

# New species of Opiinae (Insecta: Hymenoptera: Braconidae) in the Collection of the National Museums of Scotland, Edinburgh

M. Fischer\*

## Abstract

The following species in the collection of the National Museums of Scotland, Edinburgh, are described as new: *Eurytenes (Oetzelotenes) britannicola* sp.n., *Eurytenes (Stigmatopoea) stigmatocauda* sp.n., *Opius (Opiothorax) lagomeraensis* sp.n., *Opius (Illicopus) novojariae* sp.n., *Opius (Utetes) selkirkensis* sp.n., *Opius (Gastrosema) uligiloci* sp.n. They are compared with the nearest already known taxa on the base of Fischer's diagnostic system. Some morphological details are figured.

## Zusammenfassung

Folgende Arten aus der Sammlung der National Museums of Scotland, Edinburgh, werden neu beschrieben: *Eurytenes (Oetzelotenes) britannicola* sp.n., *Eurytenes (Stigmatopoea) stigmatocauda* sp.n., *Opius (Opiothorax) lagomeraensis* sp.n., *Opius (Illicopus) novojariae* sp.n., *Opius (Utetes) selkirkensis* sp.n., *Opius (Gastrosema) uligiloci* sp.n. Sie werden auf der Basis der diagnostischen Systeme nach Fischer mit taxonomisch nahestehenden Taxa verglichen. Morphologische Einzelheiten werden abgebildet.

## Introduction

The paper deals with some Opiinae, which are described as new. One species is described from the Canary Islands (La Gomera), the rest from England and Scotland, respectively. All newly described species are distinguished from the taxonomically nearest taxa on the basis of the system developed by the author (for example FISCHER 1972, 1999). There exist more or less different systems or interpretations of taxa (for example WHARTON 1988, WHARTON & al. 1992, WHARTON & al. 1997, ACHTERBERG & QUICKE 1992.) Little different is the conception of TOBIAS, 1986.

## Abbreviations:

b	basal vein of fore wing
B	brachial cell of fore wing
cc1	1st cubital cross-vein of fore wing
culb	vein of fore wing closing B distally below
cu2'	2 <sup>nd</sup> abscissa of cubital vein of hind wing
Cu2	2 <sup>nd</sup> cubital cell of fore wing
d	discoidal vein of fore wing
F, F1, F2, etc.	flagellomere(s), 1 <sup>st</sup> , 2 <sup>nd</sup> , etc.

\* Hofrat i.R. Univ.-Dozent Mag. Dr. Maximilian Fischer, Natural History Museum Vienna, International Research Institute for Entomology, Burgring 7, A-1010 Wien, Austria.

Fm, Fp, Fa	middle, penultimate, apical flagellomere
np	parallel vein of fore wing
nr	recurrent vein of fore wing
nr'	recurrent vein of hind wing
nv	nervulus of fore wing
R	radial cell of fore wing
r'	radial vein of hind wing
r1, r2, r3	the abscissae of radial vein (r) of fore wing
SM'	submedial cell of hind wing
st	pterostigma of fore wing
T, T1, T2, etc.	1 <sup>st</sup> , 2 <sup>nd</sup> , etc. metasomal tergite(s)

### Genus *Eurytenes* FOERSTER, 1862

*Eurytenes* FOERSTER, 1862: 259.

*Eurytenes*: FISCHER 1972: 60, 472 (with references).

*Eurytenes*: WHARTON 1988: 339, 341, 352, 357 (relationship).

*Eurytenes*: FISCHER 1998: 21 (new conception).

The genus is treated here in the sense of FISCHER (1998): included are all species of the genus *Opius* WESMAEL with st elongated and parallel-sided.

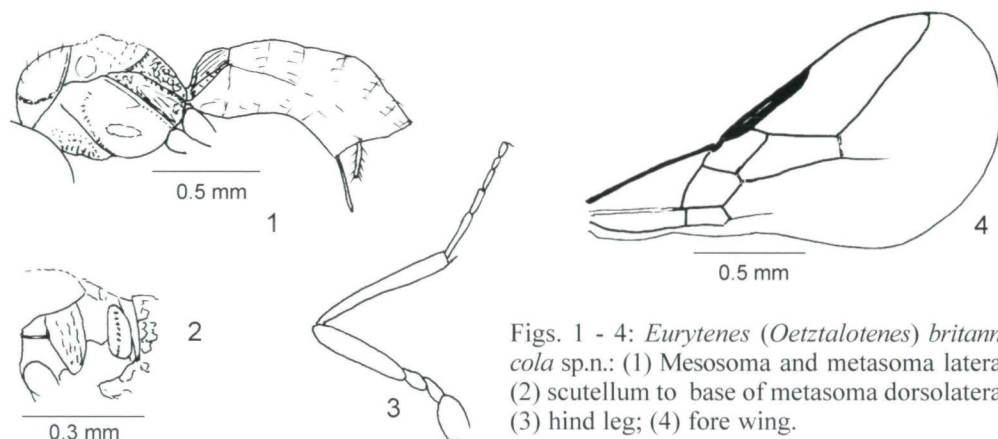
### *Eurytenes (Oetzelotenes) britannicola* sp.n. (Figs. 1 - 4)

**Holotype** ♀: Chippenham Fen. Cambs. TL 650693, Malaise trap: carr at reedbed edge A 20.7. - 1.8.84 J. Field, RNSNH 1986. 021 (National Museums of Scotland, Edinburgh).

**Description of ♀**: Length of body: 2 mm.

Head: twice as wide as long, 1.8 times as wide as the face, 1.33 times as wide as the mesoscutum, 2.5 times as wide as the T1; eyes very slightly protruding, 1.5 times as long as the temples, distance of toruli from each other and from eyes about as great as their diameter, occiput slightly excavate; upper side with rather long, scattered hairs; distance of the ocelli from each other as great as their diameter, their distance from an eye as great as the width of the ocellar area. Face 1.25 times as wide as high, middle elevation weak, with long, scattered hairs, hair-points hardly discernable, eye margins parallel. Clypeus twice as wide as high, lower edge straight, with some long, erect hairs, more or less plain. Distance of tentorial pits from each other 3 times as great as the distance from an eye. Malar space as great as the basal width of the mandibles. Subocular furrow distinct. No gap between clypeus and mandibles, mandibles expanded at base, maxillary palpi about as long as the head is high. Antennae slightly longer than the body, 25-articulated; F1 and F2 2.5 times as long as wide, the following only a little shorter, Fm and Fp twice as long as wide, Fa pointed; the F moderately separated from each other, the hairs not longer than the F is wide, 2 or 3 sensillae visible in lateral view.

