

The sawfly fauna of the Hautes-Pyrénées (France), with results of the 15th International Sawfly Workshop, 2011 (Hymenoptera, Symphyta)

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Abstract. – A faunistic survey of Hymenoptera Symphyta was conducted in the French department of Hautes-Pyrénées, and especially in the Pyrenees National Park, during the 15th International Workshop on Symphyta held in this region from 2011 May 24th to June 2nd. In total 176 species belonging to 8 Symphyta families were collected or observed, 92 of which are new for the Hautes-Pyrénées. *Ardis sulcata* (Cameron, 1882), *Cladius ordubadensis* Konow, 1892, *Pristicampus arcticus* (Lindqvist, 1959) and *Pristiphora albitibia* (Costa, 1859) are recorded for the first time in France, and in addition some species considered as rare in France were collected. Including previously recorded data, the list of Symphyta known from the Hautes-Pyrénées reaches 238 species.

Résumé. – Les Hyménoptères Symphytes des Hautes-Pyrénées, incluant les espèces récoltées lors du 15^e colloque international sur les Symphytes en 2011. Une étude faunistique sur les Hyménoptères Symphytes a été menée dans les Hautes-Pyrénées, et en particulier dans le Parc National des Pyrénées, lors du 15^e colloque international sur les Symphytes qui s'est déroulé dans cette région du 24 mai au 2 juin 2011. Au total, 176 espèces appartenant à 8 familles ont été récoltées ou observées, dont 92 sont nouvelles pour le département. *Ardis sulcata* (Cameron, 1882), *Cladius ordubadensis* Konow, 1892, *Pristicampus arcticus* (Lindqvist, 1959) et *Pristiphora albitibia* (Costa, 1859) sont cités pour la première fois de France et plusieurs espèces considérées comme rares au niveau national ont été capturées. En incluant les données antérieures, la liste des Symphytes connus des Hautes-Pyrénées atteint 238 espèces.

Keywords. – Faunistics, new records, Hautes-Pyrénées, Pyrenees National Park.

Sawflies are the basal lineages of Hymenoptera (suborder Symphyta), mostly phytophagous and represented in Europe by about 1400 species (TAEGER *et al.*, 2006). In France, about 700 species belonging to 12 families have been reported (TAEGER *et al.*, 2006; NOBLECOURT, 2007). Our knowledge of the Pyrenean sawfly fauna is in many respects very poor. However, a number of records from the French department of Hautes-Pyrénées were published in the beginning of the 20th century: 15 species by ZAVATTARI (1904) and 21 additional species by DELMAS (1927), mainly from specimens collected in Aragnouet, Gavarnie and Gèdre. BERLAND (1947) mentioned 58 species from the Hautes-Pyrénées, with new records mainly from the collection Pandellé, in the Muséum national d'Histoire naturelle, Paris (MNHN), and collection J. Pérez. With records in LACOURT (1993, 1996, 2001, and personal communication of unpublished data) and those, until now unpublished, gathered during the past five decades and kindly provided by Henri Chevin, including data from the collection of Pr. Henri Nouvel (in MNHN) and from material collected

by occasional observers (in particular Ch. Cocquempot, P. Dauphin, F. de Flaugergues, C. Géry, A. Matocq, G. Mehr, A. Mineau, Ph. Ponel, B. Sigwalt, G. Tiberghien), the list reached 146 species.

Annual international field meetings of entomologists interested in Hymenoptera Symphyta have been held since 1997. These International Sawfly Workshops facilitate exchange of information, encourage cooperation, offer the opportunity to investigate the fauna of relatively restricted or protected areas with combined efforts of specialists, and also permit the collection of fresh material of rarely sampled species for ongoing and future studies. These informal gatherings have led to numerous improvements in our knowledge of the distribution and biology of European sawflies. Some of the results have already been published (ROLLER *et al.*, 2006; BOEVÉ *et al.*, 2009; LISTON *et al.*, 2012).

The 15th International Workshop on Symphyta was held in Luz-Saint-Sauveur from 2011 May 24th to June 2nd. Participants conducted a faunistic survey of sawflies at several localities, most of them within the Pyrenees National Park. The meeting was timed to coincide with the peak of the flight season for many sawflies, and despite the hot and dry spring that may have had a negative impact on the emergence of some species, the fieldwork and subsequent examination yielded a rich species list. This paper presents the first list of sawflies from the French department of Hautes-Pyrénées, including older records and data from the Workshop.

STUDY SITES, METHODS AND MATERIAL

The localities visited during the 15th International workshop on Symphyta are listed in table I. Their geographical coordinates, altitude ranges and the dates of visits are included. The studied localities are within the submontane to alpine vegetation zones.

Most of the adult sawflies were caught with sweep nets, and a few with a Malaise trap (site G). Larvae, galls and leaf mines were also recorded, collected and in some cases reared. Voucher specimens, pinned or kept in vials with 96 % ethanol, are deposited in private collections of the authors or in the Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany (SDEI). Single mid legs of several taxa identified in this study have been or will be submitted for barcoding in Barcode of Life Data Systems [BOLD 2012], in the project “Barcodes of Symphyta”, where images of complete specimens may also be viewed online. Questions on tracing particular specimens should be addressed to the corresponding authors.

Some specimens, particularly a few males of Nematinae, remain so far undetermined and are omitted from the present results. The reason for this is a lack of adequate literature and taxonomic knowledge, which at present makes it impossible to identify some species with a reasonable level of certainty. A revision of this group is in progress at the SDEI.

The classification used here follows TAEGER *et al.* (2010), except for the large family Tenthredinidae (LACOURT, 1999).

RESULTS

During the Workshop, 176 species belonging to eight families of the Symphyta were collected, 92 new for the Hautes-Pyrénées. In total, the preliminary list for the French department of Hautes-Pyrénées includes 238 species. Moreover 4 species, *Ardis sulcata*, *Cladius ordubadensis*, *Pristicampus arcticus* and *Pristiphora albitibia* were recorded in France for the first time. The more interesting and surprising among these are *Cladius ordubadensis* and *Pristicampus arcticus* (see notes).

The list of species recorded in the Hautes-Pyrénées is given in the table presented in appendix. Names of species collected during the Workshop and new for the Hautes-Pyrénées are in bold. Columns 2 to 18 list the specimens collected in the 18 localities visited during the 15th International Sawfly Workshop (see table I), excluding locality E (col du Tourmalet) where no specimen was collected (*;* - male; female; g - galls; l - larvae; l.r. - leaf rolls; m - mines).

Table I. – Localities prospected during the 15th International Workshop on Symphyta in 2011.

