO535101	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
Sept 1977	River Wye at Bredwardine	SO336447	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
<b>1978</b>	<b>Aylesbeare and Harpford Common, Devon</b>	<b>SY0590</b>	<b>Unknown</b>	<b>Unknown</b>	<b>Invertebrate Site Register</b>
Nov 1978	River Wye at Bredwardine	SO336447	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
May 1979	River Wye at Bredwardine	SO336447	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1979	River Wye at Monmouth	SO5112	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
July 1979	River Usk at Abergavenny	SO292139	Larva	MP Brooker / DL Morris	Brooker and Morris (1980)
05/05/1982	River Wye at Bredwardine	SO336446	Larva		CEH Dorset
05/05/1982	River Wye at Huntsham Bridge	SO567182	Larva		CEH Dorset
04/08/1982	River Wye at Bredwardine	SO336446	Larva		CEH Dorset
28/10/1982	River Wye at Bredwardine	SO336446	Larva		CEH Dorset

Date	Location	NGR	Stage	Recorder	Source
1989	Near Ross-on-Wye		Unknown	JAD Murray-Bligh	J.A.D Murray-Bligh pers. comm.
11/04/1990	River Wye at Fownhope	SO574343	Larva	Environment Agency	Environment Agency
26/04/1990	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
20/06/1990	River Wye at Monmouth	SO511127	Larva	Environment Agency	Environment Agency
20/06/1990	River Wye at The Florence	SO543063	Larva	Environment Agency	Environment Agency
21/06/1990	River Wye at Fownhope	SO574343	Larva	Environment Agency	Environment Agency
02/08/1990	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
02/08/1990	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
08/08/1990	River Wye at Glasbury Common	SO180392	Larva	Environment Agency	Environment Agency
08/08/1990	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
16/10/1990	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
06/11/1990	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
06/11/1990	River Wye at Bridge Sollers	SO412424	Larva	Environment Agency	Environment Agency
08/04/1991	Afon Honddu at Alltynys	SO335232	Larva	Environment Agency	Environment Agency
18/07/1991	River Wye at Ross-on-Wye	SO590242	Larva	Environment Agency	Environment Agency
18/07/1991	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
30/07/1991	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
01/08/1991	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
23/10/1991	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
23/10/1991	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
24/10/1991	River Wye at Fownhope	SO574343	Larva	Environment Agency	Environment Agency
25/10/1991	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
1992	Llowes Brook, River Wye	SO199419	Unknown	DC Boyce	CCW Invertebrate Database
1992	Llowes Brook, River Wye	SO199421	Unknown	DC Boyce	CCW Invertebrate Database
1992	River Wye at Hay-on-Wye	SO232433	Unknown	DC Boyce	CCW Invertebrate Database
14/04/1992	River Wye at Kerne Bridge	SO580192	Larva	Environment Agency	Environment Agency
14/04/1992	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
15/04/1992	<i>Fford-fawr (pond)</i>	<i>SO187400</i>	Larva	<i>Unknown</i>	<i>National Pond Monitoring Network</i>
23/04/1992	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
23/04/1992	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
23/04/1992	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
24/04/1992	River Wye at Llanstephan	SO112416	Larva	Environment Agency	Environment Agency
24/06/1992	<i>Fford-fawr (pond)</i>	<i>SO187400</i>	Larva	<i>Unknown</i>	<i>National Pond Monitoring Network</i>