Mesosoma: 1.33 times as long as high, upper side arched. Mesoscutum 1.3 times as wide as long, middle lobe slightly separated, notauli developed on the declivity and deep, crenellate, merging in a curve into the marginal furrow, which is crenellate in anterior half, their imaginary course indicated by a few hairs, dorsal fovea deep, drop-



Figs. 1 - 4: *Eurytenes (Oetztalotenes) britannicola* sp.n.: (1) Mesosoma and metasoma lateral; (2) scutellum to base of metasoma dorsolateral; (3) hind leg; (4) fore wing.

like. Prescutellar furrow narrow, crenellate. Postaxillae rugose behind. Lateral areas of metascutum weakly crenellate. Propodeum densely rugose to deeply reticulate. Anterior furrow rugose to crenellate, posterior furrow very narrow and faintly crenellate. Prepectal furrow crenellate, passing into the epicoxal furrow, which is crenellate below; sternaulus smooth. Metapleuron rugose on anterior and posterior quarter, lower furrow wide, upper furrow distinct, narrowly crenellate, with scattered long hairs. Hind femora 5 times as long as wide.

Wings: st parallel-sided, relatively short, r arising from basal third, rl forming a straight line with r2, r2 1.5 times as long as ccl, r3 straight, 2.3 times as long as r2, R ending before tip of wing, nr postfurcal, Cu2 narrowing distad, the veins around Cu2 straight, d 1.2 times as long as nr, nv postfurcal by its own width, B closed, np arising from the middle of the distal side of B; r' and nr' absent, cu2' indicated as a fold only, hairs on distal half of hind margin shorter than the width of the hind wing.

Metasoma: T1 about as long as apically wide, linearly narrowed towards base, behind twice as wide as in front, dorsal carinae developed in front, longitudinally striate.

Ovipositor sheaths about as long as T1, hardly projecting beyond apex of metasoma.

Colouration: Black. Yellow: scape, anellus, clypeus, mouth parts, legs, tegulae, wing venation, and metasoma except the black T1. Wing membrane hyaline.

♂: Unknown.

**Taxonomic position:** The species belongs to the subgenus *Oetztalotenes* FISCHER of the genus *Eurytenes*. It can be distinguished from *Eurytenes (Oetztalotenes) oetztalicola* FISCHER, 1998, the only previously known species, as follows:

- |   |  |                                 |
|---|--|---------------------------------|
| 1 | r3 curved slightly outwards, R reaching apex of wing. ccl and r2 slightly curved. T1 1.66 times as long as wide. Metasoma black. 2.5 mm. Austria. .... | <i>E. oetztalicola</i> , ♀ ♂    |
| – | r3 straight, R not reaching apex of wing. ccl and r2 straight. T1 as long as wide. Metasoma yellow, only T1 black. 2 mm. England. ....                 | <i>E. britannicola</i> sp.n., ♀ |

**Distribution:** England.

**Etymology:** Inhabitant of Britain.

***Eurytenes (Stigmatopoea) stigmatocauda* sp.n.** (Figs. 5 - 8)

**Holotype** ♀: England, Santon Downham, Norfolk. TL 818883, Malaise trap: heath with birch and pine. 6-20.7.85, J. Field, MK RMSNH 1986.021 (National Museums of Scotland, Edinburgh).

**Further material examined:** 3 ♀ ♀, England, Santon Downham, Norfolk. TL 818883, Malaise trap: heath with birch and pine. 6-20.7.85, J. Field, MK RMSNH 1986.021 (National Museums of Scotland, Edinburgh).

**Description of ♀:** Length of body: 1.5 mm.

Head: Twice as wide as long, 1.9 times as wide as face, 1.3 times as wide as mesoscutum, 3.5 times as wide as T1; eyes little projecting, 1.5 times as long as temples, eyes and temples rounded in a common curve, distance between toruli and their distance from eyes as great as their diameter, occiput little excavate, distance between ocelli as great as their diameter, distance of ocelli from eyes as great as the ocellar area is wide, upper side of head with only a few hairs. Face 1.4 times as wide as high, with scattered, inconspicuous hairs without recognizable hair-points, middle elevation distinct in upper half, disappearing below, eye margins parallel. Clypeus 4 times as wide as high, arched, lower edge emarginate, epistomal suture evenly curved, with a few outstanding hairs only. Distance between tentorial pits 3.5 times as great as distance from eyes. Malar space shorter than mandible at base, malar suture recognizable. A gap between clypeus and mandibles, mandibles not expanded at base, maxillary palpi as long as the head is high. Antennae 1.4 times as long as body, 24-articulated; F1, F2, F3 and the following 3 times as long as wide, the F of the apical third 2 - 2.5 times, Fp twice as long as wide, Fa with a small spike apically; the F moderately separated from each other, most hairs shorter than the F is wide, 2 or 3 sensillae visible in lateral view.

Mesosoma: 1.45 times as long as high, upper side slightly arched. Mesoscutum a little wider than long, rounded before tegulae, middle lobe not separated, notauli developed as flat grooves and margined in front, absent on disc, not reaching sides of mesoscutum, the latter margined only near tegulae, dorsal fovea absent. Prescutellar furrow crenellate. Postaxillae crenellate on posterior edge. The rest of mesosoma smooth, a small portion near anterior coxa impressed. Sternaulus absent, the furrows smooth. Hind femora 5 times as long as wide.

