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A CHECKLIST OF THE WATER MITES OF FRANCE (ACARI: HYDRACHNIDIA)

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ABSTRACT — A review is given of all species reported from France. In total, 420 species and seven subspecies have been found in France. The following synonyms are established: *Atractides vandeli* Angelier, Decamps & Rey as a synonym of *A. phreaticus* Motaş & Tanasachi, *Atractides fonticolus gallicus* Angelier, Decamps & Rey as a synonym of *A. spinipes* Koch and *Barbaxonella pilosa* Angelier, Decamps & Rey as a synonym of *B. angulata* (K. Viets). The following species are reported for the first time: *Atractides orghidani* Motaş & Tanasachi, *Hydrachna goldfeldi* Thor, *Hydrodroma pilosa* Besseling, *Limnesia curvipalpis* Tuzovskij, *Limnesia undulatoides* Davids, *Piona ambigua* (Piersig), *Forelia curvipalpis* K. Viets, *Mideopsis roztoczensis* Biesiadka & Kowalik, *Arrenurus octagonus* Halbert and *Arrenurus tubulator* (Müller). Moreover, *Arrenurus affinis* Koenike is reported for the first time with certainty. For each species, all references are given which contain geographical information about their occurrence in France. Numerous new records are given, especially of species from standing waters.

KEYWORDS — Acari; Hydrachnidia; France; checklist; distribution

INTRODUCTION

Research on water mites from France started as early as the end of the 18th century and the beginning of the 19th century with publications of Latreille (1762-1833), followed later on by publications of A-L.D. Dugès (1797-1838). The most important publications of Latreille were published in 1796, 1802-1805, 1806-1809 and 1810, the most important publications of Dugès were published 1833 and 1834a,b. Later on, Gervais (1844) published a review of the known water mites, although we do not know if the cited species are from France or refer just a general species list. However, all these publications were not very helpful from a biogeographical point of view, as usually no locations were

mentioned in these papers. Although a few papers were published during the 19th century, it was not before the end of this century that Moniez (1852-1936) and Barrois (1857-1920) published the first papers entirely dedicated to the study of water mites. Barrois & Moniez (1887) published their catalogue of the water mites of northern France, which can be considered as of one of the first checklists. Unfortunately, many of their new species must be considered nowadays as *species incertae*.

In the first half of the 20th century France knew two acarologists dedicated to the study of water mites. Motaş (1891-1980), born in Rumania, worked from 1925-1928 in Grenoble, resulting in a large number of publications on the water mites of the French Alps. In his most important publications

he summarized all data on French water mites thus far (Motaş 1928f, 1928g). However, Migot (1926b) was the first author to publish a complete review of the water mite of France. Unfortunately for science, he became a monk in 1930. Also C. Angelier (1897-1951) studied water mites in the beginning of the 20th century. Many of his studies were made in the French Pyrénées, although other regions of France were studied as well, although to a much lesser extent. His son, E. Angelier succeeded his father, and published his first publication halfway the 20th century, many more followed in the second half of that century. Like his father, E. Angelier studied mostly water mites in the French Pyrénées and Corsica. Cassagne-Méjean studied mostly water mites of the genus *Arrenurus*, resulting in her thesis published in 1966 (Cassagne-Méjean 1966a). Santucci studied the water mites of Corsica, resulting in papers published between 1965-1977.

During the 20th century more authors published studies on water mites, usually as part of a study of the invertebrate water fauna. Examples of these are Vandel (1919), Hubault (1927), Schodduyn (1904, 1923 and others) and Vaillant (1955).

We can conclude that the water mite fauna of the Pyrénées, the French Alps and Corsica is relatively well known. The rheophilic water mite fauna of the remaining parts of France is poorly known. The water mite fauna of standing waters in France is very poorly known, with an exception of the genus *Arrenurus* in southern France.

MATERIAL AND METHODS

All publications to which the authors had access, and which contain data on the distribution of water mites in France, are included in the systematic part of this paper. Repetitions of records in other publications (e.g. Salgues 1932) are not included. For each species the French departments are listed where the species has been reported, except for Corsica, where no departments are mentioned. Motaş (1928f) published the localities of Hermann (1804), Dugès (1834a,b) and Thor (1903d), respectively Bas-Rhin, Hérault and Paris. However, *Piona conglobata* and *Arrenurus caudatus* (= *buccinator*) were not men-

tioned by Thor (1903d) as stated by Motaş (1928f). We assumed that when Motaş (1928f) mentioned for occurrence the Dauphiné, it concerns the department Isère. Vandel (1919a) reported species from the Jura, and it is assumed that all localities are located in the department of Doubs. E. Angelier (1954b,c,d) published three papers on the water mites of Corsica. These results were later on repeated in a supplement of *Vie & Milieu* (E. Angelier 1959,a,b,c), and only the latter paper is included in the systematic part. Species lists without a clear geographical indication are in general not included (e.g. Walckenaer 1802, Girod 1889). For each species the first page in a publication is mentioned (or the first page of the systematic part), unless it concerns a new species description. In that case the first page of the species description is listed. In a few cases, we were not able to ascertain the first page number (e.g. Schachter 1950). *Species incertae* are not included in this paper, they are listed in Table 1. For rare species, and also for more common species of standing waters, new records are given as male/female/deutonymph or adult/deutonymph. The coordinates of locations collected by H. van der Hammen and H. Smit have been ascertained with Google Earth, and are in some cases by approximation.

A few locations in the literature are not very exact, e.g. "between Bordeaux and Angoulême" (Lundblad 1956a, p. 7). In such cases an arbitrary department has been chosen. A question mark before or after a name means that the assignment is uncertain. The spelling of some author names in the literature varies, e.g. Motas/Motaş or Cassagne-Mejean/Cassagne-Méjean. We choose to use only one name in the systematic part, but use the original spelling in the references. The names of the species are in accordance with the most recent literature, e.g. for Hydryphantidae Gerecke (1996a,b) and Di Sabatino et al. 2009 and 2010, for *Atractides* Gerecke (2003) and for *Lebertia* Gerecke (2009). Sequence of the papers in the references chapter is according to K. Viets (1956b) and K.O. Viets (1987). Abbreviations used: MNHN Muséum national d'Histoire naturelle, Paris; alt. altitude; a.s.l. above sea level.

Finally, we want to underline that this checklist

TABLE 1: List of *species incertae* published for France.

Species – Reference
<i>Arrenurus abruptus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus angulifer</i> Viets, 1930 – see Smit <i>et al.</i> 2000
<i>Arrenurus anomalus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus campanulatus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus curvilaminatus</i> Viets, 1930 – see Smit <i>et al.</i> 2000
<i>Arrenurus decurtator</i> Moniez, 1889 – see K. Viets 1956
<i>Arrenurus dissimilis</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus emarginator</i> (Müller, 1776) – see K. Viets 1956
<i>Arrenurus incisus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus notabilis</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus pulchellus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus regulus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus spectabilis</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus spissus</i> Barrois & Moniez, 1887 – see K. Viets 1956
<i>Arrenurus viridana</i> (Laboulbène, 1851) – see K. Viets 1956
<i>Arrenurus viridis</i> Dugès, 1834 – see K. Viets 1956
<i>Atractides nondilatatus</i> (Sokolov, 1936) – see Gerecke 2003
<i>Eylais akmolinski gracilipalpis</i> Walter, 1927 – see Viets 1956
<i>Forelia ahumberti</i> Haller, 1882 – see K. Viets 1956
<i>Hydrachna georgei</i> Soar, 1908 – see Gledhill and Viets 1976
<i>Hydrachna</i> (= <i>Piona</i>) <i>lunipes</i> Hermann, 1804 – see K. Viets 1956
<i>Hydrodroma mendax</i> (A.-L.D. Dugès, 1834) – see K. Viets 1956
<i>Hygrobates paucidentis</i> Walter, 1926 – see Gerecke 1991a
<i>Lebertia cylindrata</i> Bader, 1955 (cited as <i>L. cylindrata</i> Walter, 1927) – see Gerecke 2009
<i>Lebertia monardi</i> Migot, 1926 – see Gerecke in press
<i>Lebertia papillosa</i> Piersig, 1898 – see K. Viets 1956a
<i>Lebertia pulchella</i> K. Viets, 1925 – see Gerecke 2009
<i>Lebertia pyrenaica</i> Migot, 1926 – see Gerecke 2009
<i>Lebertia rugosa</i> Piersig, 1897 – see K. Viets 1956a
<i>Lebertia saxonica</i> Thor, 1911 – see Gerecke 2009
<i>Lebertia walteri</i> Thor, 1906 – see Gerecke 2009
<i>Litarachna incerta</i> Walter, 1925 – K. Viets 1956a
<i>Monatractides minutirostris</i> (E. Angelier, 1954) – see Gerecke and Di Sabatino 1996
<i>Nesaea longicornis</i> (Müller, 1776) – see Viets 1956
<i>Nesaea phalerata</i> (Koch, 1836) – see Viets 1956
<i>Oxus halophilus</i> E. Angelier, 1947 – see Di Sabatino <i>et al.</i> 2009
<i>Piona minuta</i> (Koch, 1836) – see Viets 1956
<i>Protzia larrieui</i> Motaş & Şoarec, 1939 – see Gerecke 1996a
<i>Sperchon compactilis depressus</i> C. Angelier, 1950 – this study
<i>Sperchon ornatus</i> Halbnert, 1944 – Di Sabatino <i>et al.</i> 2009
<i>Stygothrombium gallicum</i> André, 1949 – see Davids <i>et al.</i> 2006
<i>Stygothrombium gallicum delphinense</i> André, 1949 – see Davids <i>et al.</i> 2006
<i>Torrenticola maglioi</i> (Koenike, 1908) – Di Sabatino <i>et al.</i> 2009
<i>Torrenticola procerivalvata</i> K. Viets, 1952 – Di Sabatino <i>et al.</i> 2009

represents the state of the art, as most species listed here, especially the old records, could not be examined.

SYSTEMATICS

Family Stygothrombiidae Mullen & Grandjean, 1980

Stygothrombium angelieri André, 1949

Stygothrombium Angelieri André, 1949: 685.

Distribution in France: Pyrénées (Ariège).

Stygothrombium chappuisi Walter, 1947

Stygothrombium chappuisi Walter, 1947: Santucci 1977: 84.

Distribution in France: Corsica.

Stygothrombium minor André, 1949

Stygothrombium Angelieri minor André, 1949: 688.

Distribution in France: Pyrénées (Pyrénées-Atlantiques).

Family Hydrovolziidae

Hydrovolzia cancellata Walter, 1906

Hydrovolzia cancellata Walter, 1906: Walter & Motaş 1927: 68; Motaş 1926b: 410, 1927b: 1, 1928e: 4, 1928f: 120, Lundblad 1956a: 2; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Hydrovolzia oscensis K. Viets, 1930: K. Viets 1954c: 307 (?); Vaillant 1955: 194; E. Angelier 1959: 15.

Distribution in France: Corsica, Gard, Isère, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques).

Hydrovolzia placophora (Monti, 1905)

Hydrovolzia placophora (Monti, 1905): Walter 1922c: 240; Hubault 1927: 87; Motaş 1928e: 5, 1928f: 119; Schwoerbel 1959a: 18; Santucci 1971: 82; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Distribution in France: Corsica, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques), Hautes-Alpes, Haute-Savoie, Savoie, Vosges.

Family Acherontacaridae Cook, 1967

Acherontacarus nicoleiana Valdecasas, Atheau & Boutin, 2005

Acherontacarus nicoleiana Valdecasas, Atheau & Boutin, 2005: 3138.

Distribution in France: Pyrénées-Orientales.

Acherontacarus rutilans E. Angelier, 1951

Acherontacarus rutilans E. Angelier, 1951b: 508, 1953b: 56, 1959: 15, 1959c: 162; Santucci 1975: 15, 1977: 84; Gerecke & Benfatti 2005: 59.

Distribution in France: Corsica.

Acherontacarus vietsi E. Angelier, 1951

Acherontacarus vietsi E. Angelier, 1951b: 508, 1953b: 56, 1959: 15, 1959c: 162; Santucci 1975, 1977: 84: 15.

Distribution in France: Corsica.

Family Hydrachnidae Leach, 1815

Hydrachna conjecta Koenike, 1895

Hydrachna conjecta Koenike, 1895: Schachter & Conat 1952: 367; Petit & Schachter 1954: 244.

New record. **Indre:** 1/0/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen; 0/1/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Bouches-du-Rhône, Indre.

Hydrachna cruenta Müller, 1776

Hydrachna cruenta Müller, 1776: Latreille 1796: 181; Smit & Van der Hammen 1992: 56; Bouzidi et al. 1984: 115.

Hydrachna scutata Piersig, 1897: Motaş 1927b: 1, 1928f: 124, 1928g: 5.

New record. **Indre:** 1/4/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Indre, Pas-de-Calais, Var.

Hydrachna geographica Muller, 1776

Hydrarachna geographica Müller, 1776: Hermann 1804: 54; A.-L.D. Dugès 1834a: 18, 1834b: 161.

Achlusia dytisci Audouin 1822a: 12.

Distribution in France: Bas-Rhin, Hérault, Seine-et-Marne.

Hydrachna globosa (Geer, 1778)

Hydrachna globosa (Geer, 1778): Hermann 1804: 54; A.-L.D. Dugès 1834a: 18, 1834b: 162 (*H. globulus*); Lucas 1866: X; Barrois & Moniez 1887: 36; Barrois 1889b: 433; Moniez 1889b: 8; Schodduyn 1904: 20, 1923: 143, 1925b: 106, 1926a: 312; Derône 1914: 45; Soudan 1920: 2; Migot 1926b: 109 (laps. *Hydrabachna*); Baldensperger 1926: 153 (laps.: *Hydrachne globosa*); Monard 1928a: 224 (as *Hydrachna globulosa*); C. Angelier 1931: 18; Motaş 1928f: 124; C. Angelier 1951b: 77.

Hydrarachna globosa (Geer, 1778): Motaş 1926b: 410; Motaş & Şoarec 1939a: Appendix.

Hydrachna gallica Thor, 1916: 57; Motaş 1928f: 124.

Hydrachna uniscutata Thor, 1897: C. Angelier 1951b: 77; C. Angelier 1953: 209.

Hydrachna uniscutata paludosa (laps.: *padulosa*) Thon, 1899: Bouzidi et al. 1984: 115.

Distribution in France: Ain, Bas-Rhin, Côte-d'Or, Haut-Rhin, Hérault, Isère, Moselle, Nord, Pas-de-Calais, Pyrénées (Pyrénées-Orientales), Somme, Val-de-Marne, Var.

Hydrachna goldfeldi Thor, 1916

New records. **Indre**: 0/2/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen; 0/4/0, pond near Étang Prieur, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen.

Distribution in France. Indre. New for the fauna of France.

Hydrachna inversa Walter, 1927

Hydrarachna inversa Walter, 1927: In: Walter & Motaş 1927: 74; Motaş 1927b: 2, 1928f: 125, 1928g: 6.

New record. **Var**: 1/0/0, La Giscle near Cogolin, Massif des Maures, 43°16.319 N 6°30.171 E, 5 May 2003, leg. H. Smit.

Distribution in France: Var.

Hydrachna juncta Walter, 1926

Hydrachna juncta Walter, 1926: Motaş 1927b: 1, 1928f: 124, 1928g: 6.

Hydrachna globosa juncta Walter, 1926: Walter & Motaş 1927: 77; Lundblad 1956a: 2.

New records. **Var**: 0/2/0, stream Nible (pools), Massif des Maures, 43°21.392 N 6°27.403 E, 14 May 2005, leg. H. Smit; 0/10/0, stream Mourrefrey, E of Les Mayons, Massif des Maures, 43°19.311 N 6°22.463 E, 15 May 2005, leg. H. Smit.

Distribution in France: Pyrénées-Orientales, Var.

Hydrachna leegei Koenike, 1895

Hydrachna leegei Koenike, 1895: Smit & Van der Hammen 1992: 56.

Distribution in France: Pas-de-Calais.

Hydrachna processifera Koenike, 1903

Hydrachna processifera Koenike, 1903: Motaş 1927b: 1, 1928f: 124; Brumpt 1929: 290.

Distribution in France: Côte-d'Or, Isère, Manche.

Family Limnocharidae Grube, 1859

Limnochaes (Limnochaes) aquatica (Linnaeus, 1758)

Limnochaes aquatica (Linnaeus, 1758): Latreille 1796: 181 (*L. aquaticus*); A.-L. D. Dugès 1834a: 18, 1834b: 159 (*L. aquaticus*); Vandel 1919a: 89; Soudan 1920: 1; Motaş 1926b: 410, 1928e: 28; Motaş & C. Angelier 1927d: 5; Motaş & Şoarec 1939a: Appendix; C. Angelier 1951b: 74; C. Angelier 1953: 209; Schwoerbel 1959a: 17; Champeau 1966: 321; Giudicelli 1970: 122; Santucci 1965: 545, 1971: 82; Smit & Van der Hammen 1992: 55; Davids et al 2005: 51.

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Limnochares holoserica (Geer, 1778): Barrois & Moniez 1887: 36 (laps. = *holeserica*); Schodduyn 1923: 143 (laps. *Limnocharis*), 1925b: 106, 1926a: 312 (laps. *Limnocharis*); Motaş 1928f: 120, 1928g: 9; C. Angelier 1931:16; Chaudonneret 1947: 2.

Trombidium aquaticum (Linnaeus, 1758): Hermann 1804: 35.

New record. **Indre**: 2/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2'E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Bas-Rhin, Bouches-du Rhône, Corsica, Côte-d'Or, Doubs, Hérault, Indre, Isère, Landes, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées-Atlantiques, Savoie, Val-de-Marne, Vosges.

Limnochares (Limnochares) azubi Gerecke, 2005

Limnochares azubi Gerecke, 2005: In Davids et al. 2005: 52.

Distribution in France: Corsica.

Family Eylaidae Leach, 1815

Eylais bisinuosa Piersig, 1899

Eylais bisinuosa Piersig, 1899: Motaş 1928f: 121, 1928g: 6.

Distribution in France: Var.

Eylais degenerata Koenike, 1897

Eylais degenerata Koenike, 1897: Schachter & Conat 1952b: 8.

Distribution in France: Gard.