Date	Location	NGR	Stage	Recorder	Source
24/06/1992	River Wye at Kerne Bridge	SO580192	Larva	Environment Agency	Environment Agency
24/06/1992	River Wye at Ross-on-Wye	SO590242	Larva	Environment Agency	Environment Agency
24/06/1992	Afon Trothy at Troy House, Monmouth	SO509114	Larva	Environment Agency	Environment Agency
24/06/1992	River Wye at Monmouth	SO511127	Larva	Environment Agency	Environment Agency
24/06/1992	River Wye at The Florence	SO543063	Larva	Environment Agency	Environment Agency
29/06/1992	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
29/06/1992	River Wye at Holme Lacy Bridge	SO567365	Larva	Environment Agency	Environment Agency
29/06/1992	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
16/07/1992	Afon Ithon at Church House Farm	SO086641	Larva	Environment Agency	Environment Agency
17/07/1992	River Wye at Llanstephan	SO112416	Larva	Environment Agency	Environment Agency
20/07/1992	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
28/07/1992	River Lugg at Lugwardine Bridge	SO546406	Larva	Environment Agency	Environment Agency
29/07/1992	River Wye at Glasbury Common	SO180392	Larva	Environment Agency	Environment Agency
30/07/1992	Maddle Brook at Portway	SO383441	Larva	Environment Agency	Environment Agency
30/07/1992	River Wye at Bridge Sollers	SO412424	Larva	Environment Agency	Environment Agency
30/07/1992	River Wye at Whitney-on-Wye	SO262474	Larva	Environment Agency	Environment Agency
07/05/1993	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
29/06/1993	River Wye at Goodrich	SO566182	Larva	Environment Agency	Environment Agency
08/07/1993	River Wye at Glasbury Common	SO180398	Larva	Environment Agency	Environment Agency
08/07/1993	River Wye at Glasbury Common	SO180399	Larva	Environment Agency	Environment Agency
26/07/1993	Willersley Stream at Eardisley	SO312485	Larva	Environment Agency	Environment Agency
26/07/1993	Willersley Stream at Eardisley	SO311485	Larva	Environment Agency	Environment Agency
19/08/1993	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
28/10/1993	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
16/04/1994	River Wye at Bredwardine	SO336447	Larva	MJ Hammett	Mike Hammett, pers. comm.
17/04/1994	River Wye at Glasbury Common	SO180393	Larva	MJ Hammett	Mike Hammett, pers. comm.
03/05/1994	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
10/08/1994	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
11/10/1994	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
<b>30/05/1995</b>	<b>Lewknor Brook at Roadbridge near Pyrton</b>	<b>SU679975</b>	<b>Larva</b>	<b>Environment Agency</b>	<b>EA National River Quality Survey</b>
01/09/1995	River Wye at Monmouth	SO51181277	Larva	Environment Agency	EA National River Quality Survey
18/05/1995	River Wye at Hampton Bishop	SO54803825	Larva	Environment Agency	EA National River Quality Survey
08/09/1995	River Wye at Hampton Bishop	SO54803825	Larva	Environment Agency	EA National River Quality Survey



Date	Location	NGR	Stage	Recorder	Source
18/05/1995	River Wye at Victoria Bridge	SO51253943	Larva	Environment Agency	EA National River Quality Survey
16/05/1995	River Wye at Sollers Bridge	SO41284243	Larva	Environment Agency	EA National River Quality Survey
08/09/1995	River Wye at Sollers Bridge	SO41284243	Larva	Environment Agency	EA National River Quality Survey
08/09/1995	River Wye at Sollers Bridge	SO41284243	Larva	Environment Agency	EA National River Quality Survey
07/09/1995	River Wye at Bredwardine	SO33704470	Larva	Environment Agency	EA National River Quality Survey
28/09/1995	River Wye at Whitney	SO262474	Larva	Environment Agency	EA National River Quality Survey
28/09/1995	River Wye at Glasbury	SO18003925	Larva	Environment Agency	EA National River Quality Survey
28/09/1995	River Wye at Hafodygarreg	SO11264164	Larva	Environment Agency	EA National River Quality Survey
17/05/1995	Kinnersley Brook at Kinley	SO32754710	Larva	Environment Agency	EA National River Quality Survey
05/05/1995	River Wye at Hoarwithy Bridge	SO54882950	Larva	Environment Agency	EA National River Quality Survey
01/04/1995	River Wye at Redbrook	SO534100	Larva	Unknown	CEH Dorset
11/04/1995	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
05/05/1995	River Wye at Hoarwithy bridge	SO548295	Larva	Environment Agency	Environment Agency
16/05/1995	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
16/05/1995	River Wye at Bridge Sollers	SO412424	Larva	Environment Agency	Environment Agency
17/05/1995	Kinnersley Brook at Kinley	SO327471	Larva	Environment Agency	Environment Agency
17/05/1995	River Wye at Whitney-on-Wye	SO262474	Larva	Environment Agency	Environment Agency
18/05/1995	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
18/05/1995	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
01/09/1995	River Wye at Monmouth	SO511127	Larva	Environment Agency	Environment Agency
07/09/1995	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
08/09/1995	River Wye at Bridge Sollers	SO412424	Larva	Environment Agency	Environment Agency
08/09/1995	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
08/09/1995	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
28/09/1995	River Wye at Glasbury Common	SO180392	Larva	Environment Agency	Environment Agency
28/09/1995	River Wye at Whitney-on-Wye	SO262474	Larva	Environment Agency	Environment Agency
28/09/1995	River Wye at Llanstephan	SO112416	Larva	Environment Agency	Environment Agency
12/04/1996	River Wye at Glasbury Common	SO180393	Larva	MJ Hammett	Mike Hammett, pers. comm.
05/06/1996	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
07/06/1996	River Wye at Glasbury Common	SO180393	Larva	MJ Hammett	Mike Hammett, pers. comm.
05/07/1996	River Wye at Redbrook	SO534100	Larva	Unknown	CEH Dorset
01/05/1997	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
18/07/1997	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency