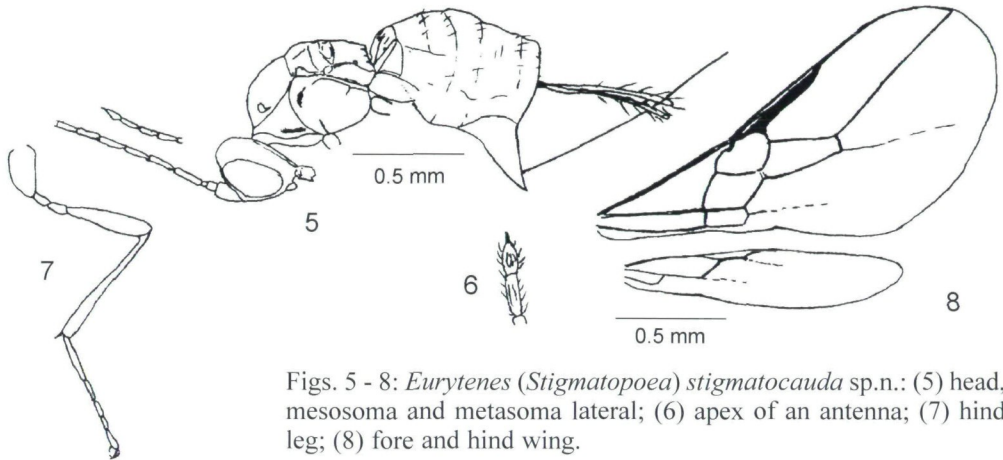
Wings: st parallel sided, narrowed at apex, as long as Cu2; r arising from basal quarter of st, r1 twice as long as cc1, r3 2.5 times as long as r2, bent outwards, R reaching apex of wing, Cu2 narrowing distally, the veins around Cu2 more or less straight, nr postfurcal, d 1.3 times as long as nr, nv a little postfurcal, B closed, np arising from middle of B; r', cu2' and nr' nearly absent.

Metasoma: T1 1.4 times as long as wide, parallel sided, weakly narrowed only in front, densely coriaceous, dorsal carinae converging posteriorly and reaching as far as middle of disc. Ovipositor sheaths projecting beyond apex of metasoma by a distance about 0.8 times as long as metasoma.

Colouration: Black. Yellow: base of antennae as far as F2, clypeus, mouthparts, cheeks, all legs, tegulae, wing venation, T2+3 and ventral side of metasoma brownish. Wing membrane hyaline.

Variability: antennae 22 - 24-articulated.

♂: Unknown.



Figs. 5 - 8: *Eurytenes (Stigmatopoea) stigmatocauda* sp.n.: (5) head, mesosoma and metasoma lateral; (6) apex of an antenna; (7) hind leg; (8) fore and hind wing.

**Taxonomic position:** The species belongs to the subgenus *Stigmatopoea* FISCHER of the genus *Eurytenes*. It runs to *cubitalis* (FISCHER, 1959) in the key of FISCHER (1998). It can be distinguished as follows:

- 1 Projecting part of ovipositor nearly as long as metasoma. Cu2 smaller, r3 2.5 times as long as r2. 1.5 mm. England. .... *E. stigmatocauda* sp.n., ♀
- Ovipositor hardly projecting. Cu2 larger, r3 1.5 times as long as r2. 1.9-2.2 mm. Finland, Austria, Bulgaria, Japan. .... *E. cubitalis*, ♀ ♂

Another line of identification would run across *Opius* WESMAEL, 1835 via subgenus *Allophlebus* FISCHER, 1972 to *O. staryi* FISCHER, 1958 in the key for the subgenus *Allophlebus*. There are, amongst others, the following differences:

- 1 Projecting part of ovipositor nearly as long as metasoma. Mesosoma 1.5 times as long as high. 1.5 mm. England. .... *E. stigmatocauda* sp.n., ♀
- Ovipositor not projecting. Mesosoma 1.3 times as long as high. 1.2-1.6 mm. England, Slovakia, Hungary. .... *E. staryi*, ♀ ♂

**Distribution:** England.

**Etymology:** The name indicates a member of the subgenus *Stigmatopoea* with a long ovipositor.

### Genus *Opius* WESMAEL, 1835

*Opius* WESMAEL, 1835: 115.

*Opius*: FISCHER 1972: 67.

*Opius*: FISCHER 1999: 277 etc. (genera and subgenera of the *Opius*-genus-group).

### *Opius (Opiothorax) lagomeraensis* sp.n. (Figs. 9 - 12)

**Holotype** ♀: Canary Islands, La Gomera, above Santiago, 28.3.99, R.R. Askew (National Museums of Scotland, Edinburgh).

**Further material examined:** 3 ♀ ♀, 1 ♂ Canary Islands, La Gomera, above Santiago, 28.3.99, R.R. Askew (National Museums of Scotland, Edinburgh).

**Description of ♀:** Length of body: 1.5 mm.

Head: Twice as wide as long, 1.9 times as wide as face, 1.4 times as wide as mesoscutum, 3.5 times as wide as T1; eyes very little protruding, 1.5 times as long as temples, eyes and temples rounded in a continuous curve, distance of toruli from each other and from eyes as great as their diameter, occiput weakly excavate, upper side of head with some inconspicuous hairs laterally, on occiput and in the ocellar area; ocelli small, distance between them 2 times as great as their diameter. Face 1.3 times as wide as high, middle elevation weak, with few hairs and these without recognizable hair-points, eye margins parallel. Clypeus 4.5 times as wide as high, nearly sickle-shaped, lower edge emarginate, with a few longer hairs. Tentorial pits small, the distance from each other 4 times as great as their distance from the eyes. Malar space as long as the mandible is basally wide. Mouth open, mandible clearly expanded at base, as long as wide. Antennae just a little longer than body, 21-segmented, F1 5 times as long as wide, the following gradually a bit shorter, most F about twice as long as wide, Fp twice as long as wide, the F clearly separated from each other, 2 or 3 sensillae weakly distinguishable in lateral view, the longest hairs as long as F width.