Site code (appendix)	Dates	Collecting site	position	altitude (m)
A	24.V.2011 1.VI.2011	Gèdre (along gawe of Gavarnie)	N 42°45'38" - E 0°00'06"	1250
B	24.V.2011 29.V.2011 1.VI.2011	Gavarnie, Cirque of Gavarnie	N 42°42'35" - W 0°00'38"	1370-1700
C	25.V.2011	Gèdre, Pragnères, Barrada valley (fir forest)	N 42°48'40" - E 0°01'31"	1200-1500
D	31.V.2011	Gèdre, Pragnères (along gawe of Gavarnie)	N 42°49'12" - E 0°00'35"	910
E	26.V.2011	Col du Tourmalet	N 42°54'32" - E 0°08'42"	2130
F	26.V.2011 30.V.2011	Barèges, Turon de la Bat de Caoubère	N 42°53'43" - E 0°06'27"	1450-1550
G	26.V.2011 28.V.2011 30.V.2011	Sers (3 km from Sesquières-Sère)	N 42°52'59" - E 0°02'12"	950
H	27.V.2011	Uz (near Saint-Savin)	N 42°57'31" - W 0°05'11"	750-900
I	27.V.2011 2.VI.2011	Luz-Saint-Sauveur, Esquièze-Sère	N 42°52'25" - W 0°00'15"	700-900
J	28.V.2011	Gèdre, Cirque of Troumouse	N 42°43'42" - E 0°05'55"	2080-2190
K	28.V.2011	Gèdre, direction Cirque of Troumouse, Gouyela du Hour	N 42°44'35" - E 0°05'29"	1650
L	28.V.2011 1.VI.2011	Gèdre, Troumouse Valley, Héas (péage)	N 42°44'48" - E 0°05'24"	1540
M	28.V.2011	Gèdre, Troumouse Valley, Héas	N 42°45'17" - E 0°04'29"	1480
N	28.V.2011 1.VI.2011	Gèdre, road D922 along gawe of Héas	N 42°45'54" - E 0°03'00"	1350
O	1.VI.2011	Gavarnie, Ossoue Valley (along road D128)	N 42°44'15" - W 0°01'00"	1450
P	1.VI.2011	Gavarnie, Ossoue Valley (along track after end of road D128)	N 42°44'52" - W 0°03'19"	1650
Q	1.VI.2011	Gavarnie, Ossoue Valley (along track after end of road D128)	N 42°45'12" - W 0°04'44"	1700
R	2.VI.2011	Saligos, along D921	N 42°53'31" - W 0°01'25"	630

The following notes serve two purposes. Firstly, they highlight and sometimes briefly discuss aspects of some individual records that are of special interest. Secondly, they include information from older records (for species with "*" in the last column of table in appendix). For older data, localities only are mentioned for common species, but full available data are provided for rare or uncommon taxa. In the notes, taxa names are placed in alphabetical order. See table in appendix for current family placement (only Tenthredinidae placed in a subfamily).

Notes on species from the workshop and older records

Abia fulgens Zaddach, 1863. – Probably the commonest *Abia* in the Central Pyrenees. All specimens collected were females. Males are very rare in the Pyrenees (SAVINA & LISTON, 2009).

Older records: Luz, Haute-Luce, Tarbes, Orédon 2000 m (BERLAND, 1947), Aragnouet 1500 m, col de Peyresourde, Barèges 1300 m, Cabanes de Géla 1710 m, Estaing 1000 m, Cauterets, Fabian, Luz-Saint-Sauveur, Orédon (*H. Chevin*), Granges d'Espiaube, 1500 m, lac d'Illhéou 1650 m (*J. Lacourt*).

Abia mutica Thomson, 1871. – This species, generally rare in Europe, seems to be locally common in some areas of the Pyrenees, at least in Ariège. It may perhaps be overlooked, as adults are active very early in spring (in Ariège: end of March/beginning of April at 800-1000 m, May for higher altitudes) and have never been observed feeding on flowers, unlike adults of other *Abia* species (*Abia candens*, *A. fulgens*, *A. sericea*) (personal observations by the first author).

Older record: 1 ♀, Granges d'Espiaube, 1500 m, 1.VI.1998 (*J. Lacourt*).

Abia nitens (Linnaeus, 1758). – *Older record*: 1 ♀, Gavarnie (ZAVATTARI, 1904). This specimen, solely on which is based the record of this species in the Pyrenees, has not been examined. Considering the adaptation of this species to extremely warm, dry, nutrient-poor conditions mainly in the lowlands (LISTON & SPÄTH, 2006), an occurrence around Gavarnie would be surprising.

Abia sericea (Linnaeus, 1767). – *Older records*: 1 ♀, Tournay, no date (*G. Tiberghien*), 1 ♀, Granges d'Espiaube 1500 m, 10.VII.1997 (*J. Lacourt*).

Acantholyda posticalis (Matsumura, 1912). – *Older records*: Orédon, vallée d'Aure Cap-de-Long (*H. Chevin*).

Aglaostigma fulvipes (Scopoli, 1763). – *Older records*: Tarbes (BERLAND, 1947), Granges d'Espiaube 1500 m (*J. Lacourt*).

Allantus togatus (Panzer, 1801). – *Older records*: Mauléon, Maubourguet (BERLAND, 1947).

Amauronematus vittatus (Audinet-Serville, 1823). – This species, also found recently in two other Pyrenean localities in Ariège (Savina, in prep.), was newly recorded for the French Pyrenees.

Ametastegia albipes (Thomson, 1871). – *Older record*: Magnoac (BERLAND, 1947).

Ametastegia carpini (Hartig, 1837). – *Older record*: Arrens (BERLAND, 1947).

Ametastegia equiseti (Fallén, 1808). – *Older record*: Tarbes (BERLAND, 1947).

Aneugmenus padi (Linnaeus, 1761). – *Older record*: Sainte-Marie-de-Campan (*Ch. Cocquemot*).

Ardis sulcata (Cameron, 1882). – New species for France. *A. sulcata* has a wide distribution in Central and Southern Europe (TAEGER *et al.*, 2006), but is scarce in most areas. It is univoltine and differs in other details of phenology from its more frequently recorded bivoltine congener *A. pallipes* (Audinet-Serville, 1823) (PSCHORN-WALCHER & ALTENHOFER, 2000). The larvae of both European *Ardis* species bore in the apical shoots and petioles of *Rosa spp.* *A. sulcata* is said to favour species of the *Rosa canina* group, but also feeds on garden cultivars (PSCHORN-WALCHER & ALTENHOFER, 2000).

Arge ciliaris (Linnaeus, 1767). – *Older record*: col de Peyresourde (*H. Chevin*).

Arge cyanocrocea (Forster, 1771). – *Older record*: Agos-Vidalos (*H. Chevin*).

Arge enodis (Linnaeus, 1767). – *Older record*: Tarbes (BERLAND, 1947).

Arge fuscipes (Fallén, 1808). – Rare species at national level, that seems to be more common in the Pyrenees.

Older records: Gavarnie, Luz (BERLAND, 1947).

Arge gracilicornis (Klug, 1814). – *Older records*: Cauterets 1100 m, Barèges 1300 m (*H. Chevin*).

Arge melanochra (Gmelin, 1790). – *Older records*: Ardengost, Cauteret, col de Coupe (*H. Chevin*), Ancizan (*J. Lacourt*).

Arge nigripes (Retzius, 1783). – *Older record*: Granges d'Espiaube 1500 m (*J. Lacourt*).