Date	Location	NGR	Stage	Recorder	Source
08/10/1997	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
07/05/1998	River Wye at Redbrook	SO534100	Larva	Unknown	CEH Dorset
21/08/1998	Willersley Stream at Eardisley	SO312485	Larva	Environment Agency	Environment Agency
06/05/1999	River Wye at Redbrook	SO534100	Larva	Unknown	CEH Dorset
24/05/1999	River Wye at Bredwardine	SO336447	Larva	MJ Hammett	Mike Hammett, pers. comm.
25/05/1999	River Wye at confluence with Maddle Brook	SO381427	Larva	MJ Hammett	Mike Hammett, pers. comm.
25/05/1999	River Wye at Monnington Falls	SO375426	Larva	MJ Hammett	Mike Hammett, pers. comm.
26/05/1999	River Wye at Bridge Sollers	SO413423	Larva	MJ Hammett	Mike Hammett, pers. comm.
26/05/1999	River Wye at Hampton Bishop	SO548383	Larva	MJ Hammett	Mike Hammett, pers. comm.
26/05/1999	River Wye at Sugwas	SO446415	Larva	MJ Hammett	Mike Hammett, pers. comm.
28/05/1999	River Wye at Backney	SO584270	Larva	MJ Hammett	Mike Hammett, pers. comm.
28/05/1999	River Wye at Hole-in-the-Wall	SO610287	Larva	MJ Hammett	Mike Hammett, pers. comm.
28/05/1999	River Wye at Sellack Church	SO567279	Larva	MJ Hammett	Mike Hammett, pers. comm.
29/05/1999	River Wye at Glewstone Boat	SO568214	Larva	MJ Hammett	Mike Hammett, pers. comm.
29/05/1999	River Wye at Ross-on-Wye	SO588240	Larva	MJ Hammett	Mike Hammett, pers. comm.
14/06/1999	River Wye at Kerne Bridge	SO580193	Larva	MJ Hammett	Mike Hammett, pers. comm.
14/06/1999	River Wye at Coldwell gravels	SO568158	Larva	MJ Hammett	Mike Hammett, pers. comm.
14/06/1999	River Wye at Park Stream at Stowfield	SO584174	Larva	MJ Hammett	Mike Hammett, pers. comm.
14/06/1999	River Wye at Yat Rock	SO546160	Larva	MJ Hammett	Mike Hammett, pers. comm.
15/06/1999	River Wye at Monmouth viaduct	SO515120	Larva	MJ Hammett	Mike Hammett, pers. comm.
15/06/1999	River Wye at The Florence	SO543063	Larva	MJ Hammett	Mike Hammett, pers. comm.
15/06/1999	River Wye at Upper Bigsweir	SO532082	Larva	MJ Hammett	Mike Hammett, pers. comm.
15/06/1999	River Wye at Wyesham	SO517116	Larva	MJ Hammett	Mike Hammett, pers. comm.
15/06/1999	River Wye at Wyesham	SO519114	Larva	MJ Hammett	Mike Hammett, pers. comm.
19/08/1999	River Wye at Redbrook	SO534100	Larva	Unknown	CEH Dorset
24/08/1999	River Wye at Bredwardine	SO336447	Larva	MJ Hammett	Mike Hammett, pers. comm.
25/08/1999	River Wye at Glewstone Boat	SO568214	Larva	MJ Hammett	Mike Hammett, pers. comm.
25/08/1999	River Wye at Park Stream at Stowfield	SO584174	Larva	MJ Hammett	Mike Hammett, pers. comm.
23/03/2000	River Wye at Wyesham	SO519114	Larva	MJ Hammett	Mike Hammett, pers. comm.
23/03/2000	River Wye at Park Stream at Stowfield	SO584174	Larva	MJ Hammett	Mike Hammett, pers. comm.
24/03/2000	River Wye at Glewstone Boat	SO568214	Larva	MJ Hammett	Mike Hammett, pers. comm.
24/03/2000	River Wye at Hole-in-the-Wall	SO610287	Larva	MJ Hammett	Mike Hammett, pers. comm.
24/03/2000	River Wye at Kerne Bridge	SO580193	Larva	MJ Hammett	Mike Hammett, pers. comm.