Mesosoma: 1.25 times as long as high, upper side strongly arched. Mesoscutum 1.3 times as wide as long, notauli developed only as small, smooth impressions, absent on disc, their imaginary course indicated by a row of hairs, dorsal fovea absent, sides margined only near tegulae. Prescutellar furrow narrow and densely crenellate. The remainder of the mesosoma smooth and shining. Sternauli absent, all furrows of the side of mesosoma smooth. Hind femora 5 times as long as wide.

Wings: st narrow, distal of r nearly parallel-sided, only distally gradually narrowed, r arising beyond base of st by a distance little more than the length r1, r1 shorter than st width, passing in a curve into r2, r2 1.4 times as long as cc1, r3 straight, 2.3 times as long as r2, R reaching apex of wing, nr postfurcal, Cu2 distally narrowed, d a little longer than nr, nv weakly postfurcal, B closed, twice as long as broad, np absent from middle of B; r' and cu2' at most a short distance indicated as folds, nr' absent.

Metasoma: T1 1.5 times as long as wide, parallel-sided behind, weakly narrowed in front, arched across, smooth, dorsal carinae developed in front, spiracles inconspicuous. The projecting part of the ovipositor as long as T1.

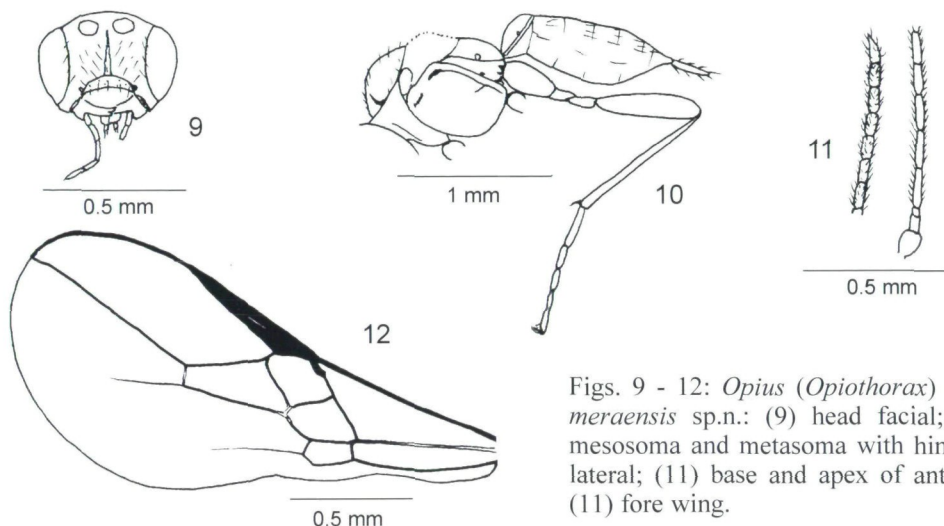
Colouration: Black. Yellow: scape, pedicel, anellus, mouthparts, legs, tegulae, wing venation and T2+3. Wing membrane hyaline.

♂: Antennae a little longer than body, 21-articulated.

**Taxonomic position:** The species belongs to the subgenus *Opiothorax* FISCHER. In the key of FISCHER (1995) it runs to *Opius levis* WESMAEL, 1835 and *Opius minusculae* FISCHER, 1967. It can be distinguished as follows:

- 1 Clypeus 4.5 times as wide as high, nearly sickle-shaped. T1 entirely smooth, parallel sided. Penultimate flagellomeres 1.6 times as long as wide. Ovipositor sheaths projecting as long as T1. 1.5 mm. Canary Islands: La Gomera. .... *O. lagomeraensis* sp.n., ♀ ♂
- Clypeus only 3 times as wide as high, not sickle-shaped. T1 with some sort of sculpture in most cases (sometimes ♂ ♂ of *O. levis* smooth), narrowed anteriorly. Penultimate flagellomeres longer, twice or 2.5 times as long as wide. Ovipositor sheaths not projecting, largely concealed. .... 2





Figs. 9 - 12: *Opius (Opiothorax) lago-meraensis* sp.n.: (9) head facial; (10) mesosoma and metasoma with hind leg lateral; (11) base and apex of antenna; (12) fore wing.

- 2 r3 twice as long as r2. R just reaching apex of wing. 1.8-2.2 mm. Palaearctic Region as far as Finland, St. Petersburg, Crete, Korea. .... *O. levis*, ♀ ♂
- r3 2.5 times as long as r2. R reaching clearly as far as tip of wing. 1.4 mm. England, Hungary. .... *O. minusculae*, ♀

**Distribution:** Canary Islands.

**Etymology:** Named after the Canary Island La Gomera.

***Opius (Ilicopius) novojariae* sp.n. (Figs. 13 - 15)**

**Holotype** ♀: Santon Downham, Norfolk, TL 818883 Malaise trap: heath with birch and pine 30.7.85, J. Field, RMSNH 1986.021 (National Museum of Scotland, Edinburgh).

**Further material examined:** 2 ♀ ♀, Santon Downham, Norfolk, TL 818883 Malaise trap: heath with birch and pine; 6-20.7.85, J. Field, RMSBH 1986.021; 1 ♀ (this example a little aberrant), Santon Downham, Norfolk, TL 818883 Malaise trap: heath with birch and pine 9.-20.7.84, J. Field, RMSNH 1986.021; 1 ♀, Chimney Meadows Ditch, Oxon. SU 352999 Mal. Trap 9.8.-6.9.1991, K. Porter NMSZ 1994.010 (National Museum of Scotland, Edinburgh).

**Description of ♀:** Length of body: 1.75 mm.

Head: Twice as wide as long, 1.4 times as wide as the face, 1.33 times as wide as the mesoscutum, 3 times as wide as T1; eyes projecting, 1.5 times as long as temples, eyes and temples rounded in a common curve, distance between toruli and their distance from eyes as great as their diameter, occiput little excavate, nearly straight; distance of ocelli from eyes as great as the ocellar area is wide, distance of ocelli from each other as great as their diameter; upper side of head with only a few hairs laterally and near occiput, hair punctures not recognizable. Face 1.25 times as wide as high, median elevation distinct dorsally, flattened downwards and absent below, with few inconspicuous hairs and no visible hair-points, eye margins parallel. Clypeus 3 times as wide as high, arched, obliquely standing off from the face, with clear punctures and erect hairs, lower edge emarginate. Malar suture distinct. Cheeks nearly shorter than

width of mandibles at base. A gap between clypeus and mandibles, mandibles not expanded at base, only gradually widened towards base, maxillary palpi about as long as the head is high. Antennae only a little longer than body, 22-segmented; F1 5.5 times, Fm 2.5 times, F of apical quarter 3 times as long as wide; F clearly separated from each other, hairs as long as F is wide, 2 sensillae visible in lateral view.