Arge ochropus (Gmelin, 1790). – *Older records*: Gavarnie (ZAVATTARI, 1904), Gavarnie, Gèdre (BERLAND, 1947), Ancizan (*J. Lacourt*).

Arge pagana (Panzer, 1797). – *Older records*: Gavarnie (ZAVATTARI, 1904), Ardengost, Cauterets, Gavarnie (*H. Chevin*).

Arge ustulata (Linnaeus, 1758). – *Older records*: Gavarnie (ZAVATTARI, 1904), Campan, Gavarnie (*H. Chevin*).

Athalia ancilla Audinet-Serville, 1823. – *Older records*: Ardengost, Cauterets, lac Bleu (*H. Chevin*).

Athalia bicolor Audinet-Serville, 1823. – *Older record*: col de Peyresourde (*H. Chevin*).

Athalia chevini Lacourt, 1986. – *Older record*: 1 ♀, Ancizan, 12.VII.1997 (LACOURT, 2001).

Athalia circularis (Klug, 1815). – *Older records*: Cauterets, lac Bleu, Lourdes, forêt de Bern (*H. Chevin*).

Athalia cordata Audinet-Serville, 1823. – *Older records*: Cauterets (*H. Chevin*), 1 ♀, Hourquette d'Aubert 2510 m (on snow), 8.VII.1997 (*J. Lacourt*).

Athalia cornubiae Benson, 1931. – *Older records*: Cauterets, Gavarnie, lac Bleu (*H. Chevin*), sapinière de Couplan 1500 m (*J. Lacourt*).

Athalia liberta (Klug, 1815). – *Older records*: Gèdre (BERLAND, 1947), Cauterets, Lourdes, Couplan (*H. Chevin*).

Athalia rosae (Linnaeus, 1758). – *Older records*: Gavarnie (ZAVATTARI, 1904), Cauterets, col de Peyresourde, Lourdes, Orédon, Pla de Lartiguette, Tarbes (*H. Chevin*).

Blennocampa phyllocolpa Viitasaari & Vikberg, 1985. – Galls on *Rosa sp.*

Calameuta filiformis (Eversmann, 1847). – *Older record*: Tarbes (BERLAND, 1947).

Calameuta pallipes (Klug, 1803). – *Older record*: Tarbes (BERLAND, 1947).

Cephalodo bifasciata bifasciata (Müller, 1766). – *Older records*: Gavarnie (ZAVATTARI, 1904), Plan d'Aragouet, Gèdre (DELMAS, 1927), Barèges, Complan (BERLAND, 1947), Cadéac, Couplan, Saint-Lary (forêt de Bern) (H. Chevin), Granges d'Espiaube 1500 m (J. Lacourt).

Cephus nigrinus Thomson, 1871. – *Older record*: Campan, 1600 m (H. Chevin).

Cephus spinipes (Panzer, 1800). – *Older record*: Tarbes (BERLAND, 1947).

Cimbex connatus (Schrank, 1776). – *Older record*: Barèges (BERLAND, 1947).

Cimbex femoratus (Linnaeus, 1758). – *Older record*: 1 ♀, Bordes, IV.1960 (Museum of Bayonne).

Cimbex quadrimaculatus (Müller, 1766). – *Older record*: 1 ♀, Madiran, no date (G. Tiberghien).

Cladardis elongatula (Klug, 1817). – *Older record*: 1 ♀, sapinière de Couplan 1500 m, 10.VII.1997 (J. Lacourt).

Cladius ordubadensis Konow, 1892. – New species for France. The species has in the past often been treated as a synonym of *C. pectinicornis*, which is common and widespread in most of Europe. Barcoding results have however revealed that they are distinct and that the males can readily be identified by the length of the projection on antennomere 6 (LISTON & JACOBS, 2012). Since its description based on syntypes of both sexes from the Araxes Valley in the Caucasus, records of *C. ordubadensis* have until recently been only from the eastern parts of the Mediterranean Region: Turkey (CALMASUR & ÖZBEK, 2004), Cyprus and Greece (LISTON & JACOBS, 2012). However, a female specimen in the SDEI identified by barcoding, was collected in northern Italy (Vinschgau, Schmelz SW Prad, 940 m., 27.VI.2005, *leg. C. Lange & J. Ziegler*). Apparently *C. ordubadensis* has a rather wide distribution in southern Europe. It is noteworthy, that at Gavarnie *C. ordubadensis* and *C. pectinicornis* are sympatric.

Cladius pectinicornis (Geoffroy, 1785). – *Older records*: Gavarnie (ZAVATTARI, 1904), Cauterets (H. Chevin).

Claremontia alternipes (Klug, 1816). – *Older records*: Lourdes (BERLAND, 1947), 1 ♀ Granges d'Espiaube 1500 m, 1.VI.1998 (J. Lacourt).

Claremontia tenuicornis (Klug, 1816). – *Older records*: Lourdes (BERLAND, 1947), Granges d'Espiaube 1500 m (LACOURT, 2001).

Corynis crassicornis (Rossi, 1790). – *Older records*: Aragnouet, Orédon (BERLAND, 1947), Cauterets 1400-1550 m, Campan, Orédon (H. Chevin), sapinière de Couplan 1500 m (J. Lacourt).

Corynis obscura (Fabricius, 1775). – *Older records*: Luz (BERLAND, 1947), 1 ♀, Ancizan 1180 m, 12.VII.1997 (J. Lacourt).

Craesus latipes (Villaret, 1832). – Rare species at national level, more common in the Pyrenees.

Older records: Saint-Sever, Tarbes (BERLAND, 1947).

Craesus septentrionalis (Linnaeus, 1758). – *Older record*: Ozous, larvae on *Betula*, IX.1981 (D. Larroche).

Cytisogaster chambersi Benson, 1947. – *Older records*: Campan, col de Peyresourde, Luz-Saint-Sauveur (H. Chevin).

Dolerus aeneus Hartig, 1837. – *Older records*: Campan, col de Peyresourde, lac Bleu (haute vallée de Lesponne) (H. Chevin), Granges d'Espiaube 1500 m (J. Lacourt).

Dolerus cothurnatus Audinet-Serville, 1823. – *Older records*: Cestas, Tarbes (BERLAND, 1947).

Dolerus ferrugatus Audinet-Serville, 1823. – *Older records*: 1 ♂ and 1 ♀, Campan, Payolle 1000 m, 2.VI.2000 (F. de Flaugergues).

Dolerus gonager (Fabricius, 1781). – *Older record*: Granges d'Espiaube 1500 m (J. Lacourt).

Dolerus haematodes (Schrank, 1781). – *Older record*: 1 ♀, Campan 1000 m, 2.VI.2000 (F. de Flaugergues).

Dolerus nigratus (Müller, 1776). – *Older records*: col de Peyresourde (H. Chevin), Granges d'Espiaube 1500 m (J. Lacourt).

Dolerus phalipi Chevin, 1988. – Species localized in sub-alpine or alpine areas with *Festuca eskia* Ramond ex DC., which is the supposed host-plant in the Pyrenees (LACOURT, 2001). Adults probably emerge early in spring, when the ground is still covered with snow patches. No material was collected during the Workshop near the col du Tourmalet where J. Lacourt collected specimens in 1998.

