

List of the Hoverflies of Bouches-du-Rhône (Diptera : Syrphidae)

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Material and Methods

The Maps of the departmental distribution of syrphid species in France (Speight *et al.* 2018) only gives 49 species as present in the Bouches-du-Rhône department, with some common species obviously missing, such as *Episyrphus balteatus*.

To revise the department list, we reidentified all the hoverflies from Bouches-du-Rhône present in the Marseille Natural History Museum: collections of Jean Timon-David (326 specimens from 1926 to 1954) and Louis Bigot (41 specimens from 1955 to 1992).

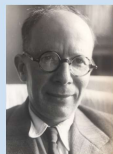


Photo © P. Timon-David

The authors have also gathered data on hoverfly distribution over the last ten years. The main areas surveyed are the Camargue (Hilaire, unpublished; Lauriaut, unpublished), the Crau (Solère *et al.*, 2022), Calanques National Park (Ropars *et al.*, 2020) and Aubagne area (Nève, unpublished). All together, we have data on over 10,000 specimens.

Results

The list of confirmed identifications amounts to 140 species. We treat *Chrysotoxum intermedium* A (?=aggr. Chr. lessonae) et B (?=aggr. Chr. intermedium) as distinct species (Speight & Lebard 2022), and *Paragus bicolor* and *P. romanicus* as synonyms (Tot *et al.*: see poster 29).



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Merodon legionensis was overlooked by Timon-David, and identified in 2020 in his collection, from a specimen collected at Bret, near Aix-en-Provence, on 23 September 1951.

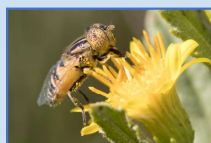
While most of the species recorded in the Bouches-du-Rhône are widely distributed in France, three of them were known only in the northern half of France or less, and thus were not expected to occur in the Bouches-du-Rhône: *Eristalis abusiva*, *Neosciasia interrupta* and *Lejops vittatus*, although the latter species occurs in Italy. All three species are locally rare, with less than 5 specimens known from Bouches-du-Rhône.

15 species are rare in France, with 5 departments or less where their presence is known: *Callieria macquartii*, *Ceriana vespiformis*, *Eristalis megacephalus*, *Eumerus barbarus*, *Eumerus nudus*, *Ferdinandea fumipennis*, *Lejops vittatus*, *Merodon legionensis*, *Paragus ollenicus*, *Paragus strigatus*, *Paragus vandergooti*, *Parhelophilus crococroronatus*, *Pelecocera garrigae*, *Sphaerophoria loewi*, *Syrphia flaviventris*.

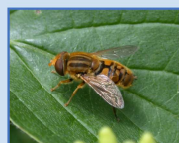
22 species are known only from Mediterranean departments: *Ceriana vespiformis*, *Cheilosia brunneipennis*, *Claussenia hispanica*, *Eristalis megacephalus*, *Eristalis taeniops*, *Eumerus barbarus*, *Eumerus nudus*, *Eupeodes nuba*, *Ferdinandea aurea*, *Ferdinandea fumipennis*, *Merodon confusus*, *Merodon elegans*, *Merodon geniculatus*, *Merodon legionensis*, *Milesia semilicifera*, *Paragus ollenicus*, *Paragus strigatus*, *Paragus vandergooti*, *Parhelophilus crococroronatus*, *Pelecocera garrigae*, *Spilomyia digitata*, *Syrphia flaviventris*.

Expected species

Nearly all the specialist Mediterranean species of the French Syrphidae fauna have now been recorded from the Bouches-du-Rhône. The species from this group still expected to occur in the Bouches-du-Rhône are: *Chrysotoxum parmenae*, *Eumerus argyropus*, *Merodon flavicornis*, *Merodon funestus*, *Merodon teruelensis*, *Pelecocera pruinosaculata*. Recently published keys (Speight *et al.*, 2021; Speight & Langlois, 2020; Lair *et al.*, 2022) on these genera should help in the search for these species. As several habitats present in the department have hardly been studied, such as the old-grown forests of the north of the department, where additional species, such as *Mallota dusmeti* and *Psilota atra* might be found.



Eristalis megacephalus occurs at a few marshland sites where imagines are found mainly in October.



Parhelophilus crococroronatus is known from only one site in Bouches-du-Rhône department, where it is regularly recorded since 2010.