Date	Location	NGR	Stage	Recorder	Source
24/03/2000	River Wye at Ross-on-Wye	SO588240	Larva	MJ Hammett	Mike Hammett, pers. comm.
24/03/2000	River Wye at Sellack Church	SO567279	Larva	MJ Hammett	Mike Hammett, pers. comm.
30/03/2000	River Wye at Monmouth	SO511127	Larva	Environment Agency	Environment Agency
11/04/2000	Camddwr Brook at A483 road bridge	SO106703	Larva	Environment Agency	Environment Agency
09/05/2000	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
10/05/2000	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
18/05/2000	River Wye at Kerne Bridge	SO580192	Larva	Environment Agency	Environment Agency
18/05/2000	River Wye at Ross-on-Wye	SO590242	Larva	Environment Agency	Environment Agency
18/05/2000	River Wye at Strangford	SO585286	Larva	Environment Agency	Environment Agency
18/05/2000	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
23/05/2000	Pentaloe Brook	SO570373	Larva	Environment Agency	Environment Agency
20/08/2000	River Wye at Redbrook	SO535103	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Hampton Bishop	SO548382	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Hoarwithy bridge	SO548295	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Kerne Bridge	SO580192	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Ross-on-Wye	SO590242	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Strangford	SO585286	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Victoria Bridge Hereford	SO512394	Larva	Environment Agency	Environment Agency
04/09/2000	River Wye at Monmouth	SO511127	Larva	Environment Agency	Environment Agency
05/09/2000	River Lugg at Mordiford	SO570374	Larva	Environment Agency	Environment Agency
06/09/2000	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
06/09/2000	River Wye at Bridge Sollers	SO412424	Larva	Environment Agency	Environment Agency
21/02/2001	River Wye at confluence with River Lugg	SO565370	Larva	MJ Hammett	Mike Hammett, pers. comm.
21/02/2001	River Wye at Eign Hereford	SO523391	Larva	MJ Hammett	Mike Hammett, pers. comm.
21/02/2001	River Wye at Red Bank, Holme Lacy	SO551361	Larva	MJ Hammett	Mike Hammett, pers. comm.
22/02/2001	River Wye at Bredwardine	SO336447	Larva	MJ Hammett	Mike Hammett, pers. comm.
22/02/2001	River Wye at Eign Hereford	SO521391	Larva	MJ Hammett	Mike Hammett, pers. comm.
22/02/2001	River Wye at Sugwas	SO442412	Larva	MJ Hammett	Mike Hammett, pers. comm.
22/02/2001	River Wye at Victoria Bridge Hereford	SO513393	Larva	MJ Hammett	Mike Hammett, pers. comm.
17/04/2002	River Wye at Bridge Sollers	SO412424	Larva	Environment Agency	Environment Agency
18/04/2002	River Wye at Hoarwithy Bridge	SO548295	Larva	Environment Agency	Environment Agency
18/04/2002	River Wye at Kerne Bridge	SO580192	Larva	Environment Agency	Environment Agency
<b>26/05/2002</b>	<b>River Test at Wherwell</b>	<b>SU400414</b>	<b>Adult</b>	<b>GS Vick</b>	<b>Graham Vick pers. comm.</b>