Older records: 65 ♂ and 10 ♀, col de Portet 2200 m (near or on snow patches), 1-3.VI.1998; 4 ♀, col du Tourmalet 1950-2080 m, 2.VI.1998 (LACOURT, 2001).

Dolerus pratensis (Linnaeus, 1758). – *Older record*: Campan (F. de Flaugergues).

- Dolerus sanguinicollis* (Klug, 1818). – *Older record*: Tarbes (BERLAND, 1947).
- Dolerus varispinus* Hartig, 1837. – *Older record*: Lourdes (BERLAND, 1947).
- Dulophanes morio* (Fabricius, 1781). – *Older record*: col de Peyresourde (*H. Chevin*).
- Emphytus melanarius* (Klug, 1818). – *Older record*: Tarbes (BERLAND, 1947).
- Emphytus rufocinctus* (Retzius, 1783). – *Older record*: Tarbes (BERLAND, 1947).
- Empria liturata* (Gmelin, 1790). – *Older records*: Maubourguet (BERLAND, 1947), Granges d'Espiaube 1500 m (*J. Lacourt*).
- Empria longicornis* (Thomson, 1871). – *Older record*: 1 ♂, Granges d'Espiaube 1500 m, 1.VI.1998 (LACOURT, 2001).
- Empria pallimacula* (Audinet-Serville, 1823). – *Older record*: 1 ♂ et 1 ♀, Granges d'Espiaube 1500 m, 1.VI.1998 (LACOURT, 2001).
- Empria parvula* (Konow, 1892). – *Older record*: 6 ♂, Granges d'Espiaube 1500 m, 1.VI.1998 (*J. Lacourt*).
- Eriocampa ovata* (Linnaeus, 1761). – *Older record*: Barèges, plateau du Lieuz 1500 m (*H. Chevin*).
- Eutomostethus gagathinus* (Klug, 1816). – *Older records*: Lourdes, Tarbes (BERLAND, 1947).
- Eutomostethus luteiventris* (Klug, 1816). – *Older record*: Campan (*H. Chevin*).
- Eutomostethus punctatus* (Konow, 1887). – Specimen collected near the foot of the waterfall in the Cirque de Gavarnie (1700 m). This uncommon species has also been recorded recently in another Pyrenean locality in Ariège (SAVINA & CHEVIN, 2012).
- Fenusia dohrnii* (Tischbein, 1846). – Mine collected on *Alnus glutinosa* (L.) Gaertner.
- Gilpinia virens* (Klug, 1812). – *Older record*: Aragnouet (BERLAND, 1947).
- Halidamia affinis* (Fallén, 1807). – *Older record*: 1 ♀, Bordères-sur-l'Echez, 2.VI.2000 (*F. de Flaugergues*).
- Hartigia linearis* (Schrank, 1781). – *Older record*: Sost (BERLAND, 1947).
- Hartigia nigra* (Harris, 1779). – *Older record*: Tarbes (BERLAND, 1947).
- Hemichroa australis* (Audinet-Serville, 1823). – *Older record*: Tarbes (BERLAND, 1947).
- Hemichroa crocea* (Geoffroy, 1785). – *Older record*: Tarbes (BERLAND, 1947).
- Heterarthrus aceris* (Kaltenbach, 1856). – Mines on *Acer pseudo-platanus* L.
- Hoplocampa flava* (Linnaeus, 1746). – *Older record*: Maubourguet (BERLAND, 1947).
- Hoplocampa fulvicornis* (Panzer, 1801). – *Older record*: Tarbes (BERLAND, 1947).
- Hoplocampa pectoralis* Thomson, 1871. – *Older record*: Artens (BERLAND, 1947).
- Hoplocampa plagiata* (Klug, 1816). – This species has also been recorded in another Pyrenean locality in Pyrénées-Orientales (LACOURT, 1996).
- Hypolaepus caeruleocarpus* (Hartig, 1837). – *Older record*: Gavarnie (BERLAND, 1947).
- Hypolaepus hypoxanthus* (Förster, 1854). – *Older record*: Tarbes (BERLAND, 1947).
- Hypolaepus pavidus* (Audinet-Serville, 1823). – *Older record*: 1 ♂, sapinière de Couplan 1500 m, 17.VII.1973 (*J. Lacourt*).
- Janus compressus* (Fabricius, 1793). – *Older record*: Maubourguet (BERLAND, 1947).
- Macrophya albicincta* (Schrank, 1776). – *Older records*: Saint-Savin (DELMAS, 1927), Lourdes, Tarbes (*H. Chevin*).
- Macrophya annulata* (Geoffroy, 1785). – *Older records*: Gèdre (DELMAS, 1927), Armenteule, Couplan, col de Peyresourde, Cauterets, Estanvielle, Salles (*H. Chevin*).
- Macrophya crassula* (Klug, 1817). – *Older record*: Estaing (*H. Chevin*).
- Macrophya diversipes* (Schrank, 1782). – *Older records*: Gèdre (DELMAS, 1927), Cauterets (*H. Chevin*).
- Macrophya montana* (Scopoli, 1763). – *Older records*: Gèdre (DELMAS, 1927), Aulon, Cauterets, Estaing, Gèdre, Pragnères, Lourdes, Sers (*H. Chevin*).
- Macrophya punctumalbum* (Linnaeus, 1767). – *Older record*: Gèdre (DELMAS, 1927).
- Macrophya ribis* (Schrank, 1781). – *Older records*: Gèdre (DELMAS, 1927), Cauterets (*H. Chevin*).
- Megalodontes cephalotes* (Fabricius, 1781). – *Older records*: Gavarnie (ZAVATTARI, 1904), Gavarnie, Gèdre, Cauterets (BERLAND, 1947), Barèges, Cauterets, Gavarnie, Gèdre, Orédon, Sers, vallée du Moudang, Tramezaïgues vallée du Rioumajou (*H. Chevin*), Ancizan (*J. Lacourt*).
- Monophadnoides rubi* (Harris, 1845). – *Older record*: 5 ♂, Granges d'Espiaube 1500 m, 1.VI.1998 (*J. Lacourt*).