Eylais discreta Koenike, 1897

Eylais discreta Koenike, 1897: Walter & Motaş 1927: 71; Motaş 1927b: 1, Motaş & C. Angelier 1927d: 5; Motaş 1928f: 121, 1928g: 5.

Distribution in France: Ain, Loire, Savoie.

Eylais extendens (Müller, 1776)

Hydrachna extendens Müller, 1776: De Théis 1832: 61.

Hydrarachna extendens (Müller, 1776): Hermann 1804: 54.

Hydrachna extensa De Théis, 1832: 60.

Eylais extendens (Müller, 1776): Latreille 1796: 182; A.-L. D. Dugès 1834a: 17, 1834b: 156; Barrois & Moniez 1887: 36; Barrois 1889b: 433; Moniez 1889b: 8, 1889e: 7; Soudan 1920: 2; Schodduyn 1926a: 312 (laps. *Eylais*); C. Angelier 1931: 17; Schachter & Conat 1952: 367; Petit & Schachter 1954: 244; E. Angelier 1959: 15.

Eylais soari Piersig, 1899: Soudan 1920: 2; Motaş 1926b: 410, 1928f: 121, 1928g: 5.

Eylais soari valenciana Viets, 1919: Migot 1926b: 104; Motaş & Şoarec 1939a: Appendix; C. Angelier 1951b: 77; C. Angelier 1953: 210; Lundblad 1956a: 2; E. Angelier 1959a: 65.

Eylais undulosa Koenike, 1897: Petit & Schachter 1954: 244.

New record. **Indre**: 0/1/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2'E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Aisne, Aude, Bas-Rhin, Bouches-du-Rhône, Corsica, Hérault, Indre, Isère, Jura, Nord, Pas-de-Calais, Pyrénées (Pyrénées-Orientales), Savoie, Seine-Maritime, Somme, Val-de-Marne.

Eylais hamata Koenike, 1897

Eylais hamata alpina Walter, 1922: Migot 1926b: 103; Walter & Motaş: 1927: 70; Motaş 1928e: 30, 1928f: 122, 1928g: 15; Motaş & Şoarec 1939a: Appendix.

Eylais hamata Koenike, 1897: Schachter & Conat 1952: 367; Petit & Schachter 1954: 244; Vinçon 1987: 240; Smit & Van der Hammen 1992: 56.

Distribution in France: Bouches-du-Rhône, Isère, Pas-de-Calais, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales).

Eylais planipons Walter, 1924

Eylais planipons Walter, 1924: Davids et al. 2005: 60.

New record. **Var:** 2/0/0, stream Nible (pools), Massif des Maures, 43°21.392 N 6°27.403 E, 14 May 2005, leg. H. Smit.

Distribution in France: Pyrénées-Atlantiques, Var.

Eylais rimosa Piersig, 1899

Eylais rimosa Piersig, 1899: Motaş 1927b: 1, 1928f: 121, 1928g: 5; C. Angelier 1931: 17.

Distribution in France: Ain, Isère, Savoie, Val-de-Marne.

Eylais setosa Koenike, 1897

Eylais setosa Koenike, 1897: Smit & Van der Hammen 1992: 56.

New record. **Indre:** 0/2/0, reedland S of Étang de Bellebouche, La Brenne, 46°46.783 N 1°18.641 E, alt. 108 m, 25 May 2005, leg. H. Smit.

Distribution in France: Indre, Pas-de-Calais.

Eylais tantilla Koenike, 1897

Eylais tantilla Koenike, 1897: Smit & Van der Hammen 1992: 55.

Eylais setosa tantilla Koenike, 1897: Bouzidi et al. 1984: 115.

Distribution in France: Pas-de-Calais, Var.

Eylais triarcuata Piersig, 1899

Eylais triarcuata Piersig, 1899: Motaş 1926b: 410, 1927b: 1, 1928f: 121, 1928g: 9.

Distribution in France: Isère, Savoie.

Family Piersigiidae Oudemans, 1902

Parawandesia chappuisi E. Angelier, 1951

Parawandesia chappuisi E. Angelier, 1951b: 508, 1953b: 56, 1959: 15, 1959c: 163.

Distribution in France: Corsica.

Family Hydryphantidae Piersig, 1896

Hydryphantes (Hydryphantes) armentarius Gerecke, 1996

Hydryphantes armentarius Gerecke, 1996: Di Sabatino et al. 2009: 12.

Distribution in France: Hautes-Pyrénées.

Remark. Reported by E. Angelier et al. (1985) as *H. pyrenaicus*, a *nomen nudum*.

Hydryphantes (Hydryphantes) dispar (Schaub, 1888)

Hydryphantes dispar (Schaub, 1888): Motaş 1928f: 129; C. Angelier 1931: 19; Smit & Van der Hammen 1992: 56.

Hydrodroma dispar Schaub, 1888: Barrois 1889b: 433; Moniez 1889d: 5.

Hydryphantes abnormis Koenike, 1908: Derône 1914: 45.

New records. **Pas-de-Calais:** 1/0, shallow pool, Les Landes de Blendecques, 50°42'20.49" N 2°16'32.82" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 19/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 8/1, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre:** 6/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Côte-d'Or, Essonne, Indre, Pas-de-Calais, Pyrénées-Atlantiques, Val-de-Marne.

Hydryphantes (Hydryphantes) placionis Thon, 1899

Hydryphantes placionis Thon, 1899: Motaş 1927b: 2, 1928f: 129, 1928g: 12; C. Angelier 1953: 210; E. Angelier 1959: 16, 1959a: 65; Smit & Van der Hammen 1992: 55.

New record. **Indre:** 2/0, reedland S of Étang de Bellebouche, Le Brenne, 46°46.783 N 1°18.641 E, alt. 108 m a.s.l., 25 May 2005, leg. H. Smit.

Distribution in France: Corsica, Indre, Isère, Pas-de-Calais, Savoie.

Hydryphantes (Hydryphantes) ruber (Geer, 1778)

Hydryphantes ruber (Geer, 1778): Vandel 1919a: 89; Motaş 1928e: 28, 1928f: 128, 1928g: 12; Smit & Van der Hammen 1992: 55.

Hydryphantes ruber prolongatus Thon, 1899: Motaş 1927b: 2, Motaş & C. Angelier 1927d: 5; 1928f: 128.

Hydrodroma rubra (Geer, 1778): Barrois & Moniez 1887: 36; Barrois 1889b: 433; Moniez 1889e: 7.

Hydrarachna impressa Müller, 1781: Hermann 1804: 54.

New records. **Pas-de-Calais:** 1/0, temporary pool, Les Landes de Blendecques, 50°42'11.31" N 2°16'33.37" E, 19 April 1996, leg. H. Smit & H. van der Hammen. **Corsica:** 1/0, marsh near Calvi, 7 May 1997, leg. H. van der Hammen.

Distribution in France: Bas-Rhin, Corsica, Côte-d'Or, Doubs, Isère, Jura, Nord, Pas-de-Calais, Savoie, Seine-Maritime.

Hydryphantes (Polyhydryphantes) flexuosus Koenike, 1885

Hydryphantes flexuosus Koenike, 1885: Schachter 1950; Schachter & Conat 1952: 367, 1952b: 8; Petit & Schachter 1954: 244.

Distribution in France: Bouches-du-Rhône, Gard.

Hydryphantes (Polyhydryphantes) octoporus Koenike, 1896

Hydryphantes octoporus Koenike, 1896: Bouzidi et al. 1984: 115.

Distribution in France: Var.

Georgella helvetica (Haller, 1882)

Hydrodroma helvetica (Haller, 1882): Barrois & Moniez 1887: 36; Barrois 1889b: 433 ; Motaş 1928f: 129.

Distribution in France: Nord, Pas-de-Calais, Savoie.

Georgella koenikei (Maglio, 1906)

Georgella koenikei (Maglio, 1906): E. Angelier 1959: 16, 1959a: 69.

Georgella intermedia Walter, 1927 (homonym of *Hydryphantes intermedius* Daday, 1901, syn. of *G. koenikei*: Di Sabatino et al. 2009): In: Walter & Motaş 1927: 80; Motaş 1927b: 2, 1928f: 129; C. Angelier 1953: 211.

Distribution in France: Corsica, Isère, Savoie.

Trichothyas (Lundbladia) duplicata (K. Viets, 1954)

Trichothyas duplicata (K. Viets, 1954): Gerecke 1996b: 375.

Lundbladia petrophila duplicata K. Viets, 1954c: 305; Vaillant 1956: 194.

Distribution in France: Corsica.

Trichothyas (Lundbladia) petrophila (Michael, 1895)

Lundbladia plumifera C. Angelier, 1949b: 358, 1950c: 232; E. Angelier 1953b: 61, 1959a: 67; Lundblad 1956a: 2; Vaillant 1956: 192; Motaş & C. Angelier 1967: 17; E. Angelier et al. 1985: 30.

Lundbladia petrophila (Michael, 1895): K. Viets 1952c: 245; E. Angelier 1959: 16; E. Angelier et al. 1963: 462.

Trichothyas petrophila (Michael, 1895): M.-L. Angelier 1980: 13.

Distribution in France: Alpes-Maritimes, Corsica, Gard, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Tarn.

Thyopsis cancellata (Protz, 1896)

Thyopsis cancellata (Protz, 1896): Vaillant 1956: 173; Vinçon 1987: 240; Gerecke 1996b: 379.

Distribution in France: Corsica, Puy-de-Dôme, Pyrénées-Atlantiques.

Paninus michaeli Koenike, 1896

Paniscus michaeli Koenike, 1896: Walter 1922c: 241; Hubault 1927: 94; Motaş 1928e: 5; K. Viets 1939a: 2; C. Angelier 1950d: 353; Schwoerbel 1959a: 19; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke 1996b: 380.

Paniscus praealpinus Walter, 1920: Vandel 1920: 55; Migot 1926b: 109; Motaş & Şoarec 1939a: Appendix (laps.: *prealpinus*).

Distribution in France: Corsica, Doubs, Hautes-Alpes, Isère, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Vosges.

Paniscus torrenticolus Piersig, 1898

Paniscus torrenticolus Piersig, 1898: Walter 1907b: 446; Hubault 1927: 94; Motaş 1928f: 140; Schwoerbel 1959a: 15, 1965: 477; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke 1996b: 382.

Paniscus bazettae Monti, 1908: Walter 1922c: 241; Motaş 1928e: 5, 1928f: 140.

Paniscus clypeolatus (Maglio, 1909): Walter & Motaş 1927: 83; Motaş & C. Angelier 1927d: 5; Hubault 1927: 94; Motaş 1928e: 4, 1928f: 140; K. Viets 1951: 285, 1952c: 245; Lundblad 1956a: 2; Vaillant 1956: 153.

Distribution in France: Alpes-Maritimes, Corsica, Haut-Rhin, Haute-Loire, Haute-Savoie, Hautes-Alpes, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées), Isère, Savoie, Vosges.

Panisopsis curvifrons (Walter, 1907)

Panisopsis curvifrons (Walter, 1907): Motaş 1928f: 138; K. Viets 1951d: 285, 1952c: 245; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vaillant 1956: 153; Vinçon 1987: 240.

Thyas curvifrons Walter, 1907: Walter 1922c: 241; Hubault 1927: 90; Motaş 1928e: 5.

Distribution in France: Haute-Savoie, Hautes-Alpes, Isère, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques), Savoie.

Panisopsis setipes (Viets, 1911)

Thyas setipes Viets, 1911: Walter 1922c: 241.

Panisoides setipes (Viets, 1911): Motaş 1928e: 5.

Distribution in France: Hautes-Alpes, Isère.

Panisopsis thori (Walter, 1907)

Panisopsis thori thori (Walter, 1907): Walter 1907b: 446; Motaş & C. Angelier 1927d: 5; Motaş 1928f: 137; Motaş & Şoarec 1939a: Appendix; K. Viets 1951d: 285, Lundblad 1956a: 2; Vaillant 1956: 165; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Thyas thori Walter, 1907: Walter 1907b: 446; Vandel 1922: 170; Motaş 1926b: 411; Migot 1926b: 105; Hubault 1927: 91.

Paniscus thori (Walter, 1907): Motaş 1928e: 4.

Distribution in France: Haute-Loire, Haut-Rhin, Haute-Savoie, Isère, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Vosges.

Parathyas barbiger (Viets, 1908)

Thyas barbiger Viets, 1908: Schwoerbel 1959a: 15; Smit & Van der Hammen 1992: 55.

Thyas barbiger pauciseta Migot, 1926a: 53, 1926b: 105; Motaş 1928f: 133; Motaş & Şoarec 1939a: Appendix; C. Angelier 1950d: 353.

Thyas venusta Koch, 1836: Schodduyn 1926a: 311.

Distribution in France: Isère, Nord, Pas-de-Calais, Pyrénées (Hautes-Pyrénées), Vosges.

Parathyas dirempta (Koenike, 1912)

Thyas dirempta Koenike, 1912: Motaş 1927b: 2, 1928e: 28, 1928f: 137, 1928g: 12; Smit & Van der Hammen 1992: 55.

New record. **Pas-de-Calais**: 1/0, pool, Les Landes de Blendecques, 50°41'55.87" N 2°14'18.23" E, 19 April 1996, leg. H. Smit & H. van der Hammen

Distribution in France: Isère, Pas-de-Calais.

Parathyas pachystoma (Koenike, 1914)

Thyas pachystoma Koenike, 1914: Motaş 1928f: 133.

Distribution in France: Côte-d'Or.

Parathyas palustris (Koenike, 1912)

Thyas palustris (Koenike, 1912): Gerecke 1996b: 396.

Thyas rivalis Koenike, 1912: Schwoerbel 1959a: 18.

Distribution in France: Corsica, Vosges.

Euthyas truncata (Neuman, 1875)

Euthyas truncata (Neuman, 1875): Motaş 1928f: 133 (laps.: *Eutyas truncata*), 1928g: 12; C. Angelier 1953: 210; Smit & Van der Hammen 1992: 55.

Bradybates truncatus Neuman, 1875: Barrois & Moniez 1887: 35.

Thyas truncata (Neuman, 1875): Motaş 1928e: 28.

New record. **Cantal:** 0/0/1, marshy area N of Le Claux, along road D262, 45°11.296 N 2°42.509 E, alt. 958 m, 18 May 2005, leg. H. Smit.

Distribution in France: Cantal, Isère, Jura, Nord, Pas-de-Calais, Savoie.

Partnunia steinmanni Walter, 1906

Partnunia steinmanni Walter, 1906: Migot 1926b: 105; Hubault 1927: 90; Motaş 1928e: 12; Motaş & Blaive 1935c: 178; ; Motaş & Şoarec 1939a: Appendix; C. Angelier 1950d: 352, 1951b: 74; Vaillant 1956: 166; Schwoerbel 1959a: 18.

New record. **Puy-de-Dôme:** 0/1/0, helocrene Ruisseau de Neuffonds, at crossing with road D149, SW of Super-Besse, 45°29.985 N 2°49.960 E, 20 May 2005, leg. H. Smit.

Distribution in France: Isère, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales), Savoie, Vosges.

Partnunia tabernaculata Gerecke & Smit, 1993

Partnunia steinmanni Walter, 1906: Vinçon 1987: 240.

Partnunia tabernaculata Gerecke & Smit, 1993: Gerecke 1996b: 409.

Distribution in France: Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées).

Protzia brevivalpis Maglio, 1909

Calonyx brevivalpis (Maglio, 1909): Motaş 1927b: 1, 1928e: 4, 1928f: 123, 1928g: 32.

Distribution in France: Hautes-Alpes, Isère.

Protzia distincta Walter, 1922

Protzia distincta Walter, 1922: Hubault 1927: 87; Motaş 1928f: 12.

Distribution in France: Savoie.

Protzia eximia (Protz, 1896)

Protzia eximia (Protz, 1896): Vandel 1922: 170; Motaş & C. Angelier 1927d: 5; Motaş 1928e: 4, 1928f: 122; Motaş & Şoarec 1939a: Appendix; Lundblad 1956a: 2; Do 1962: 67; E. Angelier et al. 1963: 464; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

New record. **Cantal:** 0/1/0, hyporheic of Le Mars Rivière, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt 1115 m, 18 May 2005, leg. H. Smit.

Distribution in France: Cantal, Gard, Hérault, Isère, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées, Pyrénées-Orientales), Savoie, Tarn.

Protzia felix Gerecke, 1996

Protzia eximia felix Gerecke, 1996b: 449.

Protzia felix Gerecke, 1999: 145.

Distribution in France: Corsica.

Protzia halberti (Walter, 1920)

Protzia halberti (Walter, 1920): Gerecke 1996a: 309.

Calonyx halberti Walter, 1920: Motaş 1927b: 1, 1928e: 4.

Distribution in France: Isère, Savoie.

Protzia invalvaris Piersig, 1898

Protzia invalvaris Piersig, 1898: Motaş & C. Angelier 1927d: 5; Schwoerbel 1959a: 15, 1965: 477; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke 1996b: 423.

Protzia invalvaris multispina Migot, 1926a: 52, 1926b: 100; Motaş 1928f: 123; Motaş & Şoarec 1939a: Appendix; C. Angelier 1950d: 353.

Protzia walteri pyrenaica Viets, 1939a: 3.

Protzia larieui Motaş & Şoarec 1939a: 2; E. Angelier 1949b: 228; C. Angelier 1951b: 74.

New records. **Cantal:** 1/4/1, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/2/0, Ruisseau de Delbarat, St. Jacques-des-Blats, 45°03.968 N 2°44.641 E, alt. 1350 m a.s.l., 17 May 2005, leg. H. Smit; 0/4/0, Upper course of unnamed creek S of Super-Lioran, 45°04.084 N 2°45.355 E, alt. 1500 m a.s.l., 17 May 2005, leg. H. Smit; 1/0/0, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 18 May 2005, leg. H. Smit; 1/8/5, Le Mars Rivière, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt. 1115 m a.s.l., 18 May 2005, leg. H. Smit. **Gard:** 0/1/1, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit. **Hérault:** 1/0/0, Rivière La Vis at Gornières, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin. **Puy-de-Dôme:** 3/6/1, Ruisseau de Chareire, upstream of Chareire, 45°29.069 N 2°46.947 E, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit; 0/1/0, Couze de Chaudfour Rivière, upstream of Vossière, 45°33.219 N 2°52.505 E, alt. 977 m a.s.l., 20 May 2005, leg. H. Smit; 1/10/1, La Planchette at Jassat, 45°33.716 N 2°56.339 E, alt. 894 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Cantal, Gard, Gers, Haut-Rhin, Hérault, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées, Pyrénées-Orientales).