Date	Location	NGR	Stage	Recorder	Source
05/09/2002	River Lugg at Wergins Bridge	SO528446	Larva	Environment Agency	Environment Agency
09/09/2002	River Wye at Hoarwithy Bridge	SO548295	Larva	Environment Agency	Environment Agency
09/09/2002	River Wye at Kerne Bridge	SO580192	Larva	Environment Agency	Environment Agency
25/09/2002	River Wye at Bredwardine	SO337447	Larva	Environment Agency	Environment Agency
06/05/2003	River Wye at Strangford	SO585286	Larva	Environment Agency	Environment Agency
03/04/2003	River Wye at Hergest Bridge	SO2800055130	Larva	Environment Agency	Environment Agency
03/04/2003	River Wye at Castle Green	SO1491134408	Larva	Environment Agency	Environment Agency
29/04/2003	River Kenson at Llancadle	SO0400068400	Larva	Environment Agency	Environment Agency
13/04/2005	River Wye at Sollers Bridge	SO4124742454	Larva	Environment Agency	Environment Agency
06/05/2003	River Wye at Strangford	SO5830028563	Larva	Environment Agency	Environment Agency
06/05/2003	River Wye at Symonds Yat	SO5600915660	Larva	Environment Agency	Environment Agency
04/09/2003	River Usk d/s of reservoir	SN8519028335	Larva	Environment Agency	Environment Agency
11/09/2003	River Monnow at Monmouth	SO5073012180	Larva	Environment Agency	Environment Agency
11/09/2003	River Wye at Strangford	SO5830028563	Larva	Environment Agency	Environment Agency
11/09/2003	River Wye at Symonds Yat	SO5600915660	Larva	Environment Agency	Environment Agency
11/09/2003	River Wye at Monmouth	SO5118012770	Larva	Environment Agency	Environment Agency
15/04/2004	River Wye at Hampton Bishop	SO5480338171	Larva	Environment Agency	Environment Agency
19/04/2004	River Wye at Bredwardine	SO3371844771	Larva	Environment Agency	Environment Agency
21/04/2004	River Wye at Ross on Wye	SO5900024200	Larva	Environment Agency	Environment Agency
21/04/2004	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
21/05/2004	River Lugg d/s Hampton Court weir	SO5150052500	Larva	Environment Agency	Environment Agency
21/05/2004	River Lugg at Mordiford	SO5680637431	Larva	Environment Agency	Environment Agency
09/09/2004	River Wye at Bredwardine	SO3371844771	Larva	Environment Agency	Environment Agency
09/09/2004	River Wye at Ross on Wye	SO5900024200	Larva	Environment Agency	Environment Agency
09/09/2004	River Wye at Symonds Yat	SO5600915660	Larva	Environment Agency	Environment Agency
09/09/2004	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
09/09/2004	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
29/09/2004	River Wye at Hampton Bishop	SO5480338171	Larva	Environment Agency	Environment Agency
13/05/2004	River Wye at Sollers Bridge	SO4124742454	Larva	Environment Agency	Environment Agency
09/05/2005	River Wye at Kerne Bridge	SO5805019200	Larva	Environment Agency	Environment Agency
09/05/2005	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
16/05/2005	River Wye at Hoarwithy Bridge	SO5485729329	Larva	Environment Agency	Environment Agency
18/05/2005	River Wye at Symonds Yat (east bank)	SO560155	Larva	R Carr	Ephemeroptera Recording Scheme