- Monophadnoides ruficruris* (Brullé, 1832). – *Older record*: Lourdes (BERLAND, 1947).
- Monophadnus latus* Costa, 1894. – *Older records*: Lourdes, Tarbes (BERLAND, 1947).
- Monophadnus pallescens* (Gmelin, 1790). – *Older record*: Lourdes (H. Chevin).
- Monsoma pulveratum* (Retzius, 1783). – Larvae collected on *Alnus glutinosa* (L.) Gaertner.
- Nematinus luteus* (Panzer, 1803). – *Older record*: Tarbes (BERLAND, 1947).
- Neodiprion sertifer* (Geoffroy, 1785). – Larvae collected on *Pinus mugo* Turra. 3 ♂ emerged 30.IX, 8.X and 20.X.2011.
- Older records*: vallée de l'Estibère (west of Orédon lake), Néouvielle (Aragnouet) (H. Chevin).
- Neurotoma saltuum* (Linnaeus, 1758). – *Older record*: Barèges (BERLAND, 1947).
- Pachynematus vagus* (Fabricius, 1781). – *Older record*: 1 ♀, col de Peyresourde, 25.VI.1974 (H. Chevin).
- Pachyprotasis rapae* (Linnaeus, 1767). – *Older records*: Gèdre (DELMAS, 1927), col de Peyresourde, Néouvielle (Aragnouet) (H. Chevin), Granges d'Espiabe 1500 m (J. Lacourt).
- Pamphilius betulae* (Linnaeus, 1758). – *Older records*: Tarbes (BERLAND, 1947), 2 ♀ from coll. Pandellé, without date, identification confirmed by CHEVIN (1988).
- Pamphilius hortorum* (Klug, 1808). – *Older record*: Arrens (BERLAND, 1947).
- Pamphilius varius* (Audinet-Serville, 1823). – Larva collected on *Betula pubescens* Ehrh.
- Parna apicalis* (Brischke, 1888). – Mine on *Tilia* sp.
- Parna tenella* (Klug, 1816). – Mines on *Tilia* sp.
- Pontania bridgmanii* (Cameron, 1883). – Galls found on *Salix caprea* L.
- Pontania (Phyllocolpa) oblita* (Audinet-Serville, 1823). – Leaf rolls found on *Salix fragilis* L.
- Pontania proxima* (Audinet-Serville, 1823). – Galls found on *Salix alba* L. and *S. fragilis* L.
- Pontania vesicator* (Bremi, 1849). – Galls found on *Salix purpurea* L.
- Pontania virilis* Zirngiebl, 1955. – Galls found on *Salix purpurea* L.
- Priophorus brullei* (Dahlbom, 1835). – *Older record*: Luz (BERLAND, 1947).
- Priophorus compressicornis* (Fabricius, 1804). – *Older record*: Tarbes (BERLAND, 1947).
- Pristicampus arcticus* (Lindqvist, 1959). – New species for France. The specimen (fig. 1), a female, was collected near the foot of the waterfall in the Cirque de Gavarnie (1700 m). Two species of *Pristicampus* are known in Europe: *P. arcticus* (Lindqvist, 1959) and *P. incisus* (Lindqvist, 1970). *P. arcticus* was described from a single male collected on a Fjell in the Kilpisjärvi area of northern Finnish Lapland (LINDQVIST, 1959). Subsequently, a very few males have been collected in similar habitats in the mountains of Scotland (BENSON, 1961; LISTON, 1982). These were until now the only records of *P. arcticus*. *P. incisus*, described from the Baikal Region of Siberia (LINDQVIST, 1970), has been found in Europe only in southern Finland, where it is apparently an invasive species, using planted *Potentilla fruticosa* L. as a larval host. Considerable numbers of both sexes have been collected in parks and gardens by M. Viitasaari and V. Vikberg (VIITASAARI, 2002). Since LINDQVIST (1972) synonymised *P. incisus* with *P. arcticus*, it has remained unclear whether one or two *Pristicampus* species occur in Europe. ZINOVJEV (1993), with some reservations, treated the two species as distinct. Note that he had not been able to examine females of *P. arcticus*. The Pyrenean female, a female from Swedish Lapland (Kiruna kommun, Abisko National Park, Nuolja Kalfjäll, 26.VI.-15.VII.2006, leg. Swedish Malaise Trap Project) and several specimens of both sexes of *P. incisus* (Finland, Ta: Janakkala, 13.V.1996, leg. M. Viitasaari) have now been compared. Some significant differences were found between the very similar French and Swedish specimens on one hand and *P. incisus* on the other. The former specimens seem likely to represent the hitherto unknown female of *P. arcticus*, because they are darker in colouration than *P. incisus* (a difference noted by Zinovjev between male *P. arcticus* and *P. incisus*) and share with Scottish males a different type of sculpture of the mesoscutum. Differences between the females of these species are summarised as follows:
- Median mesoscutal lobes with large, well defined punctures; interspaces shiny nearly unsculptured (fig. 2); medial flange of hypopygium broad, apically rounded, with small emargination; metafemora black except for extreme apex; metacoxae ventrally extensively black *Pristicampus arcticus* (Lindqvist)
 - Median mesoscutal lobes with small, ill-defined punctures; interspaces sculptured and dull (fig. 3); medial flange of hypopygium subtriangular, rather evenly tapering to acute apex; metafemora usually extensively pale; metacoxae entirely pale *Pristicampus incisus* (Lindqvist)

We agree with ZINOVJEV (1993), that *P. arcticus* and *P. incisus* are probably distinct species, not only because of the morphological differences in the female described above, but also because the habitats and probably hosts differ. The host of *P. arcticus*, at its upland Scandinavian and Scottish sites, can surely not be *Potentilla fruticosa*. This plant does not occur naturally in these areas and several of the *P. arcticus* localities are very remote from any garden in which *P. fruticosa* might exist. As surmised by LISTON (1982), one likely host of *P. arcticus* is *Potentilla crantzii* (Crantz) Fritsch. It should be noted that, although *P. crantzii* and other *Potentilla* species too numerous to list here are recorded at Gavarnie, *P. fruticosa* is not, but is however known from Gèdre, which is neighbouring Gavarnie (data from the Conservatoire botanique national des Pyrénées et de Midi-Pyrénées).

Pristiphora albitibia (Costa, 1859). – New species for France. BERLAND (1947) mentions *P. albitibia* as a synonym of *P. staudingeri* (Ruthe, 1859) and records several localities in France for the latter. However, his description of the pale parts of the legs as “reddish-yellow” indicates that he applied the name *P. staudingeri* to a species other than *P. albitibia*, with pale parts of legs whitish.

Pristiphora leucopus (Hellén, 1947). – Larva on *Tilia* sp.

Pristiphora mollis (Hartig, 1837). – Mature larvae were collected on *Vaccinium myrtillus* L. at site N, while adults were swarming 5-20 cm above *Vaccinium* sp. at locality J, at a higher altitude. Rare species at national level, but probably largely widespread in the Pyrenees.

Rhadinoceraea bensoni Beneš, 1961. – This rare species has also been recorded in another Pyrenean locality in Pyrénées-Orientales (LACOURT, 1996). Larvae feed on *Lilium martagon* L.

Rhogogaster punctulata (Klug, 1817). – Older records: Campan, Gèdre (*H. Chevin*).

Rhogogaster viridis (Linnaeus, 1758). – Older records: Plan d’Aragouet, Gèdre (DELMAS, 1927), Ancizan, Barèges, Madiran (*H. Chevin*), Granges d’Espiaube 1500 m (*J. Lacourt*).

Sciapteryx costalis (Fabricius, 1775). – Older record: Tarbes (BERLAND, 1947).

Selandria serva (Fabricius, 1793). – Older record: Campan (*F. de Flaugergues*).

Sterictiphora angelicae (Panzer, 1799). – Older record: 1 ♀, Cadéac, VII.1929 (coll. H. Nouvel, MNHN).