Mesosoma: Nearly 1.5 times as long as high, upper side only weakly arched. Mesoscutum a little wider than long, central lobe straight in front; notauli present on declivity, absent on disc, their imaginary course indicated by some hairs, passing below into the marginal furrow, dorsal fovea absent, edges clearly margined only near tegulae, indistinct in front. Prescutellar furrow crenellate in the depth. The remainder of the mesosoma smooth, all furrows smooth, sternaulus only a little impressed. Hind femora 5 times as long as wide.

Wings: Distal part of st wedge shaped, r arising from basal third of st, r1 very short, r2 twice as long as cc1, r3 2.5 times as long as r2, slightly bent outwards, R reaching apex of wing, nr postfurcal, Cu2 only slightly narrowing distally, d 1.15 times as long as nr, nv postfurcal, B closed, np arising from middle of distal side of B; r' and nr' absent, cu2' forming only a fold.

Metasoma: T1 as long as wide, behind 1.5 times as wide as in front, linearly narrowing towards base, delicately rugose, dorsal carinae reaching as far as middle of disc, spiracles on small tubercles. Ovipositor sheaths projecting beyond apex of metasoma by a distance nearly as great as length of metasoma.

Colouration: Black. Yellow: base of antennae as far as F2, mouthparts, cheeks, all legs, tegulae, wing venation. Wing membrane hyaline.

Variability: Antennae 22 - 24-articulated. Mesosoma sometimes 1.4 times as long as high. Antennae 22 - 24-segmented. Base of metasoma yellowish, or metasoma entirely dark. One specimen little aberrant (see: further material examined) with T1 smooth and the propodeum with the metasoma entirely yellowish. I think that it belongs to this species, but I do not designate it as paratype.

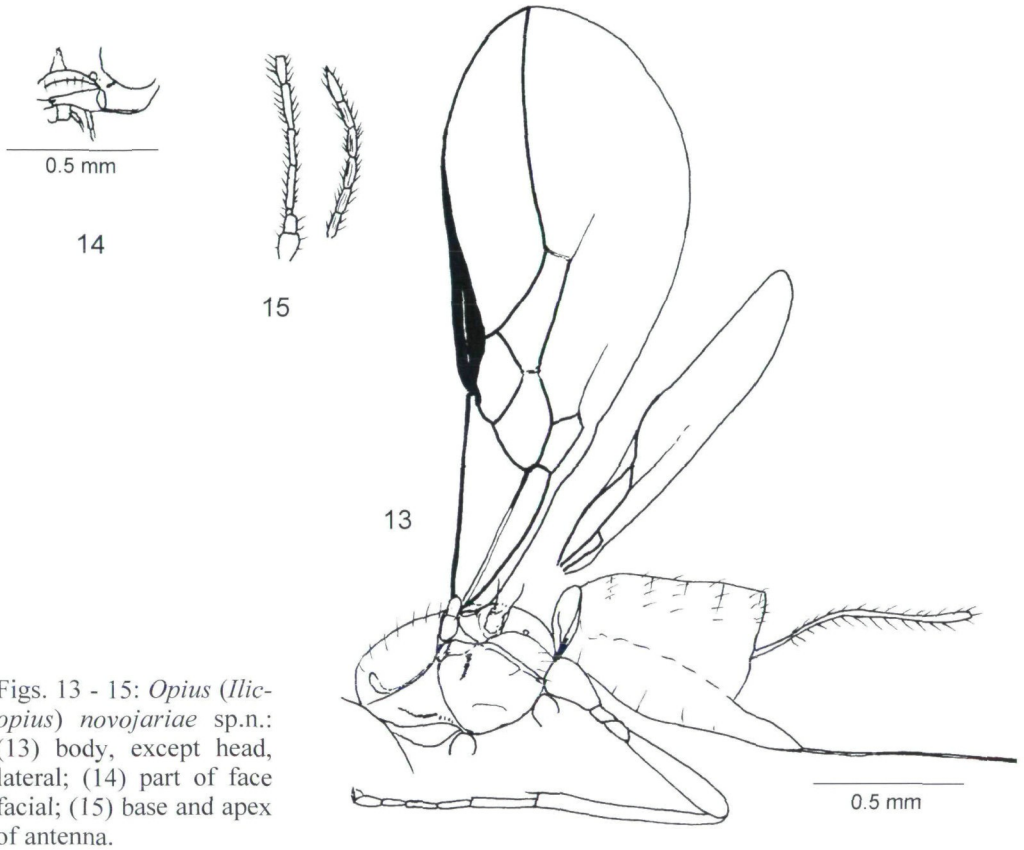
♂: Unknown.

**Taxonomic position:** The species is ascribed to the subgenus *Illicopius* FISCHER because of the more or less elongate mesosoma in combination with the presence of a hypoclypeal depression, and the absence of any sculpture of the metasoma behind T1. The species is nearest to *Opius bajariae* FISCHER, 1989, from which it can be distinguished as follows:

- 1 Mandible strongly expanded at base. r2 1.6 times as long as cc1. Clypeus and face in the same plane, lower edge of the former straight. F of the apical quarter very short. 1.75 mm. Hungary. .... *O. bajariae*, ♂
- Mandible not expanded at base. r2 twice as long as cc1. Clypeus arched, not in the same plane as the face, lower edge little excavate. F of the apical quarter twice as long as wide. 1.75 mm. 1.4 mm England. .... *O. novojariae* sp.n., ♀

If one regards the mesosoma as not elongate enough for the subgenus *Illicopius*, the species would belong to *Allophlebus* FISCHER. It would run in FISCHER's key (1972) to *O. staryi*, and can be separated as follows:





Figs. 13 - 15: *Opius (Illicopus) novojariae* sp.n.: (13) body, except head, lateral; (14) part of face facial; (15) base and apex of antenna.