Protzia lata Walter, 1906

Protzia lata Walter, 1906: Gerecke 1996b: 430.

Calonyx brevipalpis Maglio, 1909: E. Angelier 1959a: 65; E. Angelier 1959: 15; Giudicelli 1970: 112;

Santucci 1971: 82 (? - all these records could refer also to *P. pycnica*, see Gerecke 1996b).

Distribution in France: Corsica.

Protzia musculosa Gerecke, 1996

Protzia musculosa Gerecke, 1996b: 443.

Calonyx rotundus (Walter, 1908): E. Angelier 1959: 15, 1959a: 66 (see Gerecke 1996b).

Distribution in France: Corsica.

Protzia octopora Lundblad, 1954

Protzia octopora Lundblad, 1954: Santucci 1971: 82; Gerecke 1996b: 421.

Distribution in France: Corsica.

Protzia pachygnatha K. Viets, 1930

Protzia pachygnatha K. Viets, 1930: Gerecke 1999: 136.

Distribution in France: Pyrénées (Pyrénées-Atlantiques, Aude).

Protzia pycnica Gerecke, 1996

Protzia pycnica Gerecke, 1996b: 437.

Distribution in France: Corsica.

Protzia rotunda Walter, 1908

Protzia rotunda Walter, 1908: M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Calonyx rotundus (Walter, 1908): Motaş & C. Angelier 1927d: 5; Motaş 1928f: 123.

Distribution in France: Isère, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques).

Protzia rugosa Walter, 1918

Protzia rugosa Walter, 1918: Motaş 1927b: 1, 1928e: 4, 1928f: 122, 1928g: 23; Lundblad 1956a: 2.

Protzia invalvaris Piersig, 1898: Motaş 1926b: 411 (erron., see Motaş 1927b).

Distribution in France: Isère, Jura, Savoie, Var.

Protzia squamosa squamosa Walter, 1908

Smit H. and Gerecke R.

Protzia squamosa squamosa Walter, 1908: M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Calonyx squamosus (Walter, 1908): Vandel 1920: 56.

Calonyx intermedius Motaş, 1932a: 63.

Sporadoporus inovalvaris (erron., non Piersig, 1898): Vandel 1919a: 89.

Distribution in France: Doubs, Isère, Pyrénées (Hautes-Pyrénées).

Remarks. According to Gerecke (1996a), the records from the Pyrénées need confirmation.

Wandesia (Wandesia) thori Schechtel, 1912

Wandesia thori Schechtel, 1912: E. Angelier et al. 1985: 30.

Distribution in France: Hautes-Pyrénées.

Wandesia (Pseudowandesia) stygophila Szalay, 1944

Wandesia stygophila Szalay, 1944: E. Angelier 1953b: 56; Picard 1962: 485.

Distribution in France: Meurthe-et-Moselle, Pyrénées-Orientales, Vosges.

Wandesia (Pseudowandesia) vinolenta Gerecke, 1996

Wandesia vinolenta Gerecke, 1996b: 455.

Wandesia stygophila Szalay, 1944: E. Angelier 1959: 15, 1959c: 162.

Distribution in France: Corsica.

Diplodontus scapularis Dugès, 1834

Eupatra scapularis (A.-L.D. Dugès, 1834b): 150; Barrois 1889b: 394; Motaş 1928f: 129, 1928g: 6; Bouzidi et al. 1984: 115.

Distribution in France: Hérault, Pas-de-Calais, Var.

Remark: According to Gerecke (1991a), the specimen reported by Motaş (1928f,g) from Var, possibly belongs to *D. semiperforatus* (Walter, 1925).

Family Hydrodromidae Viets, 1936

Hydrodroma despiciens (Müller, 1776)

Hydrodroma despiciens (Müller, 1776): Petit & De-lamare Deboutteville 1950: 474; C. Angelier 1950a: 5, 1953: 214; Lundblad 1956a: 2; E. Angelier 1959: 16, 1959a: 69; Schwoerbel 1959a: 15; Santucci 1965: 546, 1971: 82; Smit & Van der Hammen 1992: 56.

Diplodontus despiciens (Müller, 1776): Barrois & Moniez 1887: 22; Barrois 1889b: 433; Moniez 1889b: 8; Thor 1903d: 15; Dyé 1905: 5; Vandel 1919a: 90; Soudan 1920: 2; Schodduyn 1923: 143, 1926a: 311; Motaş 1926b: 410, Motaş & C. Angelier 1927d: 5; Motaş 1928e: 28, 1928f: 141, 1928g: 6; C. Angelier 1931: 20; Chaudonneret 1947: 2.

Diplodontus filipes A.-L.D. Dugès, 1834b: 148; Moniez 1889e: 7.

Hydrachna chrysis De Théis, 1832: 58, 1835: 614.

New records. **Indre:** 4/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen; 1/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2'E, 7 July 2000, leg. H. van der Hammen. **Vienne:** 9/0, pool, Réserve naturelle du Pinail, 46°42'N 0°31'E, 8 July 2000, leg. H. van der Hammen; **Haute-Vienne:** 0/14/0, lake, La Chapelle-Montbrandeix, 45°38'35" N 0°51'27" E, 29 April 2002, leg. G. van Ee. **Cantal:** 1/0, Lac Cascades, N of Le Claux, 45°11.228 N 2°42.361 E, alt. 997 m, 18 May 2005, leg. H. Smit.

Distribution in France: Ain, Aisne, Aude, Cantal, Corsica, Côte-d'Or, Doubs, Essonne, Haute-Vienne, Hérault, Indre, Isère, Jura, Loire, Nord, Paris, Pas-de-Calais, Pyrénées-Orientales, Savoie, Seine-Maritime, Somme, Val-de-Marne, Var, Vienne, Vosges, Yvelines.

Hydrodroma pilosa Besseling, 1940

New records. **Pas-de-Calais:** 6/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/0, pool, Les Landes de Blendecques, 50°42'16.59" N 2°16'28.14" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 15/0, pond, Les Landes de

Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 4/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 9/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Landes:** 6/2, Étang Blanc, 27 July 1989, leg. H. van der Hammen. **Indre:** 6/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 40/0, pond near Étang Prieur, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen; 19/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen; 2/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2'E, 7 July 2000, leg. H. van der Hammen; 15/10, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Indre, Landes, Pas-de-Calais. Probably more widespread, as not always separated from *H. despiciens*.

Hydrodroma reinhardi Pešić, 2002

Hydrodroma reinhardi Pešić, 2002: 318.

Distribution in France: Corsica.

Hydrodroma torrenticola (Walter, 1908)

Hydrodroma motasi C. Angelier, 1949a: 85.

Hydrodroma torrenticola (Walter, 1908): Lundblad 1956a: 2; E. Angelier 1953b: 56, 1959: 16, 1959a: 65, 1959c:164; Santucci 1971: 82; Pesic 2002: 323.

New records. **Ardèche:** 1/0, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29-iv-2003, leg. H. Smit; 4/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1-v-2003, leg. H. Smit. **Gard:** 3/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Gard, Pyrénées (Pyrénées-Orientales).

Family Sperchontidae

Sperchon (Sperchon) brevirostris Koenike, 1895

Sperchon brevirostris Koenike, 1895: Vandel 1919a: 90, 1920: 56; Hubault 1927: 88; Motaş & C. Angelier 1927d: 5; Motaş 1928e: 4, 1928f: 126 (laps.: *brevirostris*), 1928g: 30; Motaş & Şoarec 1939a: (Appendix); C. Angelier 1950d: 353; Schwoerbel 1959a: 15; 1965: 479; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

New records. **Doubs:** 1/1/0, Doubs, Mouthe, X-UTM 286520 Y-UTM 5176321, 19 October 2008, leg. Richabun. **Jura:** 0/1/0, Les Rousses, X-UTM 272141 Y-UTM 5152462, 17 October 2008, leg. Richabun.

Distribution in France: Doubs, Haut-Rhin, Haute-Loire, Haute-Savoie, Isère, Jura, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques), Savoie, Vosges.

Sperchon (Sperchon) glandulosus Koenike, 1886

Sperchon glandulosus Koenike, 1886: Walter 1907b: 446; Vandel 1919a: 90, 1920: 56; Walter 1922c: 240; Hubault 1927: 87; Motaş & C. Angelier 1927d: 5; Motaş 1928e: 4, 1928f: 125, 1928g: 25; Motaş & Şoarec 1939a: 1; C. Angelier 1950d: 353; Lundblad 1956a: 2; E. Angelier 1959: 16, 1959a: 69; Schwoerbel 1959a: 15; Picard 1962: 485; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Gerecke 1991a: 75; Smit & Van der Hammen 1992: 55.

New record. **Ardèche :** 9/5, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Doubs, Haut-Rhin, Haute-Loire, Haute-Savoie, Hautes-Alpes, Isère, Jura, Meurthe-et-Moselle, Moselle, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées, Pyrénées-Orientales), Savoie, Vosges.

Sperchon (Sperchon) longirostris Koenike, 1895

Sperchon longirostris Koenike, 1895: Hubault 1927: 89; Motaş 1928e: 5, 1928f: 126; E. Angelier 1949b: 229, 1953b; Vinçon 1987: 240.

Smit H. and Gerecke R.

Distribution in France: Haute-Savoie, Isère, Pyrénées (Pyrénées-Orientales, Pyrénées-Atlantiques), Savoie.

Sperchon (Sperchon) longissimus Viets, 1920

Sperchon longissimus Viets, 1920: Lundblad 1956a: 2.

Distribution in France: Isère.

Sperchon (Sperchon) mutilus Koenike, 1895

Sperchon mutilus Koenike, 1895: Walter 1922c: 241; Hubault 1927: 89; Motaş 1928e: 5, 1928f: 126; Schwoerbel 1959a: 17.

Sperchon montisrosae Koenike & Monti, 1910: Motaş 1927b: 2, 1928e: 5, 1928f: 126.

Distribution in France: Haute-Savoie, Hautes-Alpes, Isère, Savoie, Vosges.

Sperchon (Sperchon) resupinus Viets, 1922

Sperchon resupinus Viets, 1922: C. Angelier, 1950c: 234, 1950d: 353; Schwoerbel 1959a: 18.

Distribution in France: Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Vosges.

Sperchon (Sperchon) squamosus Kramer, 1879

Sperchon squamosus Kramer, 1879: Barrois & Moniez 1887: 35; Motaş & C. Angelier 1927d: 12; Motaş 1928e: 3, 1928f: 126, 1928g: 12; K. Viets 1939a: 2; Schwoerbel 1959a: 18; Vinçon 1987: 240; Smit & Van der Hammen 1992: 55.

New records. **Pas-de-Calais**: 5/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Cantal**: 1/0/0, Source du Goul (helocrenes), E of Thiézac, 45°00.739 N 2°43.351 E, alt. 1465 m a.s.l., leg. H. Smit.

Distribution in France: Cantal, Haute-Saône, Isère, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques), Savoie, Vosges.

Sperchon (Sperchon) thienemanni Koenike, 1907

Sperchon glandulosus thienemanni Koenike, 1907: Motaş 1927b: 2, 1928e: 4, 1928f: 125, 1928g: 12; Motaş & C. Angelier 1927d: 5.

Sperchon rugosus Koenike, 1911: E. Angelier 1957.

New records. **Cantal**: 0/1/0, upper course of unnamed creek S of Super-Lioran, 45°04.084 N 2°45.355 E, alt. 1500 m a.s.l., 17 May 2005, leg. H. Smit; 4/5/1, Source du Goul (helocrenes), E of Thiézac, 45°00.739 N 2°43.351 E, alt. 1465 m a.s.l., leg. H. Smit. **Doubs**: 6/1/0, Doubs, Mouthe, X-UTM 286520 Y-UTM 5176321, 19 October 2008, leg. Richabun; 2/0/0, same location, 8 May 2008, leg. Richabun.

Distribution in France: Cantal, Doubs, Essonne, Isère, Haute-Loire, Puy-de-Dôme.

Sperchon (Sperchon) turgidus K. Viets, 1914

Sperchon turgidus K. Viets, 1914: E. Angelier 1957: 67.

Distribution in France: Essonne.

Sperchon (Hispidosperchon) clupeiifer Piersig, 1896

Sperchon clupeiifer Piersig, 1896: C. Angelier 1931: 19; K. Viets 1939a: 2, C. Angelier 1950a: 3, 1950d: 353, 1951b: 75; E. Angelier 1949b: 228, 1953b: 61, 1957: 67; Lundblad 1956a: 2; E. Angelier 1957a: 27, 1959: 16, 1959a: 67; Nicolau-Guillaumet 1959: 237; Schwoerbel 1959a: 15, 1965: 477; E. Angelier et al. 1963: 462; Giudicelli 1970: 112; Santucci 1965: 547; 1971: 82; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Sperchon clupeiifer thori Koenike, 1900: Motaş & C. Angelier 1967: 17.

Sperchon elegans Thor, 1898: Thor 1914a: 11.

Sperchon koenikei Walter, 1907: Vandel 1922: 170; Motaş 1928e: 4; 1928f: 127, 1929g: 21; C. Angelier 1931: 19, 1050a: 3; Motaş & Şoarec 1939a: Appendix (laps.: *Spercon*).

New records. **Ardèche**: 0/9/0, La Lande Ruisseau, NW of Chazeaux, 44°36.351 N 4°17.003 E, 30 April 2003, leg. H. Smit. **Puy-de-Dôme**: 1/0, Ruisseau de Chaireire, upstream of Chaireire, 45°29.069

N 2°46.947 E, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Essonne, Gers, Haut-Rhin, Haute-Savoie, Isère, Jura, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées, Ariège), Rhône, Savoie, Tarn, Val-de-Marne, Vosges.

Sperchon (Hispidosperchon) compactilis Koenike, 1911

Sperchon compactilis depressus C. Angelier, 1950: C. Angelier 1950a: 3.

New record. **Hérault**: 3/3, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Île-de France, Hérault.

Discussion. When Lundblad (1956a) proposed the identity of *S. compactilis* and *S. papillosus*, a change not followed by most later authors, he synonymized also *S. c. depressus* with *S. papillosus*. As the name-giving depression in P-2 is surely an individual misshapening, we accept Lundblad's proposal to not accept this subspecies. Notwithstanding the loss of the holotype, C. Angelier's record can be attributed to *S. compactilis*.

Sperchon (Hispidosperchon) compactilis discrepans K. Viets, 1919

Sperchon compactilis discrepans K. Viets, 1919: E. Angelier 1957: 67.

Distribution in France: Essonne.

Sperchon (Hispidosperchon) denticulatus Koenike, 1895

Sperchon denticulatus Koenike, 1895: Walter 1922c: 240; Hubault 1927: 89; Motaş 1926b: 411, 1928e: 3, 1928f: 127, 1928g: 12; Motaş & Şoarec 1939a: 2; Viets 1939a: 2; C. Angelier 1950d: 353, 1953: 214; E. Angelier 1953f: 46, 1957: 67, 1957a: 25; Lundblad 1956a: 2; Do 1962: 67; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Distribution in France: Alpes-de-Haute-Provence, Corsica, Essonne, Gard, Gers, Haute-Garonne, Hautes-Alpes, Hérault, Isère, Jura, Meurthe-et-Moselle, Pyrénées (Ariège, Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Tarn.

Sperchon (Hispidosperchon) hibernicus Halbert, 1944

Sperchon hibernicus Halbert, 1944: E. Angelier 1959: 16.

Sperchon denticulatus hibernicus Halbert, 1944: E. Angelier 1957a: 25, 1959a: 67; E. Angelier et al. 1963: 462; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 82; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Ariège, Tarn, Corsica, Haute-Garonne, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées, Pyrénées-Orientales).

Sperchon (Hispidosperchon) hispidus Koenike, 1895

Sperchon hispidus Koenike, 1895: Schwoerbel 1959a: 16; Vinçon 1987: 240.

Sperchon plumifer Thor, 1902: Hubault 1927: 88; Motaş 1927b: 2, 1928e: 4, 1928f: 128, 1928g: 23; E. Angelier 1949b: 228, 1953b: 56, 1957: 67, 1957a: 27, 1959: 16, 1959c: 164; C. Angelier 1951b: 75; E. Angelier et al. 1963: 464; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Hispidosperchon hispidus (Koenike, 1895): Hubault 1927: 89.

New records. **Ardèche**: 0/2/0, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit; 1/0, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit; 0/1/0, Le Lignon Rivière, upstream of La Souche, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit; 9/1, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°3.364 E, 1 May 2003, leg. H. Smit; 2/0, La Drobie Rivière, upstream of Sablières, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit. **Puy-de-Dôme**: 4/1, Ruisseau de Chaireire, upstream of Chaireire, 45°29.069 N 2°46.947 E, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Haut-Rhin, Haute-Savoie, Isère, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Tarn, Vosges.

Sperchon (Hispidosperchon) papillosus Thor, 1901

Sperchon papillosus papillosus Thor, 1901: C. Angelier 1950c: 236, 1951b: 75; Lundblad 1956a: 2; E. Angelier 1957a: 27; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Pyrénées (Ariège, Pyrénées-Orientales, Pyrénées-Atlantiques, Hautes-Pyrénées).

Sperchon (Hispidosperchon) setiger Thor, 1898

Sperchon setiger Thor, 1898: Motaş 1928f: 127, 1928g: 21; E. Angelier 1953b: 56, 1959: 16, 1959a: 65; Lundblad 1956a: 2; E. Angelier et al. 1963: 462; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 82; Prevot et al. 1983: 27; Smit & Van der Hammen 1992: 55.

Sperchon meridianus E. Angelier, 1954c: 90; E. Angelier 1959: 16, 1959a: 66, 1959c: 164.

Distribution in France: Corsica, Isère, Pas-de-Calais, Savoie, Tarn.

Sperchon (Hispidosperchon) vaginosus Thor, 1902

Sperchon vaginosus Thor, 1902: Motaş 1927b: 2, 1928e: 3, 1928f: 127, 1928g: 21; C. Angelier 1931: 18; Viets 1939a: 2.