Pelecocera garrigae Lair & Nève, 2022
was recently described (Lair *et al.* 2022)

Confirmed species

N°	Species	Museum Specimens <1992	Modern Specimens >2000	N°	Species	Museum Specimens <1992	Modern Specimens >2000	N°	Species	Museum Specimens <1992	Modern Specimens >2000
1	<i>Anasimyia contracta</i>	0	16	47	<i>Eristalis similis</i> *	0	23	94	<i>Neosciasia interrupta</i>	0	4
2	<i>Baccha elongata</i>	1	0	48	<i>Eristalis tenax</i> *	8	79	95	<i>Neosciasia podagrica</i> *	5	27
3	<i>Brachyopa scutellaris</i>	0	1	49	<i>Eumerus amoenus</i>	1	1	96	<i>Neosciasia tenor</i>	0	1
4	<i>Brachypalpus lentus</i>	1	0	50	<i>Eumerus barbarus</i>	1	0	97	<i>Neocnemon brevidens</i> *	0	0
5	<i>Brachypalpus valgius</i>	0	7	51	<i>Eumerus grandis</i> *	0	1	98	<i>Paragus albifrons</i>	0	8
6	<i>Caliprobola speciosa</i>	1	0	52	<i>Eumerus hungaricus</i>	1	0	99	<i>Paragus bicolor</i> *	2	28
7	<i>Callicera macquartii</i>	1	0	53	<i>Eumerus nudus</i>	2	0	100	<i>Paragus haemorrhous</i> *	1	80
8	<i>Callicera spinolae</i>	1	0	54	<i>Eumerus ornatus</i>	1	0	101	<i>Paragus ollenicus</i>	0	1
9	<i>Ceriana conopsoidea</i>	1	1	55	<i>Eumerus sogdianus</i>	0	30	102	<i>Paragus pecciolli</i> *	0	9
10	<i>Ceriana vespiformis</i>	1	2	56	<i>Eumerus tricolor</i>	1	0	103	<i>Paragus quadrifasciatus</i> *	1	13
11	<i>Chalcosyrphus nemorum</i>	0	54	57	<i>Eupeodes bucculatus</i>	1	0	104	<i>Paragus strigatus</i>	0	3
12	<i>Cheilosia albipila</i>	1	0	58	<i>Eupeodes corollae</i>	8	3458	105	<i>Paragus tibialis</i> *	1	56
13	<i>Cheilosia albitalis</i>	1	0	59	<i>Eupeodes latifasciatus</i>	1	66	106	<i>Paragus vandergooti</i> *	0	0
14	<i>Cheilosia latifrons</i>	1	4	60	<i>Eupeodes lucasi</i>	0	6	107	<i>Parhelophilus versicolor</i>	0	114
15	<i>Cheilosia grossa</i> *	0	2	61	<i>Eupeodes luniger</i>	0	33	108	<i>Parhelophilus crococroronatus</i>	0	37
16	<i>Cheilosia impressa</i> *	1	0	62	<i>Eupeodes nuba</i>	0	10	109	<i>Pelecocera garrigae</i>	0	5
17	<i>Cheilosia latifrons</i>	1	15	63	<i>Ferdinandea aurea</i>	1	0	110	<i>Pipiza festiva</i>	10	2
18	<i>Cheilosia mutabilis</i>	0	1	64	<i>Ferdinandea cuprea</i>	5	1	111	<i>Pipizella maculipennis</i> *	0	0
19	<i>Cheilosia pagana</i> *	1	0	65	<i>Ferdinandea fumipennis</i>	0	2	112	<i>Pipizella viduata</i>	6	0
20	<i>Cheilosia proxima</i> *	0	1	66	<i>Helophilus pendulus</i>	2	149	113	<i>Platycyrtus albitarsus</i>	0	1
21	<i>Cheilosia ranunculi</i>	8	1	67	<i>Helophilus trivittatus</i> *	9	292	114	<i>Platycyrtus ambiguus</i>	1	0
22	<i>Cheilosia scutellata</i>	2	49	68	<i>Heringia heringi</i> *	5	7	115	<i>Platycyrtus fulviventris</i> *	0	25
23	<i>Cheilosia soror</i> *	6	5	69	<i>Lapposyrphus lapponicus</i>	0	2	116	<i>Platycyrtus occultus</i>	0	1
24	<i>Cheilosia urbana</i> *	1	2	70	<i>Lejogaster tarsata</i>	0	9	117	<i>Platycyrtus scutatus</i>	1	0
25	<i>Chrysotoxum bicinctum</i>	2	0	71	<i>Lejops vittatus</i>	0	1	118	<i>Riponnensia splendens</i>	0	9
26	<i>Chrysotoxum cautum</i> *	4	33	72	<i>Melangyna umbellatarum</i>	0	2	119	<i>Scaeva dignata</i>	3	4
27	<i>Chrysotoxum elegans</i>	0	2	73	<i>Melanogaster nuda</i>	0	4	120	<i>Scaeva pyrastris</i> *	4	39
-	<i>Chrysotoxum intermedium</i>	0	5	74	<i>Melanostoma mellinum</i>	9	560	121	<i>Scaeva selenetica</i>	0	1
28	<i>Chrysotoxum intermedium A</i>	0	8	75	<i>Melanostoma scalare</i>	5	57	122	<i>Sphaerophoria loewi</i> *	0	14
29	<i>Chrysotoxum intermedium B</i>	21	21	76	<i>Meliscaeva auricollis</i> *	9	72	123	<i>Sphaerophoria rueppelli</i> *	1	136
30	<i>Chrysotoxum vernale</i>	0	3	77	<i>Meliscaeva cinctella</i>	0	8	124	<i>Sphaerophoria scripta</i> *	7	1785
31	<i>Claussenia hispanica</i> *	0	2	78	<i>Merodon albifrons</i> *	12	2	125	<i>Spilomyia digitata</i>	8	0
32	<i>Criorhina floccosa</i>	2	0	79	<i>Merodon avidus</i>	11	15	126	<i>Spilomyia saltum</i>	1	0
33	<i>Criorhina ranunculi</i>	0	1	80	<i>Merodon clavipes</i> *	23	3	127	<i>Syrphia flaviventris</i> *	0	6
34	<i>Dasyrphus albostrigatus</i> *	3	6	81	<i>Merodon confusus</i>	0	3	128	<i>Syrphia pipiens</i>	5	38
35	<i>Didea fasciata</i>	0	1	82	<i>Merodon equestris</i> *	3	1	129	<i>Syrphus ribesii</i>	5	11
36	<i>Epistrophe eligans</i>	10	28	83	<i>Merodon femoratus</i> *	1	0	130	<i>Syrphus vitripennis</i>	6	9
37	<i>Epistrophe nitidicollis</i>	3	17	84	<i>Merodon geniculatus</i>	0	1	131	<i>Tropidia fasciata</i>	0	2
38	<i>Episyrphus balteatus</i>	11	492	85	<i>Merodon legionensis</i>	1	0	132	<i>Tropidia scita</i>	1	38
39	<i>Eristalis aeneus</i> *	13	87	86	<i>Merodon nigratarsis</i>	1	1	133	<i>Volucella inanis</i>	2	2
40	<i>Eristalis megacephalus</i> *	0	15	87	<i>Merodon trochantericus</i>	0	1	134	<i>Volucella inflata</i> *	0	1
41	<i>Eristalis sepulchralis</i> *	6	247	88	<i>Mesembrius peregrinus</i> *	0	949	135	<i>Volucella zonaria</i>	7	7
42	<i>Eristalis taeniops</i>	7	8	89	<i>Microdon devius</i>	0	1	136	<i>Xanthandrus comtus</i>	0	7
43	<i>Eristalis abusiva</i>	0	2	90	<i>Microdon myrmicae</i>	0	4	137	<i>Xanthogramma citrofasciatum</i>	1	4
44	<i>Eristalis arbustorum</i> *	7	48	91	<i>Milesia crabroniformis</i>	9	1	138	<i>Xanthogramma dives</i>	6	29
45	<i>Eristalis intricaria</i>	1	16	92	<i>Milesia semilicifera</i> *	19	0	139	<i>Xanthogramma pedisequum</i>	2	12
46	<i>Eristalis pertinax</i>	0	8	93	<i>Myiophora florea</i>	6	43	140	<i>Xylota segnis</i>	3	3