- 1      Ovipositor sheaths hardly projecting beyond apex of metasoma. Mandibles expanded at base. 1.2 - 1.5 mm. England, Slovakia, Czech Republic, Hungary. .... *O. staryi*, ♀ ♂
- Ovipositor sheaths projecting beyond apex of metasoma by a distance nearly as great as the length of the metasoma. Mandibles not expanded at base: 1.5 mm. England. ....  
 ..... *O. novojariae* sp.n., ♀

**Distribution:** England.

**Etymology:** The name is composed of "novo" = new, and part of the name *bajariae*, and indicates that the species is nearest to *Opius (Illicopus) bajariae*.

***Opius (Utetes) selkirksensis* sp.n. (Figs. 16 - 20)**

**Holotype** ♀: Etrick Marsh, Selkirks, 5.IX.81, ex Diptera in leafminer in Valerian., Coll. 5.IX.81, Em. 12.II.82, K. Bland 1534 (National Museums of Scotland, Edinburgh).

**Description of ♀:** Length of body: 1.6 mm.

Head: Twice as wide as long, 1.8 times as wide as the face, 1.5 times as wide as the mesoscutum, 3.5 times as wide as T1; eyes a little protruding, behind eyes nearly as

wide as across eyes, the latter 1.5 times as long as the temples; distance between antennal sockets and the distance from an eye as great as their diameter, occiput only weakly excavate; upper side with a few hairs laterally and near occiput; distance between ocelli as great as their diameter, the distance of an ocellus from the eye greater than the ocellar area is wide. Face 1.25 times as wide as high, middle elevation not recognizable; smooth, and rather evenly hairy, hair points not recognizable, eye margins parallel. Clypeus twice as wide as high, epiclypeal suture evenly curved, lower edge straight in facial view (curved in ventral view), with some long hairs; distance between tentorial pits twice as great as their distance from the eyes. Cheeks as long as mandible is broad at its base. Malar suture weakly recognizable. A gap between clypeus and mandibles, the latter not expanded at base, maxillary palpi as long as the head is high. Antennae about 1.8 times as long as body, 28-articulated; F1 4.5 times as long as wide, the followings gradually shorter, Fm twice, Fp twice as long as wide; hairs as long as the width of the F, 2 sensillae visible in lateral view.

Mesosoma: 1.3 times as long as high, upper side curved. Mesoscutum a little wider than long, evenly round in front of tegulae, notauli only present on declivity, straight and smooth, absent on disc, dorsal fovea punctiform, sides margined, marginal furrows smooth, meeting the notauli nearly at a right angle. Prescutellar furrow crenellate. Remainder of mesosoma smooth. Propodeum only weakly separated from metapleuron. Anterior furrow of a side of pronotum crenellate. Sternaulus weakly developed, shortened on either side, with a few crenellations. All other furrows of the side of mesosoma smooth. Hind femora 5 times as long as wide.

Wings: st rather broad, r arising before middle, r1 much shorter than st is wide, r2 twice as long as cc1, r3 weakly curved, 1.8 times as long as r2, R reaching apex of wing, nr postfurcal, Cu2 nearly parallel-sided, d 1.5 times as long as nr, nv postfurcal, B closed, np arising from middle of distal side of B; r' and cu2' developed as folds only, nr' absent.

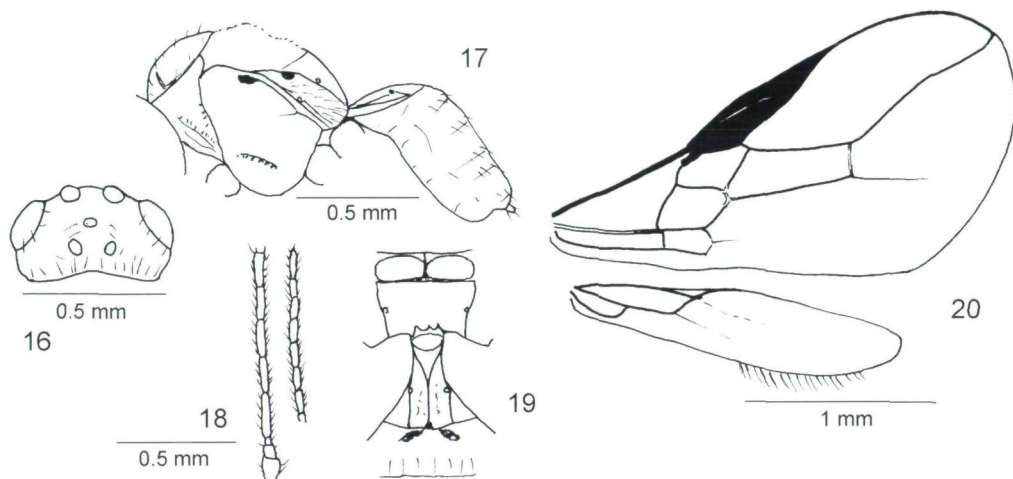
Metasoma: T1 nearly twice as long as wide, arched in transverse direction, smooth to uneven, parallel-sided behind, weakly narrowed in front of the spiracles, dorsal carinae linearly converging, meeting in the middle, reaching as a central carina as far as hind edge. Ovipositor not projecting.

Colouration: Head and flagellum black, face and cheeks brown. Mesosoma predominantly brown. Anterior half of metasoma dirty yellow, posterior half dark. Yellow: base of antenna as far as F1, clypeus, mouth parts, all legs, tegulae, and wing venation. Wing membrane hyaline.

♂: Unknown.