Distribution in France: Hérault, Isère, Pyrénées-Atlantiques, Savoie, Val-de-Marne.

Sperchon (Hispidosperchon) violaceus Walter, 1944

Sperchon denticulatus violaceus Walter, 1944: E. Angelier 1957a: 25.

New Records. **Jura**: 1/4/0, Les Rousses, X-UTM 272141 Y-UTM 5152462, 17 October 2008, leg. Rich-abun; 0/1/0, same location, 10 May 2008, leg. Rich-abun.

Distribution in France: Ariège, Haute-Garonne, Jura, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques).

Sperchonopsis verrucosa (Protz, 1896)

Sperchonopsis verrucosa (Protz, 1896): C. Angelier 1950d: 353, 1951b: 75; Lundblad 1956a: 2; E. Angelier 1957a: 27, 1959: 16, 1959a: 70; Schwoerbel 1959a: 16; E. Angelier et al. 1963: 462; Santucci 1971: 82; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Pseudosperchon verrucosus (Protz, 1896): Walter 1922c: 240; Hubault 1927: 90; Motaş 1928e: 4, 1928f: 128, 1928g: 23.

New records. **Ardèche**: 1/0, La Drobie Rivière, upstream of Sablières, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit. **Hérault**: 1/0, Rivière La Vis at Gornières, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ardèche, Corsica, Gers, Haut-Rhin, Hautes-Alpes, Hérault, Isère, Meurthe-et-Moselle, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques, Ariège), Savoie, Var, Vosges, Tarn.

Family Teutoniidae Koenike, 1910

Teutonia cometes (Koch, 1837)

Teutonia cometes (Koch, 1837): C. Angelier 1950d: 353, 1951b: 77; Lundblad 1956a: 2; E. Angelier 1957a: 26, 1959: 16, 1959a: 66; Schwoerbel 1959a: 15; E. Angelier et al. 1963: 463; Santucci 1965: 546, 1971: 82.

Teutonia primaria Koenike, 1889: Derône 1914: 46, 1915: 560; Motaş 1926b: 411, 1928e: 3, 1928f: 168, 1928g: 7; Motaş & C. Angelier 1927d: 12.

New records. **Ardèche**: 1/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°3.364 E, 1 May 2003, leg. H. Smit. **Var**: 29/9, stream V'on des Vaudrèche, Massif des Maures, 43°14.657 N 6°20.267 E, 5 May 2003, leg. H. Smit; 3/7, unnamed stream, Massif des Maures, 43°15.312 N, 6°23.954 E, 5 May 2003, leg. H. Smit; 6/8/0, small unnamed stream a crossing with road D14, Massif des Maures, 43°14.637 N 6°22.089 E, 14 May 2005, leg. H. Smit; 2/3/0, stream Mourrefrey, E of Les Mayons, Massif des Maures, 43°19.311 N 6°22.463 E, 15 May 2005, leg. H. Smit. **Hérault**: 6/6/0, Source of La Buèges, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit

& P. Martin; 7/1/3, source of La Buèges, tributary of pool, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit & P. Martin; 0/2/0, Rivière La Vis at Gorniès, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Ardèche, Corsica, Côte-d'Or, Gironde, Haute-Saône, Hérault, Isère, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées, Pyrénées-Orientales, Ariège), Savoie, Tarn, Var, Vosges.

Family Anisitsiellidae Koenike, 1910

Bandakia concreta Thor, 1913

Bandakia concreta Thor, 1913: Motaş 1928f: 146, 1928g: 30; K. Viets 1939a: 2; Schwoerbel 1959a: 19, 1965: 477; Vinçon 1987: 240; Gerecke 1994: 268.

Distribution in France: Corsica, Haut-Rhin, Isère, Pyrénées (Pyrénées-Atlantiques), Vosges.

Bandakia corsica E. Angelier, 1951

Bandakia corsica E. Angelier, 1951b: 509, 1953b: 57, 1959: 15, 1959c: 161; Santucci 1977: 84; Gerecke 1991b: 140, 1994: 268.

Distribution in France: Corsica.

Bandakia speciosa K. Viets, 1953

Bandakia corsica (erron., non E. Angelier, 1951): Schwoerbel 1965: 477 (Gerecke 1991b).

Distribution in France: Haut-Rhin.

Psammotorrenticola gracilis E. Angelier, 1951

Psammotorrenticola gracilis E. Angelier, 1951b: 509, 1953b: 57, 1959: 16, 1959c: 161; Santucci 1977: 83; Gerecke 1994: 274.

Psammotorrenticola sp.: Santucci 1970: 193, 1971: 83.

Distribution in France: Corsica.

Limnolegeria longiseta Motaş, 1928

Limnolegeria longiseta Motaş, 1928b: 325; Léger & Motaş 1928a: 176; Motaş 1928f: 149, 1928g: 7.

Distribution in France: Var.

Nilotonia (Dartiella) parva (Walter, 1931

Dartia parva Walter, 1931: E. Angelier 1959: 16, 1959a: 71.

Nilotonia gallica (Motaş & C. Angelier 1967): 27 - Gerecke & Moreno 2008.

Distribution in France: Corsica, Pyrénées-Orientales.

Family Lebertiidae Thor, 1900

Lebertia (Lebertia) cognata Koenike, 1902

Lebertia inversa Koenike, 1919: Walter & Motaş 1927: 87; Motaş 1927b: 2, 1928e: 5, 1928f: 151.

Lebertia extrema Walter, 1922: Motaş 1928f: 152, 1928g: 9.

Lebertia obesa Viets, 1925: Smit & Van der Hammen 1992: 55.

Distribution in France: Isère, Pas-de-Calais, Savoie.

Lebertia (Lebertia) fimbriata Thor, 1899

Lebertia fimbriata Thor, 1899: C. Angelier 1950a: 4; E. Angelier et al. 1963: 462; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Smit & Van der Hammen 1992: 55.

Lebertia (Lebertia) celtica procera Viets, 1920: Walter & Motaş 1927: 85; Motaş 1927b: 2, 1928e: 3, 1928f: 152, 1928g: 9; C. Angelier 1953: 215; Lundblad 1956a: 2.

Lebertia rufipes Koenike, 1902: Motaş 1926b: 412 (erron., see Motaş 1927b); Motaş & Şoarec 1939a: Appendix.

New records. **Ardèche**: 0/4/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit; 0/5/0, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit. **Cantal**: 1/0/3, Ruisseau de Delbarat, St. Jacques-des-Blats, 45°03.968 N 2°44.641 E, alt. 1350 m a.s.l., 17 May 2005, leg. H. Smit. **Doubs**: 6/0/0, Creuse, X-UTM

303653 Y-UTM 5233731, 20 October 2008, leg. Richabun; 1/0/0, same location, 6 May 2008, leg. Richabun; 2/0/0, Consolation, X-UTM 318320 Y-UTM 5225192, 19 October 2008, leg. Richabun. **Gard:** 1/4/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit. **Hérault:** 2/0/0, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin. **Jura:** 5/0/0, Seille at Ladoye sur Seille, X-UTM 705064 Y-UTM 5182147, 21 October 2008, leg. Richabun; 2/1/0, same location, 4 May 2008; 1/1/0, Cuisance, Arbois-Mesnay, X-UTM 713872 Y-UTM 5195242, 4 May 2008, leg. Richabun; 1/0/0, same location, 21 October 2008, leg. Richabun; 1/0/0, Surans, Gigny, X-UTM 689928 Y-UTM 5150437, 6 May 2008, leg. Richabun; 1/0/0, Les Rousses, X-UTM 272141 Y-UTM 5152462, 17 October 2008, leg. Richabun. **Puy-de-Dôme:** 0/1/0, R'au de Neuffonds, near road D149, 45°29.985 N 2°49.960 E, alt. 1322 m a.s.l., 20 May 2005, leg. H. Smit; 1/1/1, La Planchette at Jassat, 45°33.716 N 2°56.339 E, alt. 894 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Doubs, Gard, Gers, Hérault, Isère, Jura, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Tarn.

Lebertia (Lebertia) glabra Thor, 1897

Lebertia glabra Thor, 1897: E. Angelier et al. 1985: 30.

Lebertia lineata Thor, 1906: Motaş 1927b: 2, 1928e: 4, 1928f: 157; K. Viets 1952c: 245; E. Angelier 1953b: 68; Vaillant 1956: 156; Schwoerbel 1959a: 16; M.-L. Angelier 1980: 13; Smit & Van der Hammen 1992: 55.

Pseudolebertia glabra (Thor, 1897): Hubault 1927: 98.

New record. **Gard:** 0/2/0, Monts du Cantal, rheocrene Buron des Gardes, 45°04'084" N, 2°45'355" E, alt. 1494 m a.s.l., 17.05.2005, leg. H.Smit.

Distribution in France: Gard, Haut-Rhin, Isère, Meurthe-et-Moselle, Pas-de-Calais, Pyrénées (Hautes-Pyrénées).

Lebertia (Lebertia) guttata K. Viets, 1952

Lebertia guttata K. Viets, 1952c: 246; Vaillant 1956: 158.

Distribution in France: Hautes-Alpes.

Lebertia (Lebertia) intronata Gerecke, 2009

Lebertia intronata Gerecke, 2009: 72.

Distribution in France: Corsica.

Lebertia (Lebertia) lusitanica Lundblad, 1956

Lebertia lusitanica Lundblad, 1956: M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Pyrénées (Hautes-Pyrénées).

Lebertia (Lebertia) maculosa Koenike, 1902

Lebertia maculosa Koenike, 1902: K. Viets 1939a: 2.

Pseudolebertia oculata (Koenike, 1919): Migot 1926b: 120; Motaş 1928f: 157.

Pseudolebertia Zschokkei (Koenike, 1902): Hubault 1927: 96.

Lebertia oculata Koenike, 1919: Walter & Motaş 1927: 93; Motaş 1927b: 2, 1928e: 4, 1928g: 21.

Lebertia zschokkei Koenike, 1902: Walter 1922c: 240; Motaş 1928f: 156, 1928g: 15; Lundblad 1956a: 2; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Hautes-Alpes, Haute-Savoie, Isère, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie.

Lebertia (Lebertia) maglioi Thor, 1907

Lebertia maglioi Thor, 1907: Walter & Motaş 1927: 86; Motaş 1927b: 2, 1928e: 4, 1928f: 151; Lundblad 1956a: 2; E. Angelier 1953b: 56, 1959: 16, 1959a: 65; Giudicelli 1970: 113; Santucci 1965: 546, 1971: 82; M.-L. Angelier 1980: 13 (laps. *maglioi*); E. Angelier et al. 1985: 30; Vinçon 1987: 240 (?); Gerecke 2009: 42.

New records. **Ardèche:** 0/1/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1 May

2003, leg. H. Smit; 2/0/3, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit; 10/3/0, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit. **Cantal:** 0/1/1, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/0/4, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 18 May 2005, leg. H. Smit; 5/0/0/, Le Mars Rivière, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt 1115 m a.s.l., 18 May 2005, leg. H. Smit. **Gard:** 1/2/3, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit; 0/0/3, R'au de Neuffonds, near road D149, 45°29.985 N 2°49.960 E, alt. 1322 m a.s.l., 20 May 2005, leg. H. Smit. **Hérault:** 4/3/0, Rivière La Vis at Gorniers, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin; 0/1/0, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin. **Var:** 1/2/0, stream V'on des Vaudrèche, Massif des Maures, 43°14.657 N 6°20.267 E, 5 May 2003, leg. H. Smit; 0/2/0, unnamed creek, Massif des Maures, 43°15.312 N 6°23.954 E, 5 May 2003, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Corsica, Gard, Gers, Hérault, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques (?)), Var.

Lebertia (Lebertia) oblonga Koenike, 1911

Lebertia oblonga Koenike, 1911: Lundblad 1956a: 7.

Distribution in France: Gironde.

Lebertia (Lebertia) pusilla Koenike, 1911

Lebertia pusilla Koenike, 1911: Lundblad 1956a: 2.

Distribution in France: Savoie.

Lebertia (Lebertia) rivulorum K. Viets, 1933

Lebertia rivulorum K. Viets, 1933: Gerecke 2009: 61.

Distribution in France: Haute Vienne.

Lebertia (Lebertia) rufipes Koenike, 1902

Lebertia rufipes Koenike, 1902: Motaş 1927b: 2, 1928e: 5, 1928f: 152, 1928g: 15; Motaş & Şoarec 1939a: Appendix; Hubault 1947: 234; C. Angelier 1950d: 353, 1951b: 74; Schwoerbel 1959a: 16.

Neolebertia rufipes (Koenike, 1902): Migot 1926b: 119; Despax 1926: 131; Hubault 1927: 95.

Distribution in France: Haut-Rhin, Haute-Savoie, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie.

Lebertia (Lebertia) salebrosa Koenike, 1908

Lebertia salebrosa Koenike, 1908: Motaş & C. Angelier 1927d: 5; Motaş 1928f: 158 (?); M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Lebertia sculptata Walter, 1925b:144; Motaş 1928e: 4, 1928f: 157.

Pseudolebertia sculptata (Walter, 1925): Hubault 1927: 98.

New records. **Cantal:** 0/1/0, Ruisseau de Delbarat, St. Jacques-des-Blats, 45°03.968 N 2°44.641 E, alt. 1350 m a.s.l., 17 May 2005, leg. H. Smit. **Puy-de-Dôme:** 4/3/2, R'au de Chareire upstream of Chareire, 45°29.069 N 2°46.947 E, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Cantal, Isère, Haute-Loire, Meurthe-et-Moselle, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées), Vosges.

Lebertia (Lebertia) schechteli Thor, 1913

Lebertia schechteli Thor, 1913: Motaş 1928f: 158; Gerecke 2009: 51.

Lebertia tuberosa Thor, 1914: Walter 1922c: 240; Motaş & C. Angelier 1927d: 5; Motaş 1928f: 157; Motaş & Şoarec 1939a: 2; K. Viets 1951d: 285, 1952c: 245; C. Angelier 1950d: 353, 1951b: 74; Vaillant 1956: 154; Schwoerbel 1959a: 16.

Pseudolebertia tuberosa (Thor, 1914): Migot 1926b: 120; Hubault 1927: 95.

Pseudolebertia Schechteli (Thor, 1913): Hubault 1927: 97.

New record. **Cantal**: 1/1/0, Source du Goul (several helocrenes), E of Thiézac, 45°00.739 N 2°43.351 E, alt. 1465 m, 19 May 2005, leg. H. Smit.

Distribution in France: Cantal, Corsica, Haute-Loire, Hautes-Alpes, Haut-Rhin, Haute-Savoie, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Vosges.

Lebertia (Lebertia) sparsicapillata Thor, 1905

Lebertia sparsicapillata Thor, 1905d: 59; Motaş 1926b: 412, 1928e: 4, 1928f: 151, 1928g: 21; Motaş & C. Angelier 1927d: 5; Schwoerbel 1959a: 16, 1965: 478; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Gerecke 2009: 38.

Lebertia corsica E. Angelier, 1954: E. Angelier 1959: 16, 1959a: 69.

Neolebertia westfalica (Koenike, 1919): Hubault 1927: 95.

New records. **Ardèche**: 5/1/0, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit. **Cantal**: 1/4/7, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/1/0, upper course of unnamed creek S of Super-Lioran, 45°04.084 N 2°45.355 E, alt. 1500 m a.s.l., 17 May 2005, leg. H. Smit; 0/3/5, Le Mars Rivière, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt. 1115 m a.s.l., 18 May 2005, leg. H. Smit; 1/6/4, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 18 May 2005, leg. H. Smit. **Gard**: 1/4/4, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Corsica, Gard, Haut-Rhin, Haute-Savoie, Isère, Meurthe-et-Moselle, Pyrénées (Hautes-Pyrénées), Vosges.

Lebertia (Eolebertia) elsteri Schwoerbel, 1958

Lebertia elsteri Schwoerbel, 1958: Gerecke 2009: 132.

Distribution in France: Cantal, Corsica.

Lebertia (Pilolebertia) inaequalis (Koch, 1837)

Lebertia inaequalis (Koch, 1837): Smit & Van der Hammen 1992: 55; Lundblad 1956a: 2.

Lebertia parallela Walter, 1925b: 140.

Lebertia parallela variabilis Walter, 1927: In: Walter & Motaş 1927: 90; Motaş 1927b: 2, 1928e: 3, 1928f: 150, 1928g: 20.

Lebertia circularis Viets, 1908: Motaş & C. Angelier 1967: 17.

Lebertia exuta Koenike, 1908: Motaş 1928f: 151, 1928g: 9; Schwoerbel 1959a: 15.

Lebertia harnischi Viets, 1926: Walter & Motaş 1927: 89; Motaş 1927b: 2, 1928f: 150.

New records. **Pas-de-Calais**: 10/0, l'Aa at Gondardenne, 50°42'32.19" N 2°14'43.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/0, spring pond, Les Landes de Blendecques, 50°42'30.97" N 2°16'2.51" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 5/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Hérault**: 2/1/3, Source of La Buèges, small tributary of pool, 43°48.852 N 3°35.526 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Hérault, Isère, Meurthe-et-Moselle, Pas-de-Calais, Pyrénées (Pyrénées-Orientales), Savoie, Vosges.

Lebertia (Pilolebertia) insignis Neuman, 1880

Pachygaster tauinsignitus insignis Neuman, 1880: Barrois & Moniez 1887: 21.

Lebertia insignis Neuman, 1880: Le Roux 1907: 271; Soudan 1920: 4 (?); C. Angelier 1931: 23; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Distribution in France: Gers, Isère, Nord, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques), Haute-Savoie, Val-de-Marne.

Lebertia (Pilolebertia) longiseta Bader, 1955

Lebertia longiseta Bader, 1955: Motaş 1928f: 150, 1928g: 9.

Distribution in France: Haute-Savoie.

Remark: Initially reported as a *nomen nudum* by Walter (in Obermeyer 1922) and Motaş (1928f), but later on described by Bader (1955).

Lebertia (Pilolebertia) pilosa Maglio, 1924

Lebertia pilosa Maglio, 1924: Leger & Motaş 1928a: 176; Motaş 1928g: 7; Gerecke 2009: 81.

Distribution in France: Corsica, Var.