Comments

Microdon myrmicae was identified at a site where its host ant *Myrmica ruginodis* is present, and *Formica lemani*, the host ant of *M. mutabilis*, is absent (Solère *et al.*, 2022).

Neocnemon brevidens : 1 male [1991, det Doczkal] (Speight, 1994)

Paragus vandergooti [det. C. Claussen] and *Pipizella maculipennis* were mentioned only by Bausenwein (1993)

Unconfirmed or dubious records

Species	Comments
<i>Cheilosia nigripes</i> *	Dubious data : « Marseille » (Séguy, 1961)
<i>Cheilosia vulpina</i> *	Dubious data : « Marseille (Abeille de Perrin) » (Séguy, 1961)
<i>Eristalis horticola</i> *	Erroneous data (Solère <i>et al.</i> 2022)
<i>Eumerus excisus</i> *	Speight <i>et al.</i> 1998 : dubious taxon status, not in recent lists
<i>Mallota cimbiciformis</i> *	Unconfirmed data : « Marseille (Abeille de Perrin) » (Séguy, 1961)
<i>Microdon analis</i> *	Data in Speight <i>et al.</i> (2018) not traced
<i>Paragus cinctus</i> *	Unconfirmed data : « Marseille » (Séguy, 1961)
<i>Temnostoma bombylans</i> *	Data in Speight <i>et al.</i> (2018) not traced

* : Species mapped in Bouches-du-Rhône by Speight *et al.* 2018

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