Stromboceros delicatulus (Fallén, 1808). – Older record: Barèges, plateau du Lieuz 1500 m (*H. Chevin*).

Strongylogaster multifasciata (Geoffroy, 1785). – Older record: Armenteule (*H. Chevin*).

Taxonus agrorum (Fallén, 1808). – Older records: Tarbes (BERLAND, 1947), Agos-Vidalos (*H. Chevin*).

Tenthredella atra Linnaeus, 1758. – Older records: Gèdre (DELMAS, 1927), col de Peyresourde, Saint-Lary (forêt de Bern) (*H. Chevin*), Granges d’Espiaube 1500 m (*J. Lacourt*).

Tenthredella balteata Klug, 1817. – Rare species. This seems to be the first record for the French Pyrenees. Older record: 1 ♀, Granges d’Espiaube 1500 m, 10.VII.1997 (*J. Lacourt*).

Tenthredella livida Linnaeus, 1758. – Older records: Gèdre (DELMAS, 1927), Aulon (*H. Chevin*).

Tenthredella mandibularis Fabricius, 1804. – Species very rarely collected in the Pyrenees. This female seems to be the second specimen, the first one reported from Pyrénées-Orientales (LACOURT, 1993).

Tenthredella moniliata Klug, 1817. – Older records: Gèdre (DELMAS, 1927); 1 ♀, Argelès-Gazost, VII.1979 (*P. Dauphin*); 1 ♀, Cauterets, lac d’Ilhéou 1650 m, 15.VII.1990 (LACOURT, 1993).

Tenthredella solitaria Scopoli, 1763. – Older records: 4 ♂ and 6 ♀, col de Peyresourde, 25.VI.1974 (*H. Chevin*); 5 ♀, Granges d’Espiaube 1500 m, 10.VII.1997 and 1.VI.1998 (*J. Lacourt*).

Tenthredella velox Fabricius, 1798. – Older records: 2 ♂, col de Peyresourde, 25.VI.1974 (*H. Chevin*); 1 ♂, Cauterets, lac d’Ilhéou 1650 m, 14-15.VII.1990; 1 ♀, Granges d’Espiaube 1500 m, 10.VII.1997 (*J. Lacourt*).

Tenthredo algoviensis Enslin, 1912. – In the Pyrenees, mainly in sub-alpine and alpine zones, but localized.

Older records: Plan d’Aragouet (DELMAS, 1927); 2 ♀, Gavarnie 1600-1700 m, 8.VII.1987 (*G. Tiberghien*); 10 ♂ and 18 ♀, Cauterets, lac d’Ilhéou 1650 m, 14-15.VII.1990 (LACOURT, 1993).

Tenthredo arcuata Forster, 1771. – Older records: Gavarnie (ZAVATTARI, 1904), Plan d’Aragouet, lac d’Orédon, Gèdre (DELMAS, 1927), Cadéac, Estaing, col de Peyresourde, col d’Aspin, Gavarnie (*H. Chevin*), Granges d’Espiaube 1500 m (*J. Lacourt*).

Tenthredo brevicornis (Konow, 1886). – Older records: Plan d’Aragouet, Gèdre (DELMAS, 1927), Ardengost, Cauterets, Cadéac, Estaing, col de Peyresourde, Gèdre, lac Bleu, Tramezaïgues (*H. Chevin*), Ancizan 1180 m, sapinière de Couplan 1500 m, granges d’Espiaube 1500 m (*J. Lacourt*).

Tenthredo crassa Scopoli, 1763. – *Older records*: Gavarnie (ZAVATTARI, 1904), Gèdre (DELMAS, 1927), Aulon, Armenteule, Barèges, col de Peyresourde, vallée d'Aure Cap-de-Long (*H. Chevin*).

Tenthredo ferruginea Schrank, 1776. – *Older records*: Gèdre, Saint-Savin (DELMAS, 1927).

Tenthredo koehleri (Klug, 1817). – *Older records*: Gèdre (DELMAS, 1927), Luz, Barèges (BERLAND, 1947), Ancizan, Ardengost, Barèges, Bun, Campan, col de Beyrède, col de Peyresourde, Estanvielle, lac Bleu 1980 m, bords de la Neste de Couplan (*H. Chevin*), sapinière de Couplan 1500 m, Granges d'Espiaube 1500 m (*J. Lacourt*).

Tenthredo korabica Taeger, 1985. – In the Pyrenees, mainly in alpine, more rarely sub-alpine zones.

Older records: Plan d'Aragnouet, Gèdre (DELMAS, 1927); 1 ♂ and 10 ♀, lac d'Ilhéou 1800 m, 14-15.VII.1990; 3 ♂ and 4 ♀, Pic du Midi de Bigorre 2400 m, 12.VII.1990 (LACOURT, 1993); 4 ♀, Granges d'Espiaube 1500 m, 10.VII.1997 (*J. Lacourt*).

Tenthredo largiflava (Enslin, 1910). – Less frequent in the Central Pyrenees than in the East (LACOURT, 1993).

Older records: 1 ♀, Barèges-Sers 1360 m, 15.VIII.1973 (*R. Allemand*); 1 ♀, Ardengost, 15.VIII.1977 (*B. Sigwalt*); 4 ♂ and 7 ♀, Ancizan 1180 m, 10-12.VII.1997 (*J. Lacourt*).

Tenthredo maculata Geoffroy, 1785. – *Older record*: 1 ♀, Arrens, 29.VI.1970 (*P. Cantot*).

Tenthredo marginella Fabricius, 1793. – *Older record*: Gèdre (DELMAS, 1927).

Tenthredo mesomela Linnaeus, 1758. – *Older records*: Gavarnie (ZAVATTARI, 1904), Plan d'Aragnouet, Gèdre (DELMAS, 1927), Armenteule, Aulon, Aragnouet, Barèges, Cadéac, Estanvielle, Gavarnie, Gèdre, col de Peyresourde, vallée d'Aure Cap-de-Long, Tramezaïgues (*H. Chevin*), Granges d'Espiaube 1500 m (*J. Lacourt*).

Tenthredo mioceras (Enslin, 1912). – *Older records*: Plan d'Aragnouet, Gèdre (DELMAS, 1927), col de Peyresourde, Estaing (*H. Chevin*).

Tenthredo notha Klug, 1817. – *Older records*: Cauterets, Fabian, col de Peyresourde, col de Beyrède, Tramezaïgues, bords de la Neste de Couplan (*H. Chevin*), Ancizan 1180 m, Cauterets lac d'Ilhéou 1650 m, Granges d'Espiaube 1500 m (*J. Lacourt*).

Tenthredo obsoleta Klug, 1817. – *Older record*: Bauges (*H. Chevin*).

Tenthredo olivacea Klug, 1817. – *Older records*: Gavarnie (ZAVATTARI, 1904), Ardens, Barèges, col de Peyresourde, Gèdre, Tramezaïgues (*H. Chevin*), sapinière de Couplan 1500 m (*J. Lacourt*).