Lebertia (Pilolebertia) porosa Thor, 1900

Lebertia (Pilolebertia) porosa Thor, 1900: Thor 1906a: 761; Vandel 1922: 170; Motaş 1926b: 412, 1928e: 4, 1928f: 149, 1928g: 9; Motaş & C. Angelier 1927d: 5; C. Angelier 1931: 21; Motaş & Şoarec 1939a: Appendix; E. Angelier 1959: 16, 1959a: 69; E. Angelier et al. 1963: 462; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Lebertia insignis porosa Thor, 1900: Lundblad 1956a: 2.

Pilolebertia porosa (Thor, 1900): Migot 1926b: 115; Hubault 1927: 94.

Lebertia saxonica Thor, 1911: Motaş & Şoarec 1939a: Appendix; Lundblad 1956a: 2; Do 1962: 67.

Lebertia seclusa Koenike, 1914: C. Angelier 1931: 24 (laps. *seclusa*); Schwoerbel 1959a: 16.

Lebertia (Pilolebertia) violacea Viets, 1921: Motaş 1927b: 2, 1928e: 5, 1928f: 149, 1928g: 21; K. Viets 1939a: 2; C. Angelier 1953: 215; E. Angelier 1959: 16, 1959a: 65; Schwoerbel 1959a: 16; Motaş & C. Angelier 1967: 17; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 82.

New records. **Ardèche**: 4/4/0, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit; 1/3/0, Le Lignon Rivière, upstream of La Souche, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit; 0/2/0, La Drobie Rivière, upstream of Sablières, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit. **Cantal**: 0/2/3, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/2/0, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 18 May 2005, leg. H. Smit; 0/1/3, Petit Rhue Rivière near Cascade du Sartre, N of Le Claux, 45°11.392 N 2°42.353 E, alt. 938 m a.s.l., 18 May 2005, leg. H. Smit. **Doubs**: 1/2/0, Creuse, X-UTM 303653 Y-UTM 5233731, 20 October 2008, leg.

Richabun; 1/0/0, Consolation, X-UTM 318320 Y-UTM 5225192, 19 October 2008, leg. Richabun. **Gard**: 0/1/1, l'Hérault 3 km upstream of Valler-augue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit; 2/4/2, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit. **Jura**: 2/1/0, Hérisson, Ilay, X-UTM 720827 Y-UTM 5165883, 9 May 2008, leg. Richabun. **Pas-de-Calais**: 4/0, l'Aa at Gondardenne, 50°42'32.19" N 2°14'43.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/0/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Puy-de-Dôme**: 0/1/0, R'au de Chaire upstream of Chaire, 45°29.069 N 2°46.947 E, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit. **Vienne**: 1/0/0, Riv. Vienne, at Saint-Martin-de-la-Rivière, 46°30'34.25" N 0°37'57.46" E, 7 July 2000, leg. H. van der Hammen. **Hérault**: 3/0/8, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Ardèche, Cantal, Corsica, Doubs, Gard, Gers, Haut-Rhin, Haute-Loire, Hautes-Alpes, Haute-Savoie, Hérault, Isère, Jura, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Rhône, Savoie, Tarn, Val-de-Marne, Vienne, Vosges.

Lebertia (Mixolebertia) bisbisetosa K. Viets, 1930

Lebertia bisbisetosa K. Viets, 1930: K. Viets 1939a: 2.

Distribution in France: Pyrénées (Pyrénées-Atlantiques).

Lebertia (Mixolebertia) crenophila Viets, 1920

Lebertia crenophila Viets, 1920: Schwoerbel 1959a: 19.

Distribution in France: Vosges.

Lebertia (Mixolebertia) cuneifera Walter, 1922

Lebertia cuneifera Walter, 1922: Motaş 1927b: 2, 1928e: 10, 1928f: 156; Schwoerbel 1959a: 18.

Distribution in France: Isère, Vosges.

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Lebertia (Mixolebertia) depressostriata K. Viets, 1952

Lebertia depressostriata K. Viets, 1952c: 248; Vailant 1956: 158.

Distribution in France: Hautes-Alpes.

Lebertia (Mixolebertia) dubia Thor, 1899

Lebertia dubia Thor, 1899: Motaş 1928e: 30, 1928f: 156, 1928g: 15; Motaş & Şoarec 1939a: Appendix; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Lebertia dubia suturata Viets, 1926: Walter & Motaş 1927: 95; Motaş 1927b: 2, 1928e: 4, 1928f: 156, 1928g: 21; Motaş & C. Angelier 1927d: 5; C. Angelier 1953: 215.

Hexalebertia dubia (Thor, 1899): Migot 1926b: 121.

Lebertia insignis Neuman, 1880: Motaş 1926b: 412 (erron., see Motaş 1927b).

Distribution in France: Corrèze, Haute-Loire, Haute-Saône, Haute-Savoie, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie.

Lebertia (Mixolebertia) fontana Walter, 1912

Lebertia extendens Walter, 1912: Motaş 1928e: 10, 1928f: 155; K. Viets 1956b: 214.

Hexalebertia extendens (Walter, 1912): Hubault 1927: 99.

Distribution in France: Haute-Savoie, Isère, Savoie.

Lebertia (Mixolebertia) holsatica Viets, 1920

Hexolebertia holsatica (Viets, 1920): Migot 1926b: 126; Motaş & Şoarec 1939a: Appendix.

Lebertia holsatica Viets, 1920: Gerecke 2009: 102.

New record. **Gard**: 3/0/0, helocrene at campsite Mourétou, N of Valleraugue, 44°05.203 N 3°36.500 E, 418 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Corsica, Gard, Pyrénées (Pyrénées-Orientales).

Lebertia (Mixolebertia) lativentris Viets, 1922

Lebertia lativentris Viets, 1922: Schwoerbel 1959a: 19.

Distribution in France: Vosges.

Lebertia (Mixolebertia) mediterranea Gerecke, 2009

Lebertia mediterranea Gerecke, 2009: 124.

Distribution in France: Corsica.

Lebertia (Mixolebertia) sefvei Walter, 1911

Lebertia sefvei Walter, 1911: Schwoerbel 1959a: 18; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke 2009: 97.

Distribution in France: Corsica, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées), Vosges.

Lebertia (Mixolebertia) semireticulata Viets, 1925

Lebertia semireticulata Viets, 1925: Motaş 1927b: 2, 1928e: 5, 1928f: 155.

Distribution in France: Isère.

Lebertia (Mixolebertia) stigmatifera Thor, 1900

Lebertia stigmatifera Thor, 1900: Bornhauser 1912: 47; Motaş 1928e: 10, 1928f: 156, Lundblad 1956a: 2; Schwoerbel 1959a: 16; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Distribution in France: Haut-Rhin, Isère, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées), Vosges.

Family Oxidae Viets, 1926

Oxus (Oxus) carpenteri (Halbert, 1911)

Frontipoda carpenteri Halbert, 1911: Schwoerbel 1959a: 15.

Distribution in France: Vosges.

Oxus (Oxus) longisetus (Berlese, 1885)

Oxus longisetus (Berlese, 1885): Lundblad 1956a: 3; E. Angelier 1959: 16, 1959a: 72.

Oxus koenikei Thor, 1899: Motaş 1926b: 412, 1927b: 2, 1928f: 148, 1928g: 5; Walter & Motaş 1927: 99; C. Angelier 1953: 216; Picard 1962: 486.

New record. **Indre**: 3/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Corsica, Côte-d'Or, Haute-Saône, Indre, Isère, Meurthe-et-Moselle, Pyrénées-Orientales, Savoie.

Oxus (Oxus) musculus (Müller, 1776)

Marica musculus Koch, 1837: Moniez 1887a: 162; Barrois & Moniez 1887: 21.

Frontipoda musculus (Müller, 1776): Motaş 1928f: 149, 1928g: 5; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Ain, Nord, Pyrénées (Hautes-Pyrénées), Vosges.

Oxus (Oxus) ovalis (Müller, 1776)

Oxus ovalis (Müller, 1776): Motaş 1927b: 2, 1928f: 148, 1928g: 5.

Hydracna testudo Daudebart de Férussac, 1806: 217 (?).

New records. **Var**: 0/1/0, stream Nible (pools), Massif des Maures, 43°21.392 N 6°27.403 E, 14 May 2005, leg. H. Smit. **Cantal**: 16/0, Lac Cascades, N of Le Claux, 45°11.228 N 2°42.361 E, alt. 997 m a.s.l., 18 May 2005, leg. H. Smit.

Distribution in France: Ain, Cantal, Isère, Lot (?), Var.

Oxus (Oxus) strigatus (Müller, 1776)

Oxus strigatus (Müller, 1776): Motaş 1926b: 412, 1928f: 148, 1928g: 6.

Oxus oblongus Kramer, 1879: Giudicelli et al. 1980: 289.

Distribution in France: Bouches-du-Rhône, Isère, Nord, Var.

Oxus (Gnaphiscus) setosus (Koenike, 1898)

Oxus setosus (Koenike, 1898): C. Angelier 1953: 216.

Gnaphiscus setosus Koenike, 1898: Vandel 1919a: 90; Motaş 1926b: 412, 1928e: 3, 1928f: 148, 1928g: 21; Motaş & C. Angelier 1967: 17.

New records. **Isère**: 2/0, stream near Valbonnais, 19 July 1992, leg. H. van der Hammen. **Vienne**: 0/1/0, Riv. Vienne, at Saint-Martin-de-la-Rivière, 46°30'34.25" N 0°37'57.46" E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Doubs, Isère, Jura, Pyrénées-Orientales, Savoie, Jura, Vienne.

Family Pontarachnidae Koenike, 1910

Pontarachna punctulum Philippi, 1840

Pontarachna punctulum Philippi, 1840: Moniez 1888: 64; Motaş 1928f: 170; Walter 1925d: 15; Lundblad 1956a: 2.

Pontarachna lacazei Moniez, 1888: 64; 1890b: 358; 1890c: 33.

New records. **Alpes-Maritimes**, Agay, 17.09.1951, 1/1/0; Cannes, Zone à Otoplanidae, 16-17 September 1951, 0/3/0 (MNHN); **Pyrénées-Orientales**: Plage d'Argeles, 22 September 1951, 2/0/2; Plage de Banyuls s/mer, 25 September 1951, 6/13/0; Le Racou, 30 September 1951, 2/2/2 (MNHN).

Distribution in France: Alpes-Maritimes, Hérault, Pyrénées-Orientales, Var.

Litarachna communis Walter, 1925

Litarachna communis Walter, 1925: 33; Motaş 1928f: 170; Lundblad 1956a: 2.

Pontarachna punctulum (nec Philippi, 1840): Moniez 1890b: 358.

New records. **Var**: 1/5/0, marine littoral l'Escalet, near Ramatuelle, 43°11.268 N 6°38.803 E, 4 May 2003, leg. H. Smit. **Pyrénées-Orientales**: Plage d'Argeles, 1/0/2, 22 September 1951; Plage de Banyuls-sur-Mer, 23-25 September 1951, 1/2/2; 0/1/0, Le Racou, 30 September 1951 (all MNHN).

Distribution in France: Pyrénées-Orientales, Var.

Litarachna duboscqi Walter, 1925

Litarachna duboscqi Walter, 1925d: 42.

Distribution in France: Pyrénées-Orientales.

Family Torrenticolidae Piersig, 1902

Torrenticola (Torrenticola) amplexa (Koenike, 1908)

Atractides amplexus Koenike, 1908: Motaş 1927b: 2, 1928e: 3, 1928f: 142, 1928g: 21; C. Angelier 1931: 21.

Atractides connexus Koenike, 1908: Migot 1926b: 126; Motaş & Şoarec 1939a: Appendix; E. Angelier 1950a: 91; C. Angelier 1951b: 77.

Torrenticola connexa (Koenike, 1908): E. Angelier 1957: 68, 1953b: 91.

Torrenticola amplexa (Koenike, 1908): E. Angelier et al. 1963: 462; Motaş & C. Angelier 1967: 17; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Côte-d'Or, Drôme, Gers, Haute-Saône, Isère, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Tarn, Val-de-Marne.

Torrenticola (Torrenticola) anomala (Koch, 1837)

Atractides anomalus Koch, 1837: C. Angelier 1951b: 75.

Atractides angustirostris Walter, 1918: Motaş 1928f: 143; C. Angelier 1951b: 77.

Torrenticola anomala (Koch, 1837): E. Angelier 1953b: 91; Lundblad 1956a: 2; E. Angelier 1957: 68, 1957a: 27, 1959: 16, 1959a: 65; Schwoerbel 1959a: 15; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 82; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke & Di Sabatino 1996: 295.

Torrenticola longirostris (Szalay, 1933): E. Angelier 1959: 16, 1959a: 71.

New records. **Cantal:** 0/5/0, Petit Rhue Rivière near Cascade du Sartre, N of Le Claux, 45°11.392 N 2°42.353 E, alt. 938 m a.s.l., 18 May 2005, leg. H. Smit. **Gard:** 0/2/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l.,

15 May 2005, leg. H. Smit. **Puy-de-Dôme:** 0/1/0, La Planchette at Jassat, 45°33.716 N 2°56.339 E, alt. 894 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Corsica, Gard, Gers, Haut-Rhin, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées).

Torrenticola (Torrenticola) barsica (Szalay, 1933)

Torrenticola barsica (Szalay, 1933): Lundblad 1956a: 2; E. Angelier 1959: 16; Giudicelli 1970: 113; Santucci 1971: 82; Gerecke & Di Sabatino 1996: 296.

New records. **Cantal:** 1/1/0, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, 927 m a.s.l., 18 May 2005, leg. H. Smit. **Gard:** 03/1, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, 1115 m a.s.l., 16 May 2005, leg. H. Smit; 2/0/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Cantal, Corsica, Gard, Pyrénées-Orientales.

Torrenticola (Torrenticola) brevirostris (Halbert, 1911)

Atractides brevirostris Halbert, 1911: E. Angelier 1949b: 228, 1950a: 85; C. Angelier 1951b: 75.

Torrenticola brevirostris (Halbert, 1911): Lundblad 1956a: 2; E. Angelier 1953b: 61, 1957: 68, 1957a: 27; E. Angelier et al. 1963: 464; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Gers, Puy-de-Dôme, Pyrénées (Ariège, Hautes-Pyrénées, Pyrénées-Orientales, Pyrénées-Atlantiques), Savoie, Tarn.

Torrenticola (Torrenticola) cavifrons E. Angelier, 1954

Torrenticola cavifrons E. Angelier, 1954: E. Angelier 1959: 16, 1959a: 65; Giudicelli 1970: 112; Santucci 1971: 83; Gerecke & Di Sabatino 1996: 297.

Distribution in France: Corsica.

Torrenticola (Torrenticola) diaspora Gerecke & Di Sabatino, 1996

Torrenticola diaspora Gerecke & Di Sabatino, 1996: 301.

Torrenticola brevirostris (non Halbert, 1911): Angelier 1959: 16; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 83.

Distribution in France: Corsica.

Torrenticola (Torrenticola) elliptica Maglio, 1909

Atractides ellipticus (Maglio, 1909): Motaş & C. Angelier 1927d: 5; Motaş 1927b: 2, 1928e: 4, 1928f: 142, 1928g: 9; E. Angelier 1949b: 228, 1950a: 85, 1953b: 106, 1962a: 353; C. Angelier 1950d: 353; Schwoerbel 1965: 477.

Torrenticola elliptica (Maglioi, 1909: Di Sabatino et al. 2009: 25.

Torrenticola anomala (Koch, 1837): Motaş 1926b: 412 (erron., see Motaş 1927b).

New records. **Cantal:** 1/1/0, Petit Rhue Rivière near Cascade du Sartre, N of Le Claux, 45°11.392 N 2°42.353 E, alt. 938 m a.s.l., 18 May 2005, leg. H. Smit; 4/8/1, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16/05/2005, leg. H. Smit. **Jura:** 0/1/0, Cuisance, Arbois-Mesnay, X-UTM 713872 Y-UTM 5195242, 4 May 2008, leg. Richabun; 0/1/0, same location, 21 October 2008, leg. Richabun. **Puy-de-Dôme:** 0/4/0, R'au de Chareire upstream of Chareire, 45°29.069 N 2°46.947 E, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Cantal, Drôme, Haute-Loire, Haute-Savoie, Haute-Garonne, Haut-Rhin, Isère, Jura, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Orientales, Hautes-Pyrénées), Var, Vosges.

Torrenticola (Torrenticola) hyporheica Di Sabatino & Cicolani, 1993

Torrenticola hyporheica Di Sabatino & Cicolani, 1993: Gerecke & Di Sabatino 1996: 304.

Torrenticola ramigera (Szalay, 1947): E. Angelier 1950a: 88, 1953b: 57, 1959: 16, 1959a: 68 (see Gerecke & Di Sabatino 1996), 1959c: 162 (laps.: *ramiger*).

Distribution in France: Corsica, Pyrénées (Pyrénées-Atlantiques).

Torrenticola (Torrenticola) ischnophallus Lundblad, 1956

Torrenticola ischnophallus Lundblad, 1956: 167.

Distribution in France: Savoie.

Torrenticola (Torrenticola) laskai Di Sabatino, 2009

Torrenticola lativalvata (non K. Viets, 1952): E. Angelier 1959: 16, 1959a: 64; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 83; Gerecke & Di Sabatino 1996: 307.

Distribution in France: Corsica.

Torrenticola (Torrenticola) limula Gerecke & Di Sabatino, 1996

Torrenticola limula Gerecke & Di Sabatino, 1996: 309.

Distribution in France: Corsica.

Torrenticola (Torrenticola) microphallus Lundblad, 1956

Torrenticola microphallus Lundblad, 1956: 151.

Distribution in France: Pyrénées (Pyrénées-Orientales).

Torrenticola (Torrenticola) minutivalvata Lundblad, 1956

Torrenticola amplexa minutivalvata Lundblad, 1956a: 166.

New record. **Hérault:** 0/1/0, Rivière La Vis at Gornières, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Hérault, Pyrénées-Orientales.

Torrenticola (Torrenticola) similis (Viets, 1939)

Atractides elliptica similis Viets, 1939a: 9; E. Angelier 1950a: 85; C. Angelier 1951b: 75.

Torrenticola similis (Viets, 1939): E. Angelier 1957: 68, 1953b: 91, 1957a: 27; E. Angelier et al. 1963: 464; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke & Di Sabatino 1996: 313.