**Taxonomic position:** The species belongs to the subgenus *Utetes* FOERSTER. The key by FISCHER (1972) leads it near *Opius tarasi* TOBIAS, 1986 and *clavifemoralis* JAKIMAVICIUS, 1986. The new species can be separated as follows:

- 1 T1 nearly twice as long as broad, dorsal carinae converging linearly and uniting in the centre to a median longitudinal fold, which reaches as far as hind margin. 1.6 mm. Scotland. .... *O. selkirkensis* sp.n., ♀.
- T1 at most 1.6 times as long as broad, without median carina. .... *O. tarasi*, ♀, and *O. clavifemoralis*, ♀



Figs. 16 - 20: *Opius (Utetes) selkirkensis* sp.n.: (16) head dorsal; (17) mesosoma and metasoma lateral; (18) base and apex of antenna; (19) metascutum to base of T2 dorsal; (20) fore and hind wing.

**Host:** Unidentified Diptera (emerged ex puparium).

**Distribution:** Scotland.

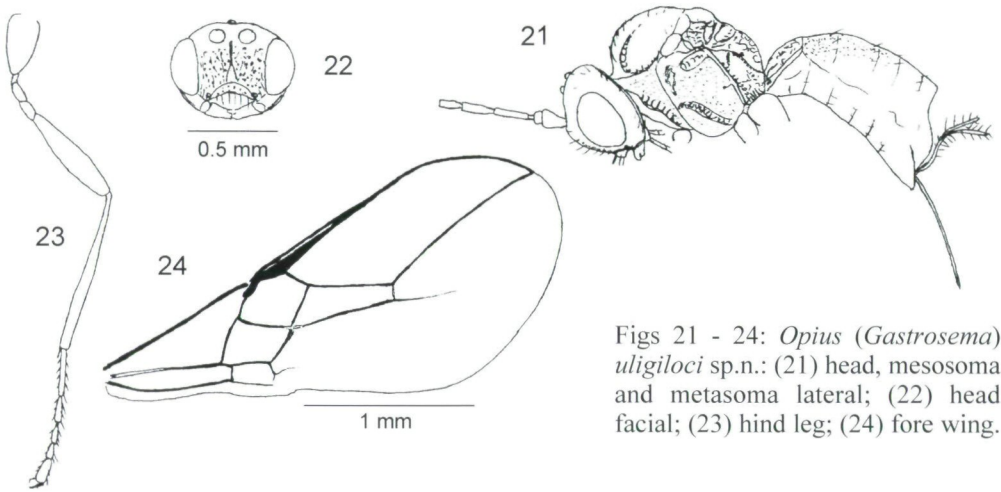
**Etymology:** The name refers to the type locality.

***Opius (Gastrosema) uligiloci* sp.n. (Figs. 21 - 24)**

**Holotype** ♀: Chippenham Fen. Cambs. TL 650693, Malaise trap carr at reedbed edge. 11-22.8.85 J. Field, RMSNH 1986.021 (National Museums of Scotland, Edinburgh).

**Description of ♀:** Length of body: 2.2 mm.

Head: Twice as wide as long, 1.3 times as wide as mesoscutum, 1.8 times as wide as face, twice as wide as T1; slightly wider between eyes than between temples, eyes and temples rounded in a common curve, eyes twice as long as temples, distance between toruli and their distance from eyes as great as their diameter, occiput nearly straight; upper side predominantly bare, distance between ocelli as great as their diameter. Face 1.25 times as wide as high, clearly coriaceous all over except for a very narrow median elevation in upper half, with fine scattered hairs, those near eye margins longer and erect, the rest of them bent towards the mid line, eye margins scarcely recognizable converging below. Clypeus 3 times as wide as high, arched, epistomal suture semi-circular, lower edge retracted, smooth, with a few erect hairs. Tentorial pits round, distance between them 3 times as great as their distance from eyes. Malar space as long as mandible basally wide. Mouth open, mandible not expanded at base, labrum with numerous punctures, maxillary palpi as long as head high. Antennae 1.75 times as long as body, 32-articulated; F1 4 times, F2 3.5 times, F3 2.5 times, Fm and Fp 2 times as long as wide; the F separated from each other, the longest hairs as long as F is wide, the hair points visible, 2 or 3 sensillae visible in lateral view.



Figs 21 - 24: *Opius (Gastrosema) uligiloci* sp.n.: (21) head, mesosoma and metasoma lateral; (22) head facial; (23) hind leg; (24) fore wing.

Mesosoma: 1.33 times as long as high, upper side arched. Mesoscutum a little wider than long, evenly rounded in front of tegulae, middle lobe scarcely separated, notauli developed in front, deep, with a few cross ridges, passing in a curve into the lateral furrows, disappearing gradually on disc, dorsal fovea absent, surface nearly smooth, a coriaceous sculpture hardly discernable. Prescutellar furrow crenellate. Postaxillae striate. Lateral areas of metascutum crenellate behind. Propodeum evenly arched and densely rugose. Sides of pronotum and metapleuron coriaceous, sternaulus crenellate and complete, posterior mesopleural furrow not crenellate. Metapleuron more or less rugose, with some longitudinal folds behind, the marginal furrows crenellate, with inconspicuous hairs. Legs long and slender, hind femora 5 times as long as wide.

Wings: Distal part of st wedge shaped, r arising from basal quarter, r1 as long as st is wide, forming a straight line with r2, r2 twice as long as cc1, r3 twice as long as r2, bent outwards, R reaching apex of wing, nr interstitial, Cu2 narrowed distad, d 1.3 times as long as nr, nv postfurcal by its own length, B closed, cu1b weak and passing in a curve into a2, np arising from middle of B; r', cu2' and nr' nearly absent.

Metasoma: T1 as long as wide, twice as long behind as in front, linearly narrowing forwards, densely rugose, dorsal carinae reaching as far as middle. T2+3 weakly coriaceous, the sculpture disappearing behind. Ovipositor sheaths about as long as T1.

Colouration: Black. Yellow: Anelli, mouthparts, legs, tegulae and wing venation. T2+3 and ventral side of metasoma brown. Wing membrane hyaline.

♂: Unknown.