Date	Location	NGR	Stage	Recorder	Source
19/05/2005	River Wye at Symonds Yat (island)	SO560156	Larva	R Carr	Ephemeroptera Recording Scheme
01/09/2005	River Wye at Hoarwithy Bridge	SO5485729329	Larva	Environment Agency	Environment Agency
06/09/2005	River Lugg at Wergins Bridge	SO5291644612	Larva	Environment Agency	Environment Agency
12/04/2006	River Wye at Monmouth	SO5118012770	Larva	Environment Agency	Environment Agency
24/04/2006	River Wye at Whitney	SO2620047400	Larva	Environment Agency	Environment Agency
08/06/2006	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
22/07/2006	River Wye at Monmouth	SO524105	Adult	Patrick Lloyd	Ephemeroptera Recording Scheme
27/07/2006	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
01/09/2006	River Wye at RedBrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
11/09/2006	River Wye at Whitney	SO2620047400	Larva	Environment Agency	Environment Agency
<b>01/11/2006</b>	<b>River Teme @Knightsford Bridge</b>	<b>SO7348055780</b>	<b>Larvae</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
10/04/2007	River Wye at Ross on Wye	SO5900024200	Larva	Environment Agency	Environment Agency
10/04/2007	River Wye at Redbrook Bush Inn	SO5346810139	Larva	Environment Agency	Environment Agency
10/04/2007	River Wye at Florence Hotel	SO5433506275	Larva	Environment Agency	Environment Agency
11/04/2007	River Lugg at Mordiford	SO5680637431	Larva	Environment Agency	Environment Agency
<b>13/04/2007</b>	<b>Olway Brook at Llandenny</b>	<b>SO4200604019</b>	<b>Larva</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
02/05/2007	River Wye d/s Valley Brook	SO5360909652	Larva	Environment Agency	Environment Agency
<b>24/05/2007</b>	<b>River Teme @Knightsford Bridge</b>	<b>SO7348055780</b>	<b>Larvae</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
06/06/2007	River Wye d/s Valley Brook	SO5360909652	Larva	Environment Agency	Environment Agency
03/08/2007	Ledbury Road, Ross-on-Wye	SO606254	Adult	Barrie Jones	Ephemeroptera Recording Scheme
<b>07/08/2007</b>	<b>River Teme @Knightsford Bridge</b>	<b>SO7348055780</b>	<b>Larvae</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
22/08/2007	Ledbury Road, Ross-on-Wye	SO606254	Adult	Barrie Jones	Ephemeroptera Recording Scheme
24/08/2007	Ledbury Road, Ross-on-Wye	SO606254	Adult	Barrie Jones	Ephemeroptera Recording Scheme
01/09/2007	Ledbury Road, Ross-on-Wye	SO606254	Adult	Barrie Jones	Ephemeroptera Recording Scheme
04/09/2007	River Lugg at Mordiford	SO5680637431	Larva	Environment Agency	Environment Agency
05/09/2007	River Wye at Ross on Wye	SO5900024200	Larva	Environment Agency	Environment Agency
06/09/2007	River Wye at Bredwardine	SO3371844771	Larva	Environment Agency	Environment Agency
06/09/2007	Ledbury Road, Ross-on-Wye	SO606254	Adult	Barrie Jones	Ephemeroptera Recording Scheme
<b>19/09/2007</b>	<b>River Teme @Knightsford Bridge</b>	<b>SO7348055780</b>	<b>Larva</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
<b>07/04/2008</b>	<b>River Waycock at Curnix Bridge</b>	<b>ST0655468822</b>	<b>Larva</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
28/08/2008	Ledbury Road, Ross-on-Wye	SO606254	Adult	Barrie Jones	Ephemeroptera Recording Scheme
11/04/2008	River Wye at Hoarwithy Bridge	SO5485729329	Larva	Environment Agency	Environment Agency
01/09/2008	Garren Brook u/s River Wye	SO5595018390	Larva	Environment Agency	Environment Agency