New records. **Gard**: 0/2/0, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit; 3/2/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Corsica, Gard, Gers, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées, Ariège), Tarn.

Torrenticola (Torrenticola) ungeri Szalay, 1927

Torrenticola ungeri Szalay, 1927: E. Angelier 1957: 68, 1953b: 61, 1959: 16, 1959a: 65; Lundblad 1956a: 3; Santucci 1971: 83; Gerecke & Di Sabatino 1996: 313.

Distribution in France: Corsica, Pyrénées-Orientales.

Torrenticola (Torrenticola) xylurgella Gerecke & Di Sabatino, 1996

Torrenticola xylurgella Gerecke & Di Sabatino, 1996: 314.

Distribution in France: Corsica.

Torrenticola (Megalpalpis) fagei E. Angelier, 1949

Torrenticola fagei E. Angelier, 1949a: 88, 1949b: 229, 1950a: 85; C. Angelier 1950d: 353; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Distribution in France: Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées).

Torrenticola (Megalpalpis) remyi E. Angelier, 1954

Torrenticola remyi E. Angelier, 1954: E. Angelier 1959: 16, 1959a: 66; E. Angelier et al. 1963: 463; Santucci 1977: 84; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Gerecke & Di Sabatino, 1996: 318.

Distribution in France: Corsica, Gers, Pyrénées (Hautes-Pyrénées), Tarn.

Torrenticola (Megalpalpis) thori (Halbert, 1944)

Atractides andrei E. Angelier, 1950a: 85.

Torrenticola andrei (E. Angelier, 1950): E. Angelier 1953b: 57, 1959: 16, 1959a: 65, 1959c: 162; Schwoerbel 1962e: 252, 1965: 479; Santucci 1971: 83, 1977: 84.

Distribution in France: Corsica, Pyrénées (Pyrénées-Atlantiques), Vosges.

Monatractides (Monatractides) aberratus (Lundblad, 1941)

Torrenticola aberrata (Lundblad, 1941): Lundblad 1956a: 3.

Distribution in France: Pyrénées-Orientales, Gironde.

Monatractides (Monatractides) lusitanicus (Lundblad, 1941)

Monatractides lusitanicus (Lundblad, 1941): Gerecke & Di Sabatino 1996: 291.

Distribution in France: Corsica.

Monatractides (Monatractides) madritensis (Viets, 1930)

Torrenticola madritensis Viets, 1930: E. Angelier 1950a: 90, 1953b: 93; Lundblad 1956a: 2; E. Angelier et al. 1963: 462; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

New record. **Gard**: 6/5/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Gers, Isère, Pyrénées (Pyrénées-Orientales, Pyrénées-Atlantiques, Hautes-Pyrénées), Tarn.

Monatractides (Monatractides) stadleri (Walter, 1924)

Atractides stadleri Walter, 1924: Motaş 1928f: 143; E. Angelier 1949b: 228, 1950a: 90, 1959a: 64, 1959c: 162; C. Angelier 1951b: 77.

Torrenticola stadleri Walter, 1924: E. Angelier 1953b: 57, 1959: 16; Lundblad 1956a: 3; E. Angelier et al. 1963: 464; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 83; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30.

Monatractides stadleri (Walter, 1924): Gerecke & Di Sabatino 1996: 293.

Distribution in France: Ardèche, Corsica, Drôme, Gers, Gironde, Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales), Tarn.

Monatractides (Pinquicola) adoratus Di Sabatino & Gerecke, 1996

Monatractides adoratus Di Sabatino & Gerecke, 1996: 187; Gerecke & Di Sabatino 1996: 294.

Distribution in France: Corsica.

Pseudotorrenticola rhyngota Walter, 1906

Pseudotorrenticola rhyngota Walter, 1906: Motaş & C. Angelier 1927d: 5; Motaş 1928e: 31, 1928f: 143; E. Angelier 1953b: 57, 1959: 16, 1959a: 67, 1959c: 162; Schwoerbel 1965: 478; Santucci 1971: 83, 1977: 84; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240; Gerecke & Sabatino 1996: 321.

New record. **Cantal**: 1/0/0, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit.

Distribution in France: Cantal, Corsica, Haut-Rhin, Isère, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées), Puy-de-Dôme.

Family Limnesiidae Thor, 1900

Limnesia (Limnesia) acuminata Walter, 1925

Limnesia acuminata Walter, 1925: Migot 1926b: 111; Motaş & Şoarec 1939a: Appendix; Dô 1962: 67.

New record. **Hérault**: 0/1/0, Pool in dry river bed, tributary of La Buèges near source, 43°49.180 N 3°35.254 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Hérault, Pyrénées (Pyrénées-Orientales).

Limnesia (Limnesia) arevaloi arevaloi Viets, 1918

Limnesia arevaloi Viets, 1918: Migot 1926b: 110; Motaş 1928f: 169, 1928g: 6; Monard 1928a: 224; Motaş & Şoarec 1939a: Appendix.

Distribution in France: Drôme, Pyrénées (Pyrénées-Orientales), Var.

Limnesia (Limnesia) arevaloi ambulatoria Gerecke, 1991

Limnesia arevaloi Viets, 1918: E. Angelier 1959: 15, 1959a: 73 (laps. *aravei*).

Limnesia arevaloi ambulatoria Gerecke, 1991a.

Distribution in France: Corsica.

Limnesia (Limnesia) curvipalpis Tuzovskij, 1997

New record. **Pas-de-Calais**: 0/2/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Pas-de-Calais. New for the fauna of France.

Limnesia (Limnesia) fulgida Koch, 1836

Limnesia fulgida Koch, 1836: Vandel 1919a: 90; Soudan 1920: 3; Motaş 1926b: 411, 1928e: 7, 1928f: 169, 1928g: 5; Motaş & C. Angelier 1927d: 6; Brumpt 1929: 293; C. Angelier 1931: 24; Chaudonneret 1947: 2; Lundblad 1956a: 2; E. Angelier 1959: 15, 1959a: 72; Smit & Van der Hammen 1992: 56.

Limnesia histrionica Bruzelius, 1854: Barrois & Moniez 1887 (as *L. histrionica* (Hermann)): 34; Barrois 1889b: 433, 1889d: 5; Moniez 1889b: 8, 1889e: 6; Le Roux 1907: 371; Schodduyn 1923: 143, 1926a: 311.

Atax histrionicus A.-L.D. Dugès 1834a: 17, 1834b: 146; Lucas 1880: LIV.

New records. **Pas-de-Calais**: 1/0/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 5/5/0, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E,

20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 0/3/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 1/0/0, pond near Étang Prieur, La Brenne, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen; 6/3/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen; 0/1/0, Ruisseau de Fosse Noire near Vendroeuves, La Brenne, 46°46'28.14"N 1°21'42.58" E, 9 July 2000, leg. H. van der Hammen. **Cantal**: 1/1/0, Lac Cascades, N of Le Claux, 45°11.228 N 2°42.361 E, alt. 997 m, 18 May 2005, leg. H. Smit.

Distribution in France: Ain, Aisne, Aude, Cantal, Corsica, Côte-d'Or, Doubs, Essonne, Haute-Loire, Haute-Saône, Haute-Savoie, Hérault, Indre, Isère, Manche, Moselle, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées-Atlantiques, Seine-Maritime, Somme, Val-de-Marne.

Limnesia (Limnesia) koenikei Piersig, 1894

Limnesia koenikei Piersig, 1894: Derône 1914: 46 (laps. *koenikei*); Motaş 1926b: 411, 1928e: 28, 1928f: 169, 1928g: 9; Motaş & C. Angelier 1927d: 6; Chaudonneret 1947: 2 (laps. *Köniki*); C. Angelier 1950a: 4; Do 1962: 67; Smit & Van der Hammen 1992: 55.

New records. **Hérault**: 17/44/0, Source of La Buèges, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit & P. Martin; 1/0/1, same data as previous location, hyporheic; 4/1/1, Pool in dry river bed, tributary of La Buèges near source, 43°49.180 N 3°35.254 E, 23 July 2008, leg. H. Smit & P. Martin; 8/3/7, Source of La Buèges, tributary of pool, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Côte-d'Or, Essonne, Haute-Loire, Hérault, Isère, Pas-de-Calais, Puy-de-Dôme, Savoie.

Limnesia (Limnesia) maculata (Müller, 1776)

Limnesia maculata (Müller, 1776): Moniez 1887a: 162; Barrois & Moniez 1887: 34; Vandel 1919a: 90; Soudan 1920: 3; Motaş 1926b: 411, 1928f: 169, 1928g: 5; Motaş & C. Angelier 1927d: 6; C. Angelier 1931:

25, 1953: 217; Chaudonneret 1947: 2; Schwoerbel 1959a: 15; Smit & Van der Hammen 1992: 56.

Limnesia vitellina (Koch, 1836): Moniez 1887a: 162; Barrois & Moniez 1887: 35.

Hydrarachna maculata Müller, 1776: Hermann 1804: 54.

Hydrachna runica De Théis, 1832: 60, 1835: 615; A.-L.D. Dugès 1834b: 145.

Atax runicus (De Théis, 1832): A.-L.D. Dugès 1834a: 17.

New records. **Pas-de-Calais**: 4/2/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 2/2/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 4/13/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 1/2/1, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Aisne, Bas-Rhin, Côte-d'Or, Doubs, Haute-Loire, Haute-Saône, Hérault, Indre, Isère, Jura, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie, Seine-Maritime, Val-de-Marne, Vosges.

Limnesia (Limnesia) undulata (Müller, 1776)

Hydrachna undulata Müller, 1776: De Théis 1832: 61.

Limnesia undulata (Müller, 1776): Vandel 1919a: 90; Soudan 1920: 3; Motaş & C. Angelier 1927d: 6; Motaş 1928f: 169, 1928g: 5; C. Angelier 1931: 25, 1950a: 5; Chaudonneret 1947: 2; Smit & Van der Hammen 1992: 56.

Limnesia pardina Neuman, 1870: Barrois & Moniez 1887: 35; Moniez 1889e: 6 ; Le Roux 1907: 371.

Hydrarachna undulata Müller, 1776: Hermann 1804: 54.

Hydrarachna erythrophthalma Hermann, 1804: 57.

New records. **Pas-de-Calais:** 10/9/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08"E, 19 April 1996, leg. H. Smit & H. van der Hammen; 4/14/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Landes:** 10/16/0, Étang Blanc, 27 July 1989, leg. H. van der Hammen. **Indre:** 1/0/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 21/39/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen; 1/0/0, Ruisseau de Fosse Noire near Vendroeuves, La Brenne, 46°46'28.14"N 1°21'42.58" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Aisne, Bas-Rhin, Côte-d'Or, Doubs, Essonne, Haute-Loire, Haute-Savoie, Indre, Isère, Landes, Loire, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie, Seine-Maritime, Val-de-Marne.

Remarks. Old records, published before Davids (1997), refer either to *L. undulata* or *L. undulatoides*.

Limnesia (Limnesia) undulatoides Davids, 1997

New record: **Pas-de-Calais:** 1/2/0, pond dunes near Berck, 30 March 1990, leg. H. Smit.

Distribution in France: Pas-de-Calais. New for the fauna of France.

Limnesia (Limnesia) walteri Migot, 1926

Limnesia walteri Migot, 1926a: 53, 1926b: 112; Motaş & Şoarec 1939a: Appendix; E. Angelier 1959: 15, 1959a: 65.

Distribution in France: Corsica, Pyrénées (Pyrénées-Orientales).

Family Hygrobatidae Koch, 1842

Hygrobates (Hygrobates) calliger Piersig, 1896

Hygrobates calliger Piersig, 1896: Walter 1907b: 446; Hubault 1927: 99; Motaş & C. Angelier 1927d: 6; Motaş 1928e: 4, 1928f: 173; C. Angelier 1931: 27, 1951b: 74; K. Viets 1939a: 2; E. Angelier 1949b: 229, 1950c: 187, 1953b: 91, 1957a: 27, 1959: 15, 1959a:

74; Delamare-Deboutteville 1955b: 433; Lundblad 1956a: 3; Schwoerbel 1959a: 15, 1965: 477; Do 1962: 67; E. Angelier et al. 1963: 462; Giudicelli 1970: 112; Santucci 1971: 83; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

Hygrobates calliger obtusipalpis Viets, 1930: C. Angelier 1951b: 75.

Hygrobates (Hygrobates) subterraneus C. Angelier, 1947: 446.

New records. **Ardèche:** 0/1/1, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit. **Cantal:** 0/1/0, Petit Rhue Rivière, near Cascade du Sartre, N of Le Claux, 45°11.392 N 2°42.353 E, 938 a.s.l., 18 May 2005, leg. H. Smit; 8/9/2, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, 967 m a.s.l., 16 May 2005, leg. H. Smit; 3/1/0, Le Mars Rivière, at crossing with road D12, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, 1115 m a.s.l., 18 May 2005, leg. H. Smit; 0/1/0, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, 927 m a.s.l., 18 May 2005, leg. H. Smit. **Gard:** 1/4/1, Le Trèvezet Rivière, between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, 1115 m a.s.l., 16 May 2005, leg. H. Smit. **Puy-de-Dôme:** 6/10/5, La Planchette at Jassat, S of Murol, 45°33.716 N 2°56.339 E, 894 m a.s.l., 20 May 2005, leg. H. Smit; 6/0/0, Ruisseau de Chareire, upstream of Chareire, 45°29.069 N 2°46.947 E, 1263 m a.s.l., 20 May 2005, leg. H. Smit. **Hérault:** 8/8/4, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin; 4/3/0, Rivière La Vis at Gorniers, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ardèche, Cantal, Corsica, Gard, Gers, Gironde, Haute-Loire, Haut-Rhin, Hérault, Isère, Meurthe-et-Moselle, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées, Ariège), Tarn, Val-de-Marne, Vosges.

Hygrobates (Hygrobates) fluviatilis (Ström, 1768)

Hygrobates fluviatilis (Ström, 1768): C. Angelier 1950a : 5; Lundblad 1956a: 2; E. Angelier 1959: 15,

1959a: 65; Schwoerbel 1959a: 15, 1965: 479; Giudicelli 1970: 112; Santucci 1965: 546, 1971: 83; M.-L. Angelier 1980: 13; Prevot et al. 1983: 27; E. Angelier et al. 1985: 30; Smit & Van der Hammen 1992: 55.

Hygrobates naicus (Johnston, 1848): Soudan 1920: 2; Hubault 1927: 100; Motaş & C. Angelier 1927d: 6; Motaş 1928e: 3, 1928f: 173, 1928g: 9; C. Angelier 1931: 27.

Nesaea reticulata Kramer, 1879: Richards 1887: 953.

Hygrobates reticulatus Koenike, 1892: Motaş 1926b: 411 (erron., see Motaş 1927b).

New records. **Pas-de-Calais:** 3/0/0, l'Aa at Gondardenne, 50°42'32.19" N 2°14'43.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 11/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Ardèche:** 0/1/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit. **Cantal:** 1/0/0, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/1/0, Le Mars Rivière, at crossing with road D12, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt. 1115 m a.s.l., 18 May 2005, leg. H. Smit. **Gard:** 0/1/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit. **Hérault:** 4/11/0, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin; 4/3/0, source of La Buèges, tributary of pool, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit & P. Martin; 2/3/0, Rivière La Vis at Gornières, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Alpes-de-Haute-Provence, Ardèche, Cantal, Corsica, Essonne, Gard, Gers, Haut-Rhin, Haut-Saône, Haute-Savoie, Hérault, Isère, Marne, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Val-de-Marne, Var, Vosges.

Hygrobates (Hygrobates) foreli (Lebert, 1874)

Hygrobates titubans Koenike, 1908: Hubault 1927: 100, 1947: 219; Motaş 1928e: 4, 1928f: 171.

New record. **Ardèche:** 0/3/0, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit. **Cantal:** 0/1/1, Ruisseau de Delbarat, St. Jacques-des-Blats, 45°03.968 N 2°44.641 E, alt. 1350 m a.s.l., 17 May 2005, leg. H. Smit; 0/1/0, upper course of unnamed creek S of Super-Lioran, 45°04.084 N 2°45.355 E, alt. 1500 m a.s.l., 17 May 2005, leg. H. Smit; 0/4/0, Le Mars Rivière, at crossing with road D12, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt. 1115 m a.s.l., 18 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Isère, Savoie, Vosges.

Hygrobates (Hygrobates) longipalpis (Hermann, 1804)

Hydrarachna longipalpis Hermann, 1804: 55.

Hygrobates longipalpis (Hermann, 1804): Barrois & Moniez 1887: 20; Barrois 1889d: 6; Moniez 1889b: 8, 1889e: 6; Le Roux 1907: 271; K. Viets 1913a: 333; Derône 1914: 45, Vandel 1919a: 90; Soudan 1920: 2; Walter 1922c: 106; Schodduyn 1923: 143; Motaş 1926b: 411, 1928e: 3, 1928f: 171, 1928g: 6; Motaş & C. Angelier 1927d: 6; C. Angelier 1931: 26, 1951b: 77; Chaudonneret 1947: 3; Schachter & Conat 1952: 367; Petit & Schachter 1954: 244; E. Angelier 1959: 15, 1959a: 72; Do 1962: 67; E. Angelier et al. 1963: 465; Smit & Van der Hammen 1992: 56.

Hygrobates impressus Neuman, 1880: Barrois & Moniez 1887: 20.

Hygrobates prosiliens Koenike, 1915: Chaudonneret 1947: 3; C. Angelier 1950a: 5.

New records. **Pas-de-Calais:** 0/1/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/1/0, pool, Les Landes de Blendecques, 50°42'16.59" N 2°16'28.14" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 11/0, l'Aa at Gondardenne, 50°42'32.19" N 2°14'43.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 12/0, spring pond, Les Landes de Blendecques, 50°42'30.97" N 2°16'2.51" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/6/0, fish

pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 45/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen; 1/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Indre:** 1/0/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 0/2/0, pond near Étang Prieur, La Brenne, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen; 1/2/0, Ruisseau de Fosse Noire near Vendroeuves, La Brenne, 46°46'28.14"N 1°21'42.58" E, 9 July 2000, leg. H. van der Hammen. **Haute-Vienne:** 0/1/0, lake, La Chapelle-Montbrandeix, 45°38'35"N 0°51'27: E, 29 April 2002, leg. G. van Ee. **Hérault:** 1/0/0, source of La Buèges, tributary of pool, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Alpes-Maritimes, Bas-Rhin, Bouches-du-Rhône, Corsica, Côte-d'Or, Doubs, Essonne, Haute-Loire, Haute-Saône, Haute-Savoie, Haute-Vienne, Hérault, Indre, Isère, Marne, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales), Savoie, Seine-Maritime, Somme, Tarn, Val-de-Marne, Var.