Tenthredo schaefferi Klug, 1817. – *Older records*: Gavarnie (ZAVATTARI, 1904), Plan d'Aragnouet, Gèdre (DELMAS, 1927), Luz, Barèges (BERLAND, 1947).

Tenthredo scrophulariae Linnaeus, 1758. – *Older records*: Plan d'Aragnouet, Gèdre (DELMAS, 1927), Cauterets, Tramezaïgues (*H. Chevin*).

Tenthredo sulphuripes (Kriechbaumer, 1869). – *Older record*: 1 ♀, Gavarnie, D128, prairie 1480 m (*C. Géry*).

Tenthredo temula Scopoli, 1763. – *Older records*: Gavarnie (ZAVATTARI, 1904), Barèges, Bun, Cauterets, Estaing, vallée d'Aure Cap-de-Long (*H. Chevin*), Granges d'Espiaube 1500 m (*J. Lacourt*).

Tenthredo thompsoni (Curtis, 1839). – *Older records*: Gavarnie, Lannemezan, Saint-Lary Soulan (*H. Chevin*).

Tenthredo trabeata Klug, 1817. – This species is rarely collected, but probably present all along the Pyrenees. Recorded from Ariège [eastern part (SAVINA & CHEVIN, 2012)] and Pyrénées-Orientales (LACOURT, 1996), but strangely has never been collected in the more prospected western part of Ariège (Couzerans).

Older record: 1 ♀, Granges d'Espiaube 1520 m, 11.VII.1997 (LACOURT, 2001).

Tenthredo vespa Retzius, 1783. – Species common in France, but seems less frequent in the south-west, including the Pyrenees.

Older records: Gavarnie (ZAVATTARI, 1904), Plan d'Aragnouet, Gèdre (DELMAS, 1927), Ardengost, Gavarnie, vallée d'Aure Cap-de-Long, Tramezaïgues (*H. Chevin*), sapinière de Couplan 1500 m, Cauterets lac d'Ilhéou 1650 m (*J. Lacourt*).

Tenthredo vespiformis Schrank, 1781. – *Older records*: 2 ♀, Granges d'Espiaube 1500 m, 10.VII.1997 and 1.VI.1998 (*J. Lacourt*).

Tenthredo zona Klug, 1817. – *Older record*: col de Peyresourde (*H. Chevin*).

Tenthredopsis litterata (Geoffroy, 1785). – *Older records*: Gèdre, Luz (DELMAS, 1927).

Tenthredopsis nassata (Linnaeus, 1767). – *Older record*: Cauterets (*H. Chevin*).

Trachelus tabidus (Fabricius, 1775). – *Older record*: Arreau (BERLAND, 1947).

Trachelus troglodyta (Fabricius, 1787). – The single female specimen is unusually coloured (very dark), but otherwise morphologically similar to specimens from other parts of Europe. Unfortunately, an attempt to obtain barcode sequence data for the Pyrenees specimen failed.

Trichiocampus grandis (Audinet-Serville, 1823). – *Older record*: Maubourguet (BERLAND, 1947).

Urocerus gigas (Linnaeus, 1758). – *Older records*: Cauterets, col de Beyrède, Plan d'Aragnouet, forêt de Barousse, Fabian, Tramezaïgues vallée du Rioumajou (*H. Chevin*).

Xeris spectrum (Linnaeus, 1758). – *Older records*: Fabian, Saint-Lary (forêt de Bern), Plan d'Aragnouet (*H. Chevin*).

Zonuledo amoena (Gravenhorst, 1807). – *Older records*: Plan d'Aragnouet (DELMAS, 1927), Barèges, Gèdre (BERLAND, 1947), Aulon, Cauterets (*H. Chevin*), Granges d'Espiabe 1500 m (*J. Lacourt*).

Zonuledo zonula (Klug, 1817). – *Older record*: col de Peyresourde (*H. Chevin*).

DISCUSSION AND CONCLUSION

The 176 species recorded during the workshop in the Pyrenees in 2011, is less than the total of about 200 collected during the workshop in the Lower Tatra of Slovakia (ROLLER *et al.*, 2006), or the approximately 190 species found during the workshop in the Highlands of Scotland (LISTON *et al.*, 2012). This may be partly due to the hot and dry spring that probably had a negative impact on the emergence of some species, especially Nematinae (*s. l.*) — see table II. We nevertheless recorded a number of interesting and rare species.

In our opinion, planning for nature conservation management should pay particular attention to the occurrence of the following species. *Dolerus altivolus*, *D. chevini* and *D. phalipi* indicate well preserved subalpine and lower alpine biotopes. *Dolerus bimaculatus*, *Eutomostethus gagathinus* and *E. punctatus* are characteristic of wet submontane meadows. Findings of *Abia fulgens*, *A. mutica*, *A. sericea*, *Macrophya rufipes*, *Megalodontes cephalotes*, *M. plagiocephalus* and *Cephalo bífasciata* suggest the presence of valuable sub-montane and montane mesophilic grasslands.

In this preliminary list for the Hautes-Pyrénées, in addition to the 4 species new for France, 36 are rarely collected, or considered to be rare at national level: *Pamphilus betulae*, *P. fumipennis*, *Hartigia linearis*, *Janus compressus*, *Arge fuscipes*, *Abia mutica*, *A. nitens*, *Cimbex connatus*, *C. quadrimaculatus*, *Aneugmenus fuerstenbergensis*, *Dolerus altivolus*, *D. bimaculatus*, *D. chevini*, *D. phalipi*, *Strongylogaster macula*, *Athalia chevini*, *Empria alpina*, *E. longicornis*, *Monsoma pulveratum*, *Claremontia brevicornis*, *Paracharactus gracilicornis*, *Rhadinoceraea bensoni*, *Hoplocampa pectoralis*, *Amauronematus hedstroemi*, *A. puniceus*, *Craesus latipes*, *Pristiphora mollis*, *Pachyprotasis variegata*, *Rhogogaster dryas*, *Tenthredella balteata*, *Tenthredo algoviensis*, *T. korabica*, *T. largiflava*, *T. trabeata*, *T. vespiformis* and *T. zona*. Most of these species have a wide European distribution, but are similarly scarce in other parts of their range. Only two of the species so far found in the Hautes-Pyrénées are largely confined to the Pyrenean mountain chain: *Tenthredo largiflava* has only been recorded in the Pyrenees, except for records by ZOMBORI (1996) from Hungary, however the identity of these latter specimens should be checked; *Dolerus phalipi* has only been found in the Pyrenees and the Cévennes, whilst *D. chevini* is so far only recorded in the Massif Central and the Pyrenees.

The current knowledge on the distribution of a majority of sawflies in the Pyrenees is insufficient to assess their status and endangeredness in these mountains. This is well illustrated by the records of 92 species new for the Hautes-Pyrénées (more than half of the 176 species collected during the Workshop). Nevertheless, some species rare at national level can be considered to be more frequent, or even locally common, in the Pyrenees, like *Arge fuscipes*, *Monsoma pulveratum*, *Craesus latipes*, *Pristiphora mollis*, *Tenthredo algoviensis*, *T. korabica* and *T. trabeata*. This may be also the case in others, such as *Abia mutica*, *Cimbex connatus* and *Rhadinoceraea bensoni*, but more intensive fieldwork is needed before any conclusion can be drawn.