Date	Location	NGR	Stage	Recorder	Source
<b>09/09/2008</b>	<b>Taff Clydach u/s Lady Windsor colliery</b>	<b>ST0553395075</b>	<b>Larva</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
10/09/2008	Nant Y Robwl at Chain Bridge	SO3445005630	Larva	Environment Agency	Environment Agency
17/09/2008	River Wye at Kerne Bridge	SO5805019200	Larva	Environment Agency	Environment Agency
<b>22/09/2008</b>	<b>Sor Brook at Garth road bridge</b>	<b>ST3448692655</b>	<b>Larva</b>	<b>Environment Agency</b>	<b>Environment Agency</b>
02/06/2010	River Wye at Fford-fawr	SO1848040390	Larva	Dai Roberts	Dai Roberts, pers. comm.
<b>14/06/2010</b>	<b>River Teme at Knightsford Bridge</b>	<b>SO7348055780</b>	<b>Larva</b>	<b>Riverfly Partnership</b>	<b>W. Yeomans, pers. comm.</b>

*Italics* – unconfirmed or incomplete records      **Bold** – records from outwith the River Wye catchment

Additional records of *Potamanthus luteus* should be sent to the Ephemeroptera Recording Scheme ([info@ephemeroptera.org.uk](mailto:info@ephemeroptera.org.uk))

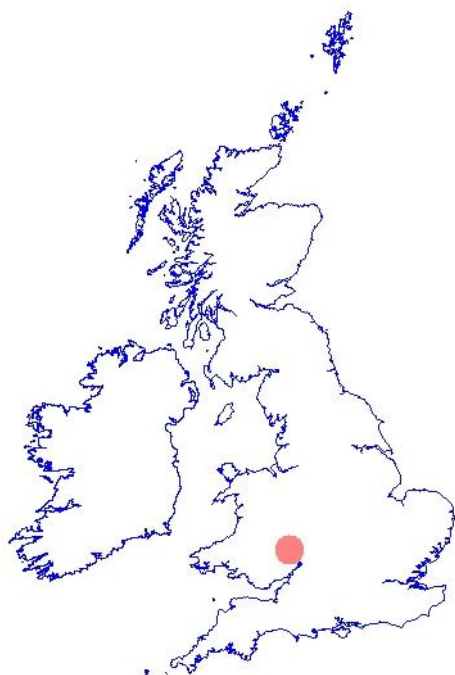


Fig. 1 Generalised distribution of confirmed records in UK

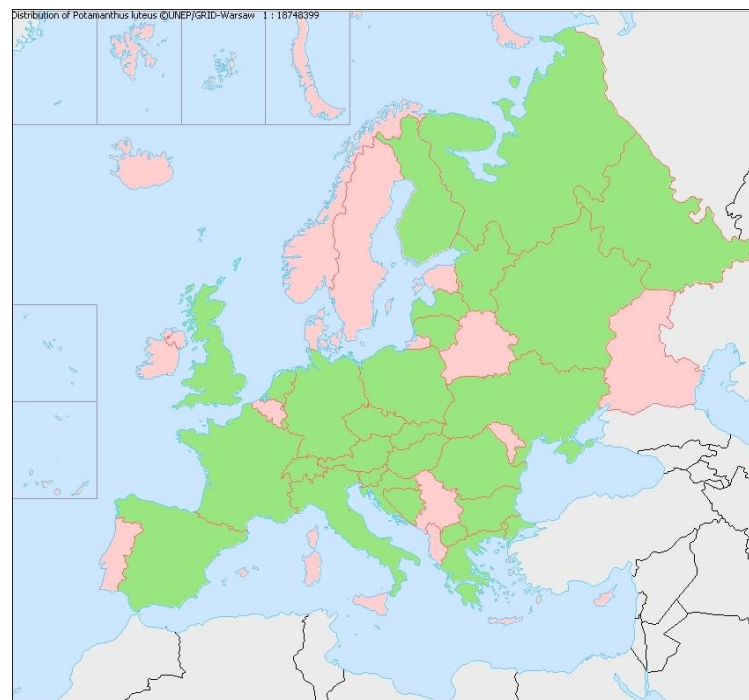


Fig. 2 Distribution of *P. luteus* in Europe (from Fauna Europaea)  
(Green = Present Red = Absent)