Hygrobates (Hygrobates) longiporus Thor, 1898

Hygrobates longiporus Thor, 1898: Migot 1926b: 127; Monard 1928a: 224; Motaş & Şoarec 1939a: Appendix; Lundblad 1956a: 3; E. Angelier 1953b: 57, 1959: 15, 1959a: 64, 1959c: 162; E. Angelier et al. 1963: 462; Giudicelli 1970: 113; Santucci 1971: 83.

Hygrobates falcilaminatus Walter, 1926: Migot 1926b: 127; Motaş 1928f: 173, 1928g: 7; Leger & Motaş 1928a: 176.

Hygrobates squamifer Thor, 1898: Motaş 1928f: 172.

New record. **Ardèche:** 1/0/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Pyrénées (Pyrénées-Orientales), Tarn, Var.

Hygrobates (Hygrobates) nigromaculatus Lebert, 1879

Hygrobates nigromaculatus Lebert, 1879: Vandel 1919a: 90; Soudan 1920: 3; Migot 1926b: 127; Motaş 1926b: 411, 1928e: 3, 1928f: 171, 1928g: 9; Motaş & Şoarec 1939a: Appendix; E. Angelier et al. 1963: 462; M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 30; Vinçon 1987: 240.

New records. **Pas-de-Calais:** 1/0/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 26/0, l'Aa at Gondardenne, 50°42'32.19" N 2°14'43.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 4/0, spring pond, Les Landes de Blendecques, 50°42'30.97" N 2°16'2.51" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 20/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Hérault:** 0/1/0, source of La Buèges, tributary of pool, 43°48.852 N 3°35.526 S, 23 July 2008, leg. H. Smit & P. Martin. **Doubs:** 0/3/0, Creuse, X-UTM 303653 Y-UTM 5233731, 20 October 2008, leg. Richabun; 2/1/0, same location, 6 May 2008, leg. Richabun.

Distribution in France: Doubs, Haute-Saône, Hérault, Isère, Pas-de-Calais, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques), Savoie, Tarn.

Hygrobates (Hygrobates) trigonicus Koenike, 1895

Hygrobates trigonicus Koenike, 1895: Lundblad 1956a: 3; E. Angelier 1959: 16, 1959a: 72; Santucci 1971: 83; Prevot et al. 1983: 27.

Distribution in France: Alpes-de-Haute-Provence, Corsica, Gironde, Pyrénées-Orientales.

Hygrobates (Rivobates) norvegicus (Thor, 1897)

Hygrobates norvegicus (Thor, 1897): Bornhauser 1912: 47; Hubault 1927: 100; Motaş 1928e:10; Lundblad 1956a: 10; Schwoerbel 1959a: 17 (laps.: *norvegicus*); M.-L. Angelier 1980: 13; E. Angelier et al. 1985: 31.

Rivobates norvegicus Thor, 1897: Motaş 1928f: 174, 1928g: 29.

Distribution in France: Haut-Rhin, Isère, Pyrénées (Hautes-Pyrénées), Vosges.

Mixobates processifer (Thor, 1905)

Mixobates processifer (Thor, 1905): E. Angelier et al. 1963: 463.

Distribution in France: Tarn.

Atractides (Atractides) angustiporus (Viets, 1930)

Megapus angustiporus Viets, 1930: C. Angelier 1950d: 354.

Distribution in France: Pyrénées (Hautes-Pyrénées).

Atractides (Atractides) clavipes Lundblad, 1954

Atractides clavipes Lundblad, 1954: Lundblad 1956a: 11.

New record. **Gard**: 1/2/0, helocrene at campsite Mourétou, N of Valleraugue, 44°05.203 N 3°36.500 E, alt. 418 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Gard, Vosges.

Atractides (Atractides) corsicus E. Angelier, 1954

Atractides nodipalpis corsicus E. Angelier, 1954: E. Angelier 1959: 16, 1959a: 65.

Atractides corsicus E. Angelier, 1954: Gerecke 2003: 274.

Atractides fonticolus corsicus (E. Angelier, 1954): Giudicelli 1970: 112; Santucci 1971: 83.

Distribution in France: Corsica.

Atractides (Atractides) distans (Viets, 1914)

Atractides distans (Viets, 1914): E. Angelier 1953b: 68; Schwoerbel 1959a: 16; E. Angelier et al. 1963: 462.

Distribution in France: Haut-Rhin, Tarn.

Remarks: The presence of this species needs confirmation due to confusion with closely related species (Gerecke 2003).

Atractides (Atractides) fissus (Walter, 1927)

Megapus fissus Walter, 1927: In: Walter & Motaş 1927: 106; Motaş 1927a: 341, 1927b: 2, 1928e: 4, 1928f: 176.

Distribution in France: Isère.

Atractides (Atractides) fluviatilis (Szalay, 1929)

Atractides nodipalpis fluviatilis (Szalay, 1929): Lundblad 1956a: 3; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Distribution in France: Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées).

Atractides (Atractides) fonticolus (Viets, 1920)

Megapus nodipalpis fonticola Viets, 1920: Walter & Motaş 1927: 104; Motaş 1927a: 340, 1927b: 2, 1928e: 10, 1928f: 175; Motaş & Şoarec 1939a: 1.

Atractides nodipalpis fonticolus (Viets, 1920): Do 1962: 67; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Smit & Van der Hammen 1992: 55.

Atractides fonticolus (Viets, 1920): Prevot et al. 1983: 27.

Distribution in France: Hérault, Isère, Pas-de-Calais, Pyrénées (Hautes-Pyrénées).

Atractides (Atractides) gibberipalpis Piersig, 1898

Atractides gibberipalpis Piersig, 1898: Vandel 1920: 56; K. Viets 1939a: 3; C. Angelier 1950d: 353, 1951b: 74, Lundblad 1956a: 2; Schwoerbel 1959a: 16; Santucci 1971: 83; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Megapus gibberipalpis (Piersig, 1898): Hubault 1927: 101; Motaş 1926b: 411, 1927a: 341, 1928f: 174, 1928g: 30.

New records. **Ardèche**: 2/8/4, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit; 1/1/8, La Borne Ruisseau, W of Col de la Croix de Bauzon, 44°37.770 N 4°09.610 E, 30 April 2003, leg. H. Smit. **Cantal**: 2/5/2, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/1/2, Ruisseau de Delbarat, St. Jacques-des-Blats, 45°03.968 N 2°44.641 E, alt. 1350 m a.s.l., 17 May 2005, leg. H. Smit; 1/6/17, Le Mars Rivière, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt.

1115 m a.s.l., 18 May 2005, leg. H. Smit; 1/0/0, Petit Rhue Rivière near Cascade du Sartre, N of Le Claux, 45°11.392 N 2°42.353 E, alt. 938 m a.s.l., 18 May 2005, leg. H. Smit; 1/0/0, Source du Goul (helocrenes), E of Thiézac, 45°00.739 N 2°43.351 E, alt. 1465 m a.s.l., 19 May 2005, leg. H. Smit. **Puy-de-Dôme**: 1/1/0, Ruisseau de Chareire, upstream of Chareire, 45°29.069 N 2°46.947 S, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit; 2/4/0, La Planchette at Jassat, S of Murol, 45°33.716 N 2°56.339 E, alt. 894 m a.s.l., 20 May 2005, leg. H. Smit; 0/2/0, R'au de Neuffonds, near road D149, 45°29.985 N 2°49.960 E, alt. 1322 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Corsica, Doubs, Isère, Haut-Rhin, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Vosges.

Atractides (Atractides) glandulosus (Walter, 1918)

Megapus glandulosus Walter, 1918: C. Angelier 1951b: 75; Lundblad 1956a: 2; E. Angelier 1954f: 46, 1957a: 24.

Distribution in France: Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Ariège), Savoie.

Atractides (Atractides) gracilipes (E. Angelier, 1951)

Megapus gracilipes E. Angelier, 1951b: 509.

Atractides gracilipes (E. Angelier, 1951): E. Angelier 1953b: 57, 1959: 16, 1959c: 164.

Distribution in France: Corsica.

Atractides (Atractides) inflatipes Lundblad, 1956

Atractides distans inflatipes Lundblad, 1956: 208.

Distribution in France: Pyrénées-Orientales.

Atractides (Atractides) inflatus (Walter, 1925)

Atractides inflatus (Walter, 1925): Lundblad 1956a: 3.

Distribution in France: Pyrénées-Orientales.

Atractides (Atractides) latipalpis Motaş & Tanasachi, 1946

Atractides latipalpis Motaş & Tanasachi, 1946: E. Angelier 1953b: 109; Schwoerbel 1965: 477; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New record. **Cantal**: 1/0/0, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit.

Distribution in France: Cantal, Haut-Rhin, Isère, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées).

Atractides (Atractides) latipes (Szalay, 1935)

Atractides latipes (Szalay, 1935) : E. Angelier 1953b: 57, 1959: 16, 1959a: 66, 1959c: 164; Santucci 1971: 83.

Megapus remyi E. Angelier 1951b: 509.

New record. **Gard**: 0/1/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Corsica, Gard.

Atractides (Atractides) legeri (Motaş, 1927)

Megapus legeri (Motaş, 1927): In: Walter & Motaş 1927: 114; Motaş 1927a: 341, 1927b: 2, 1928e: 4, 1928f: 176, 1928g: 30.

Atractides legeri (Motaş, 1927): Gerecke 2003: 206.

Distribution in France: Isère.

Atractides (Atractides) loricatus Piersig, 1898

Atractides adenophorus (Viets, 1930): E. Angelier 1949b: 229 (see Gerecke 2003).

Megapus adenophorus Viets, 1930: C. Angelier 1950d: 353.

Megapus loricatus (Piersig, 1898): Migot 1926b: 128; Motaş & C. Angelier 1927d: 6; Motaş 1928f: 177, 1928g: 30; Monard 1928a: 224; Motaş & Şoarec 1939a: Appendix.

Atractides loricatus Piersig, 1898: M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Distribution in France: Gers, Haute-Loire, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques).

Atractides (Atractides) lunipes Lundblad, 1956

Atractides lunipes Lundblad, 1956: 211; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New records. **Ardèche**: 2/1/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°3.364 E, 1 May 2003, leg. H. Smit; 1/2/0, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit.

Distribution in France: Ardèche, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées).

Atractides (Atractides) nodipalpis (Thor, 1899)

Megapus nodipalpis Thor, 1899: Thor 1914a: 1; Hubault 1927: 101, 1934: 63; Motaş 1926b: 411, 1927a: 341, 1928e: 3, 1928f: 175, 1928g: 20; Motaş & C. Angelier 1927d: 6; C. Angelier 1931: 28, 1951b: 74.

Atractides nodipalpis (Thor, 1899): Lundblad 1956a: 2; E. Angelier 1953b: 57, 1957a: 27; 1959: 16, 1959a: 64; Schwoerbel 1959a: 15, 1965: 477; E. Angelier et al. 1963: 462; Santucci 1971: 83; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Atractides limnicola Schwoerbel, 1959a: 39.

New records. **Pas-de-Calais**: 0/1/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen. **Hérault**: 28/27/5, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin; 3/1/0, Rivière La Vis at Gorniès, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Charente, Corsica, Gard, Gers, Gironde, Haut-Rhin, Hérault, Isère, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques), Savoie, Tarn, Val-de-Marne, Vosges.

Discussion: As pointed out by Gerecke (2003), most records published under the name *Atractides spinipes* (Koch, 1837) refer to misshaped specimens, mostly of *A. nodipalpis*. The following records, partly published as *Megapus spinipes* (Koch, 1837), not being documented by collection material, their

identity remains unclear: Vandel 1920: 56; Motaş 1928f: 174, 1928g: 9; Motaş & Şoarec 1939a: 2; E. Angelier 1949b: 228; Schwoerbel 1959a: 15; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

In addition to the distributional data given above, these data include records from Doubs and Var.

Atractides (Atractides) oblongus (Walter, 1944)

Atractides longus (laps., Walter, 1947): E. Angelier 1953b: 109.

Distribution in France: Isère.

Atractides (Atractides) octoporus Piersig, 1904

Megapus octoporus (Piersig, 1904): Motaş 1926b: 411 (laps. *octopovus*), 1927a: 340, 1927b: 2, 1928e: 4; 1928f: 189, 1928g: 23; Motaş & Angelier 1927d: 9.

Atractides octoporus Piersig, 1904: Lundblad 1956a: 2; Schwoerbel 1959a: 16; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New record. **Hérault**: 1/0/0, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Isère, Haut-Rhin, Hérault, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées), Savoie.

Atractides (Atractides) ovalis Koenike, 1883

Atractides ovalis Koenike, 1883: Barrois & Moniez 1887: 20.

Distribution in France: Pas-de-Calais.

Atractides (Atractides) pennatus (Viets, 1920)

Atractides nodipalpis pennatus (Viets, 1920): Lundblad 1956a: 2; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Smit & Van der Hammen 1992: 55.

Megapus nodipalpis pennata Viets, 1920: Walter & Motaş 1927: 101; Motaş 1926b: 412, 1927a: 340, 1927b: 2, 1928e: 3, 1928f: 175, 1928g: 21; Motaş & Şoarec 1939a: 2; C. Angelier 1950d: 354.

Megapus nodipalpis longitibialis Walter, 1927: In: Walter & Motaş 1927: 104; Motaş 1927a: 340, 1927b: 2, 1928e: 10, 1928f: 176.

Atractides ovalis Koenike, 1883: Motaş 1926b: 411 (erron., see Motaş 1927b).

Distribution in France: Gard, Gers, Isère, Pas-de-Calais, Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales).

Atractides (Atractides) phreaticus Motaş & Tanasachi, 1948

Atractides vandeli E. Angelier, Decamps & Rey, 1963: 476. Nov. syn.

Material examined. **Tarn:** *Atractides vandeli*, Holotype MNHN Paris, without author label, only red number inscription "93". *Locus typicus:* France, Massif Central, from a 12 month investigation, no datum; Ruisseau du Céret, Stat.2, en amont du pont de la Route nationale 88.

Discussion. Notwithstanding several contradictions to the original description, and the complete lack of taxonomic or geographic labels, the holotype of *A. vandeli* could be identified because it was conserved in a drawer together with other unique material (specimens of *Nudomideopsis longipalpis*, *Barbaxonella pilosa*, *Torrenticola fagei*, and *Atractides fonticolus gallicus*) globally published in the paper of Angelier et al. (1963). From a revision of this specimen results that Gerecke's (2003) hypothesis was correct, that it belongs to *A. phreaticus*: (1) an unpaired posterior plate (obviously overlooked by Angelier) is present on the dorsum; (2) setae S-1/2 are homoiomorphic - the figure of I-L in the original description, with one blunt and one pointed seta, is not correct. (3) setae at both Dgl-1 are lacking. The figures in the original description show these setae somewhat longer and more slender than in *A. phreaticus*. However, as these figures are generally sketchy in quality, and the setae in question are flattened, thus differing in proportions depending on the angle of view, no taxonomic weight can be given to this difference.

Distribution in France: Tarn.

Atractides (Atractides) prosiliens Motaş & Tanasachi, 1948

Atractides prosiliens Motaş & Tanasachi, 1948: Giudicelli et al. 1980: 289.

Distribution in France: Bouches-du-Rhône.

Atractides (Atractides) pumilus (Szalay, 1946)

Atractides pumilus (Szalay, 1946): M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Atractides primitivus Walter, 1947: E. Angelier 1953b: 69; Schwoerbel 1962e: 256, 1965: 478.

Distribution in France: Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales), Vosges.

Atractides (Atractides) robustus (Sokolov, 1940)

Atractides nodipalpis robustus (Sokolov, 1940): Lundblad 1956a: 2.

New records. **Ardèche:** 1/0/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°3.364 E, 1 May 2003, leg. H. Smit. **Hérault:** 1/0/0, Rivière La Vis at Gorniès, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ardèche, Hérault, Isère, Pyrénées-Orientales.

Atractides (Atractides) similis (E. Angelier, 1949)

Megapus similis E. Angelier, 1949a: 89.

Atractides similis (E. Angelier, 1949b): 235; Gerecke 2003: 264.

Atractides simillimus E. Angelier, 1953: E. Angelier 1953b: 93.

Distribution in France: Isère, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales).

Atractides (Atractides) spinipes Koch, 1837

Atractides fonticolus gallicus E. Angelier, Decamps & Rey, 1963: 472. Nov. syn.

New records and material examined. **Ardèche:** 0/1/0, Le Lignon Rivière, upstream of La Souche, 44°37.770 N 4°9.610 E, 30 April 2003, leg. H. Smit. **Cantal:** 0/1/0, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 1/0/0, Ruisseau de Delbarat, St. Jacques-des-Blats, 45°03.968 N 2°44.641 E, alt. 1350 m a.s.l., 17 May 2005, leg. H. Smit; 0/2/0, Le

Mars Rivière, upstream of Le Falgoux, 45°07.616 N 2°38.623 E, alt 1115 m a.s.l., 18 May 2005, leg. H. Smit. **Puy-de-Dôme**: 1/1/0, Ruisseau de Chareire, upstream of Chareire, 45°29.069 N 2°46.947 S, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit. **Tarn**: *Atractides fonticolus gallicus*, syntypes, MNHN Paris, without author label, only red number inscriptions "10" 1/0/0, "32" 1/0/0, "33" 1/1/0, "94" 1/0/0, "108" 1/0/0, "111" 3/0/0, 1/1/0, "206" 1/1/0. *Loci typici* (1958/1959, from a 12-month investigation, neither datum, nor specimen number specified in original publication): France, Massif Central, ruisseau Céret. Stat.2: En amont de la Route nationale 88; Stat.5: Entre les barrages des Farguettes et de la Roucarié; Stat.6: En amont du barrage de la Roucarié, près du pont d'Almayac; Stat.8: Près du pont de la route de Trévien.