**Taxonomic position:** The species belongs to the subgenus *Gastrosema* FISCHER and to a group with r2 twice as long as cc1: *caucasii* TOBIAS, 1986, *erzurumensis* FISCHER, 2004, and *kyotoensis* FISCHER, 2001. These species can be separated as follows:

- |   |  |                                      |
|---|--|--------------------------------------|
| 1 | Face, mesopleuron and sides of pronotum coriaceous, but mesopleuron and sides of pronotum a little weaker: 2.2 mm. England. .... | <b><i>O. uligiloci</i> sp.n.</b> , ♀ |
| — | Face, mesopleuron and sides of pronotum not coriaceous. ....   | 2                                    |



- 2 st narrow, a part distal of r1 parallel-sided. Sternaulus clearly crenellate. Anterior furrow of side of pronotum crenellate, ventral furrow of metapleuron crenellate. 1.5 mm. Turkey. .... *O. erzurumensis*, ♂
- st comparatively wide, distal part wedge-shaped. Sternaulus in one species inconspicuously crenellate and indistinctly sculptured. .... 3
- 3 Furrows of metapleuron smooth. Lateral areas of metascutum smooth. Propodeum very finely rugose. 1.4 mm. Caucasus (Sotshi). .... *O. caucasi*, ♀
- Dorsal and ventral furrow of metapleuron crenellate. Lateral areas of metascutum weakly crenellate. Propodeum densely rugose, with larger cells behind. 1.9 mm. Japan (Kyoto). .... *O. kyotoensis*, ♂

**Remark:** The fine coriaceous sculpture is often associated with development in wet habitats, as *caesus* HALIDAY (a synonym referring to a wet location is *hydrelliae* RIMSKY-KORSAKOV, 1925) and others.

**Distribution:** England.

**Etymology:** Derived from uligo (lat.) = wetness, and locus = location, i.e. uligiloci = species of a wet location.

#### Acknowledgement

I thank very much Mark Shaw (Edinburgh), who loaned much material for study and commented on the manuscript.

#### References

- ACHTERBERG C. VAN & QUICKE D.L.J., 1992: Phylogeny of the subfamilies of the family Braconidae: A reassessment assessed. – Cladistics 8: 237-264.
- FISCHER M., 1958: Die europäischen Arten der Gattung *Opius* WESM., Teil IVb. – Acta entomologica Musei nationalis Pragae 32: 295-316.
- FISCHER M., 1959: Die europäischen Arten der Gattung *Opius* WESMAEL, Teil IIc. – Opuscula entomologica 24: 55-78.
- FISCHER M., 1967: Gezüchtete Opiinae aus Europa. – Zeitschrift für angewandte Entomologie 60: 318-350.
- FISCHER M., 1972: Hymenoptera, Braconidae (Opiinae). – Das Tierreich 91: I-XII, 1-620 pp., Walter de Gruyter: Berlin - New York.
- FISCHER M., 1989: Paläarktische Opiinae (Hymenoptera, Braconidae): Neue Arten und neue Funde aus dem Ungarischen Naturwissenschaftlichen Museum in Budapest. – Annales historico-naturales Musei nationalis hungarici 81: 205-238.
- FISCHER M., 1995: Korrekturen und Ergänzungen zur Taxonomie altweltlicher Opiinae und Neufassung eines Bestimmungsschlüssels für die paläarktischen Arten des Subgenus *Opiothorax* FISCHER, 1972 des Genus *Opius* WESMAEL, 1835. – Entomofauna 16 (9): 217-244.
- FISCHER M., 1998: Neue taxonomische Untersuchungen über Madenwespen der Alten Welt mit besonderer Berücksichtigung der Gattungen *Eurytenes* FOERSTER, *Aulonotus* ASHMEAD, *Biosteres* FOERSTER und der Untergattung *Gastrosema* FISCHER. – Linzer biologische Beiträge 30(1): 21-51.

- FISCHER M., 1999: Zur Evolution und zum System der *Opius*-verwandten Gattungen der Unterfamilie Opiinae mit einer erweiterten Aufteilung dieses Gattungs-Komplexes (Hymenoptera, Braconidae, Opiinae). – Linzer biologische Beiträge 30(1): 277-336.
- FISCHER M., 2001: Sieben neue Opiinae (Insecta: Hymenoptera: Braconidae) in der Sammlung des Naturhistorischen Museums Wien. – Annalen des Naturhistorischen Museums in Wien 103B: 303-325.
- FISCHER M., 2004: Einige neue Brackwespen (Insecta: Hymenoptera: Braconidae) und weitere Formen der Kiefer- und Madenwespen (Alysiinae, Opiinae). – Annalen des Naturhistorischen Museums in Wien 105B: 277-318.
- FOERSTER A., 1862: Synopsis der Familien und Gattungen der Braconen. – Verhandlungen des Naturhistorischen Vereins der Preußischen Rheinlande und Westfalens 19: 225-288.
- TOBIAS V., 1986: Oprod. nasek. Evr. tchasti SSSR 3, Perep. 5: 308 pp.
- RIMSKY-KORSAKOV M., 1925: Über Wasserhymenopteren der Umgegend vom See Sseliger. – Russische Hydrobiologische Zeitschrift 4: 67-71.
- WESMAEL C., 1835: Monographie des Braconides de Belgique. – Nouveaux Mémoires de l'Académie Royale des sciences et belles-lettres de Bruxelles 9: 1-252.
- WHARTON R.A., 1988: Classification of the Braconid subfamily Opiinae (Hymenoptera). – Canadian Entomologist 120: 333-360 (with further references).
- WHARTON R.A., SHAW S.R., SHARKEY M.J., WAHL D.B., WOOLEY J.B., WHITEFIELD J.B., MARSH P.M. & JOHNSON J.W., 1992: Phylogeny of the subfamilies of the family Braconidae (Hymenoptera: Ichneumonoidea): a reassessment. – Cladistics 8: 199-235.
- WHARTON R.A., 1997: Opiinae. – In: WHARTON R.A., MARSH P.M. & SHARKEY M.J., 1997: Manual of the New World genera of the family Braconidae (Hymenoptera). – Special publications of the International Society of Hymenopterists 1: 379-396.