Fig. 1-3. – *Pristicampus* spp. – 1-2, *Pristicampus arcticus* (Lindqvist), ♀, Gavarnie: 1, whole specimen, lateral, length 4.5 mm; 2, thorax, showing sculpture of median mesoscutal lobes. – 3, *P. incisus* (Lindqvist), ♀, Finland, Janakkala, thorax showing sculpture of median mesoscutal lobes. (Photos by A. D. Liston).

Table II. – Number of species recorded in the Central Pyrenees (percentages indicate the representation of the four subfamilies of Tenthredinidae)

	Ariège	Haute-Garonne	Hautes-Pyrénées (total)	Hautes-Pyrénées (Workshop)
Total	267	222	238	176
Non Tenthredinidae	53	49	48	28
Selandriinae	28 (13 %)	21 (12 %)	26 (14 %)	20 (13 %)
Blennocampinae (<i>s. l.</i>)	55 (26 %)	64 (37 %)	56 (29 %)	44 (30 %)
Nematinae (<i>s. l.</i>)	78 (36 %)	32 (18 %)	44 (23 %)	31 (21 %)
Tenthredininae	53 (25 %)	56 (33 %)	64 (34 %)	53 (36 %)

Preliminary lists of Symphyta are available for Ariège (SAVINA & CHEVIN, 2012; additional records to be published) and Haute-Garonne (CHEVIN & SAVINA, 2013), the two other French departments covering the Central Pyrenees. The comparison between the three departments Hautes-Pyrénées (west), Haute-Garonne (centre) and Ariège (east) is summarized in table II.

Ariège is the best surveyed area. It should be noted that, if a significant part of Ariège and Hautes-Pyrénées is within the Pyrenean Massif, only the far south of Haute-Garonne is part of it. In the Hautes-Pyrénées, fieldwork seems to have been quite efficient at detecting Tenthredininae, 64 (total) and 53 (workshop) species (respectively 79 % and 65 % of the species of Tenthredininae known for the six departments covering the Pyrenees), but much less for Nematinae, 44 (total) and 31 (workshop) species (respectively 40 % and 28 % of the species of Nematinae known for the six departments covering the Pyrenees).

We are forced to conclude that the results of the Workshop underline the extent to which detailed knowledge of the Pyrenean Symphytan fauna is still lacking. More intensive faunal surveys are needed, using various complementary sampling methods, including Malaise traps to augment the spectrum of taxa and sexes of Symphyta collected by hand, especially for Nematinae.

ACKNOWLEDGMENTS. – We warmly thank the Parc National des Pyrénées, especially Gilles Perron, Eric Sourp and Eric Boyer, for permission to undertake sampling and for guiding some of us to interesting and well-preserved natural spots in the Barrada Valley. We thank also Christophe Bergès from the Conservatoire botanique national des Pyrénées et de Midi-Pyrénées for the data on *Potentilla*. We thank again all the occasional observers, and also Henri Chevin and Jean Lacourt who kindly provided their unpublished data. H. Chevin also supplied useful information on the status of some species in France. We are indebted to Dr. Kajsa Glenhörn, Dave Karlsson and Pelle Magnusson of the Station Linné, Öland, Sweden, for the loan of comparative material of *Pristicampus* from the Swedish Malaise Trap Project's samples of Symphyta.

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Species	Sites	A	B	C	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	Older records
<i>Prisicampus arcticus</i> (Lindqvist, 1959)		0;1																	
<i>Prisiphora albitibia</i> (Costa, 1859)		1;1							1;0										
<i>Prisiphora appendiculata</i> (Hartig, 1837)		0;1																	
<i>Prisiphora insularis</i> Rohwer, 1910										0;1	1;0								
<i>Prisiphora leucopus</i> (Hellen, 1947)					11					64;23	18;4			20;1					
<i>Prisiphora mollis</i> (Hartig, 1837)																			
<i>Prisiphora pallidiventris</i> (Fallén, 1808)				1;0							0;1								
<i>Pseudoneura fuscata</i> (Klug, 1816)		0;1																	
Tenthredinidae - Tenthredininae																			
<i>Aglao stigma fuvipes</i> (Scopoli, 1763)		7;2	1;0			0;2	0;1						0;4	0;1					*
<i>Cephalodo bifasciata bifasciata</i> Müller, 1766			0;1				5;10				0;1								*
<i>Cyrtogaster chambersi</i> Benson, 1947		1;2									3;0								*
<i>Cyrtogaster genistae</i> Benson, 1947		0;1				1;8	0;1					0;2							
<i>Cyrtogaster picta</i> (Klug, 1817)						1;1	0;1												*
<i>Macrophya albicincta</i> (Schränk, 1776)		0;8																	
<i>Macrophya alboannulata</i> Costa, 1859		2;0				0;2													*
<i>Macrophya amulata</i> (Geoffroy, 1785)		28;4	1;0			48;4	0;17			8;1	9;0		8;3	1;3	4;2				*
<i>Macrophya crassula</i> (Klug, 1817)						1;5													*
<i>Macrophya diversipes</i> (Schränk, 1782)							0;3												*
<i>Macrophya dnoecimpunctata</i> (Linné, 1758)		2;1				19;3	0;9				1;0								
<i>Macrophya militaris</i> (Klug, 1817)							0;1	0;1											
<i>Macrophya montana</i> (Scopoli, 1763)		2;1	0;5				11;19		1;1				2;2	2;1	0;1				*
<i>Macrophya punctumalbum</i> (Linné, 1767)												0;1							*
<i>Macrophya ribis</i> (Schränk, 1781)																			*
<i>Macrophya rufipes</i> (Linné, 1758)			1;1			9;22	1;12												
<i>Pachyprotasis antennata</i> (Klug, 1817)								0;1											*
<i>Pachyprotasis rapae</i> (Linné, 1767)		0;1	6;7	5;0		6;11				0;1	2;0	3;1	1;1	0;4	0;1				
<i>Pachyprotasis variegata</i> (Fallén, 1808)		0;1				3;4	0;2												
<i>Rhogogaster chlorosoma</i> (Benson, 1943)		0;5	0;1																
<i>Rhogogaster dryas</i> (Benson, 1943)						0;1													*
<i>Rhogogaster punctulata</i> (Klug, 1817)						2;2					1;0								*
<i>Rhogogaster viridis</i> (Linné, 1758)		1;4				3;1;18		0;1			3;0	2;0	0;1	0;1					*
<i>Sciapteryx costalis</i> (Fabricius, 1775)																			*
<i>Tenthredella atra</i> Linné, 1758		1;1				3;7	0;3				0;1	0;1	0;1	1;1	3;2				*
<i>Tenthredella balleata</i> Klug, 1817																			*
<i>Tenthredella livida</i> Linné, 1758			0;1			1;3	1;0	0;2				1;0							*