Discussion. As explained above in the discussion of *A. phreaticus*, also of this species, syntypes (Angelier et al. mention numerous specimens, but without giving collecting site and date details) could be identified by their location in coll. Angelier together with other typical material from the study of Angelier et al. (1963). From a revision of measurements and proportions results that they obviously represent populations of *A. spinipes* in the sense of Gerecke (2003). No significant differences could be found that would justify considering *A. fonticolus gallicus* as a separate species.

Distribution in France: Ardèche, Cantal, Puy-de-Dôme, Tarn.

Atractides (Atractides) subasper Koenike, 1902

Atractides subasper Koenike, 1902: E. Angelier 1953b: 61, 1953f: 46, 1957a: 24, 1959: 16, 1959a: 66; Lundblad 1956a: 3; Nicolau-Guillaumet 1959: 237; E. Angelier et al. 1963: 462; Motaş & C. Angelier 1967: 17; Santucci 1971: 83; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Distribution in France: Corsica, Gers, Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales), Tarn.

Atractides (Atractides) subterraneus (K. Viets, 1932)

Atractides subterraneus (K. Viets, 1932): E. Angelier 1953b: 106.

Distribution in France: Pyrénées-Orientales.

Atractides (Atractides) tener (Thor, 1899)

Megapus tener Thor, 1899: Vandel 1920: 56; Hubault 1927: 101; Motaş 1927a: 340, 1928e: 4, 1928f: 174, 1928g: 6; Motaş & C. Angelier 1927d: 8; Schwoerbel 1959a: 16; E. Angelier et al. 1963: 465; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New records. **Cantal**: 0/1/1, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit; 0/3/1, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 18 May 2005, leg. H. Smit; 0/2/1, Petit Rhue Rivière near Cascade du Sartre, N of Le Claux, 45°11.392 N 2°42.353 E, alt. 938 m a.s.l., 18 May 2005, leg. H. Smit.

Distribution in France: Cantal, Doubs, Isère, Tarn, Haut-Rhin, Haute-Loire, Loire, Meurthe-et-Moselle, Pyrénées (Hautes-Pyrénées), Var.

Atractides (Atractides) vaginalis (Koenike, 1905)

Atractides vaginalis (Koenike, 1905): K. Viets 1951d: 285, Lundblad 1956a: 2; Vaillant 1956: 154; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Megapus vaginalis Koenike, 1905: Walter 1922c: 241; Hubault 1927: 102; Motaş 1927a: 341, 1928f: 177 (laps. *waginalis*).

Distribution in France: Haute-Savoie, Hautes-Alpes, Isère, Pyrénées (Hautes-Pyrénées), Savoie.

Remarks. According to Gerecke (2003) old records of this species need confirmation.

Atractides (Atractides) walteri (K. Viets, 1925)

Megapus walteri K. Viets, 1925: Walter & Motaş 1927: 110; Motaş 1927b: 2, 1928e: 4, 1928f: 177; Motaş & Şoarec 1939a: Appendix.

Megapus borceai Motaş 1928f: 181.

Distribution in France: Isère.

Atractides (Polymegapus) orghidani Motaş & Tanasachi, 1960

New records. **Var:** 0/1/0, unnamed creek Massif des Maures, 43°15.312 N 6°23.954 E, 5 May 2003, leg. H. Smit; 0/1/0, small unnamed stream a crossing with road D14, Massif des Maures, 43°14.637 N 6°22.089 E, 14 May 2005, leg. H. Smit.

Distribution in France: Var.

Remark. New for the fauna of France.

Atractides (Polymegapus) polyporus (Viets, 1922)

Megapus polyporus Viets, 1922: Migot 1926b: 129; Motaş & Şoarec 1939a: Appendix.

New record. **Gard:** 1/3/0, helocrene at campsite Mourétou, N of Valleraugue, 44°05.203 N 3°36.500 E, alt. 418 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Gard, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées).

Atractides (Tympanomegapus) acutirostris (Motaş & C. Angelier, 1927)

Megapus acutirostris Motaş & C. Angelier, 1927: 8; Motaş 1928f: 185.

Atractides pavesii Maglio, 1905: Lundblad 1956a: 3; E. Angelier 1959: 16, 1959a: 65 (see Gerecke 2003); Picard 1962: 486; Santucci 1971: 83; E. Angelier et al. 1985: 31.

Atractides acutirostris (Motaş & C. Angelier, 1927): M.-L. Angelier 1980: 14; Gerecke 2003: 336.

New records. **Ardèche:** 0/1/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°3.364 E, 1 May 2003, leg. H. Smit; 0/1/0, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit.

Distribution in France: Ardèche, Corrèze, Corsica, Gers, Meurthe-et-Moselle, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales).

Atractides (Tympanomegapus) moniezi (Motaş, 1927)

Atractides moniezi (Motaş, 1927); In: Walter & Motaş 1927d: 122; Motaş 1927a: 340, 1927b: 2, 1928f: 185; C. Angelier 1953: 217.

Distribution in France: Savoie.

Family Unionicolidae

Unionicola (Pentatax) bonzi (Claparède, 1869)

Atax Bonzi Claparède, 1869: Barrois & Moniez 1887: 5.

Distribution in France: Nord.

Unionicola (Pentatax) intermedia (Koenike, 1882)

Unionicola intermedia (Koenike, 1882): Soudan 1920: 3.

Distribution in France: Isère.

Unionicola (Hexatax) crassipes (Müller, 1776)

Atax crassipes (Müller, 1776): Moniez 1887a: 162; Richards 1887: 953; Barrois & Moniez 1897: 5; Moniez 1889b: 8, 1889e: 6; Bruyant & Eusébio 1904: 60; Schodduyn 1904: 20, 1923: 143, 1925b: 106, 1926a: 311; Le Roux 1907: 271; Vandel 1919a: 90; Baldensperger 1926: 153; Motaş & C. Angelier 1927d: 9; Motaş 1928f: 189, 1928g: 5; C. Angelier 1931: 28, 1950a: 5; Chaudonneret 1947: 3.

Unionicola crassipes (Müller, 1776): Soudan 1920: 3; Motaş 1926b: 412, 1928e: 17; K. Viets 1913a: 335; C. Angelier 1953: 217; Smit & Van der Hammen 1992: 57.

New records. **Indre:** 0/1/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen. **Puy-de-Dôme:** 0/10/0, Lac Pavin, 45°29.952 N 2°53.204 E, alt. 1197 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ain, Côte-d'Or, Doubs, Essonne, Haut-Rhin, Haute-Saône, Haute-Savoie, Indre, Isère, Jura, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie, Seine-Maritime, Somme, Val-de-Marne, Vosges.

Unionicola (Hexatax) figuralis (Koch, 1836)

Pentatax figuralis (Koch, 1836): Soudan 1920: 3; Motaş 1928f: 190, 1928g: 12.

Distribution in France: Isère, Savoie.

Unionicola (Hexatax) gracilipalpis (K. Viets, 1908)

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Atax gracilipalpis K. Viets, 1908: Motaş 1928f: 190, 1928g: 12.

Distribution in France: Isère, Savoie.

Unionicola (Hexatax) minor (Soar, 1900)

Unionicola crassipes minor (Soar, 1900): E. Angelier 1959: 16, 1959a: 66; Schwoerbel 1959a: 15; Dô 1962: 67; E. Angelier et al. 1963: 465.

New record. **Pas-de-Calais**: 0/1/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08"E, 19 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Corsica, Haut-Rhin, Hérault, Pas-de-Calais, Tarn, Vosges.

Unionicola (Hexatax) parvula Lundblad, 1954

Unionicola parvula Lundblad, 1954b: 156, 1956a: 2.

Distribution in France: Hérault.

Unionicola (Unionicola) ypsilophora (Bonz, 1783)

Atax ypsilophorus (Bonz, 1783): Barrois & Moniez 1887: 5; Bruyant & Eusébio 1904: 60.

Unionicola ypsilophora (Bonz, 1783): Soudan 1920: 3; Motaş 1926b: 412, 1928f: 189, 1928g: 9; Chaudonneret 1947: 3.

Distribution in France: Ain, Côte-d'Or, Isère, Nord, Puy-de-Dôme, Savoie.

Neumania (Neumania) callosa (Koenike, 1895)

Neumania callosa (Koenike, 1895): Motaş 1927b: 2, 1928f: 191.

Neumania imitata (err., non Koenike, 1908): C. Angelier 1931: 29.

Distribution in France: Haute-Saône, Val-de-Marne.

Neumania (Neumania) deltoides (Piersig, 1894)

Neumania deltoides (Piersig, 1894): Chaudonneret 1947: 3; C. Angelier 1950a: 5, 1953: 218; E. Angelier et al. 1963: 464.

Neumania triangularis (Piersig, 1893): Motaş 1926b: 412, 1928f: 191, 1928g: 5; C. Angelier 1931: 29.

New records. **Pas-de-Calais**: 3/8/0, pond, Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pool, Landes de Blendecques, 50°42'16.59" N 2°16'28.14" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/3/0, fish pond, Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 1/1/1, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Côte-d'Or, Essonne, Indre, Isère, Pas-de-Calais, Seine-Maritime, Savoie, Tarn, Val-de-Marne.

Neumania (Neumania) elliptica Walter, 1925

Neumania elliptica Walter, 1925: Pešić et al. 2007: 189.

Neumania vietsi Husiatinschi, 1937: E. Angelier 1959: 16, 1959a: 134.

Distribution in France: Corsica.

Remarks. *Neumania vietsi* is considered by Pešić et al. (2007) as a *species incerta*. All material of Angelier collected in Corsica belonged to *N. elliptica*.

Neumania (Neumania) limosa (Koch, 1836)

Neumania limosa (Koch, 1836): Derône 1914: 45, 1915: 560; Vandell 1919a: 90; Motaş 1926b: 412, 1928f: 191, 1928g: 7; C. Angelier 1931: 29, 1953: 218; Chaudonneret 1947: 3; Schwoerbel 1959a: 17; Motaş & C. Angelier 1967: 17; Smit & Van der Hammen 1992: 56; Pešić et al. 2007: 191.

New records. **Pas-de-Calais**: 0/9/0, pond, Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/5/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08"E, 19 April 1996, leg. H. Smit & H.

van der Hammen. **Indre**: 10/11/0, pond near Étang Prieur, La Brenne, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen. **Hérault**: 0/1/0, Pool in dry river bed, tributary of La Buèges near source, 43°49.180 N 3°35.254 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Côte-d'Or, Doubs, Haut-Rhin, Hérault, Indre, Isère, Jura, Landes, Pas-de-Calais, Pyrénées (Pyrénées-Orientales), Savoie, Seine-Maritime, Val-de-Marne, Var.

Neumania (Neumania) phreaticola Motaş & Tanasachi, 1948

Neumania phreaticola Motaş & Tanasachi, 1948: E. Angelier 1953b: 57, 1959: 16, 1959c: 161; Santucci 1970: 193, 1971: 83; Pešić et al. 2007: 192.

Distribution in France: Corsica.

Neumania (Neumania) spinipes (Müller, 1776)

Hydrarachna spinipes Müller, 1776: Hermann 1804: 54.

Neumania spinipes (Müller, 1776): Vandel 1919a: 90; Motaş 1928e: 28; 1928f: 191, 1928g: 6; Chaudonneret 1947: 3.

Nesaea mirabilis Neuman, 1880: Moniez 1887a: 162; Barrois & Moniez 1887: 7; Moniez 1889b: 8.

Cochleophorus spinipes (Müller, 1776): Schodduyn 1923: 143.

Distribution in France: Bas-Rhin, Côte-d'Or, Doubs, Isère, Nord, Pas-de-Calais, Somme, Var, Vosges.

Remark. K. Viets (1956) listed *Nesaea mirabilis* under *N. vernalis*, but according to K.O. Viets (1987) this species is a synonym of *N. spinipes*.

Neumania (Neumania) uncinata Walter, 1927

Neumania uncinata Walter, 1927: In: Walter & Motaş 1927: 127; Motaş 1927b: 2, 1928f: 192, 1928g: 6; Motaş & C. Angelier 1967: 18; Pešić et al. 2007: 195.

Distribution in France: Corsica, Pyrénées (Pyrénées-Orientales), Var.

Neumania (Neumania) vernalis (Müller, 1776)

Neumania vernalis vernalis (Müller, 1776): Vandel 1919a: 90; Soudan 1920: 4; Motaş 1926b: 412, 1928f: 190, 1928g: 5; Motaş & C. Angelier 1927d: 9; Chaudonneret 1947: 3; C. Angelier 1953: 218; Lundblad 1956a: 2; Smit & Van der Hammen 1992: 56.

Atax spinipes (Müller, 1776): Barrois & Moniez 1887: 5; Moniez 1889b: 8.

Atax vernalis (Müller, 1776): Barrois & Moniez 1887: 5.

New records. **Pas-de-Calais**: 0/4/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 0/2/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Côte-d'Or, Doubs, Hérault, Indre, Isère, Jura, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie, Somme.

Family Feltriidae Viets, 1926

Feltria (Feltria) armata Koenike, 1902

Feltria armata Koenike, 1902: Walter 1907b: 446; Hubault 1927: 102; Motaş & C. Angelier 1927d: 9; Motaş 1928e: 4, 1928f: 193; K. Viets 1939a: 2; C. Angelier 1950d: 354, 1951b: 74, Lundblad 1956a: 2; Nicolau-Guillaumet 1959: 237; Schwoerbel 1959a: 16; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Distribution in France: Haute-Loire, Haut-Rhin, Isère, Meurthe-et-Moselle, Puy-de-Dôme, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Vosges.

Feltria (Feltria) brevipes Walter, 1907

Feltria brevipes Walter, 1907: Hubault 1927: 102; Motaş 1928e: 17, 1928f: 194.

Feltria brevipes alpina Motaş & Şoarec, 1939 (see Bader 1973): Motaş 1928e: 4, 1928f: 194; C. Angelier 1950c: 354, 1951b: 74; E. Angelier 1953b: 97.

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Feltria armata alpina (= *F. brevipes alpina* Motaş & Şoarec, 1939): E. Angelier et al. 1963: 465.

Distribution in France: Haute-Savoie, Isère, Pyrénées (Pyrénées-Orientales), Savoie, Tarn.

Feltria (Feltria) conjuncta K.O. Viets, 1955

Feltria rouxi (erron., non Walter 1907): Walter & Motaş 1927: 137.

Distribution in France: Isère.

Feltria (Feltria) cornuta cornuta Walter, 1927

Feltria cornuta Walter, 1927: In: Walter & Motaş 1927: 141; Motaş 1927b: 3, 1928e: 17; 1928f: 195; Schwoerbel 1965: 478.

New record. **Gard**: 1/0/0, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit.

Distribution in France: Gard, Isère, Vosges.

Feltria (Feltria) cornuta longispina Motaş & C. Angelier, 1927

Feltria cornuta longispina Motaş & C. Angelier, 1927: 9; Motaş 1928f: 195.

Distribution in France: Haute-Loire.

Feltria (Feltria) cornuta paucipora Szalay, 1946

Feltria cornuta paucipora Szalay, 1946: E. Angelier 1953b: 69.

New record. **Hérault**: 1/0/0, Rivière La Vis at Gorniès, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Hérault, Pyrénées-Orientales.

Feltria (Feltria) denticulata E. Angelier, 1949

Feltria denticulata E. Angelier, 1949a: 89, 1949b: 238; Gledhill 1983: 426.

Distribution in France: Ariège, Pyrénées (Pyrénées-Orientales).

Feltria (Feltria) minuta Koenike, 1892

Feltria minuta Koenike, 1892: Walter 1922c: 241; Hubault 1927: 103; Motaş 1926b: 411, 1928e: 4, 1928f: 193, 1928g: 30; Motaş & C. Angelier 1927d: 9; C. Angelier 1951b: 74; Schwoerbel 1959a: 16; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Feltria composita Thor, 1897: Vandel 1920: 56.

Feltria kulczynskii Schechtel, 1910: K. Viets 1913a: 333.

Distribution in France: Doubs, Haut-Rhin, Haute-Loire, Hautes-Alpes, Isère, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques), Vosges.

Feltria (Feltria) oedipoda Viets, 1922

Feltria oedipoda Viets, 1922: Schwoerbel 1959a: 20.
Distribution in France: Vosges.

Feltria (Feltria) rouxi Walter, 1907

Feltria rouxi Walter, 1907: Motaş 1927b: 3, 1928e: 4, 1928f: 195, 1928g: 23; E. Angelier 1949b: 229; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Feltria bispinosa C. Angelier 1950d: 354; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Feltria romijni Besseling, 1930: E. Angelier et al. 1963: 462.

Distribution in France: Alpes-de-Haute-Provence, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques), Savoie, Tarn.

Feltria (Feltria) setigera Koenike, 1896

Feltria setigera Koenike, 1896: Walter 1922c: 240; Hubault 1927: 102; Walter & Motaş 1927: 130; Motaş 1928e: 4, 1928f: 193, 1928g: 30.

Feltria nusbaumi Schechtel, 1910: Walter 1922c: 240.

Feltria georgei Piersig, 1899: Hubault 1927: 103; Walter & Motaş 1927: 133; Motaş & C. Angelier 1927d: 9; Motaş 1928e: 4, 1928f: 192, 1928g: 30.

Distribution in France: Haute-Loire, Haute-Savoie, Hautes-Alpes, Isère, Savoie.

Feltria (Feltria) zschokkei zschokkei Koenike, 1896

Feltria zschokkei zschokkei Koenike, 1896: Motaş 1927b: 2, 1928e: 4, 1928f: 194.

Distribution in France: Isère.

Feltria (Feltria) zschokkei brevidentata Lundblad, 1956

Feltria zschokkei brevidentata Lundblad, 1956a: 242.

Distribution in France: Isère.

Feltria (Feltriella) menzeli Walter, 1922

Feltria menzeli Walter, 1922: K. Viets 1951d: 285, 1954c: 308; E. Angelier 1959: 16; Vaillant 1956: 158.

Distribution in France: Corsica, Hautes-Alpes, Isère.

Feltria (Feltriella) rubra Piersig, 1898

Feltria rubra Piersig, 1898: Hubault 1927: 103; Motaş 1926b: 411, 1927b: 3, 1928e: 4, 1928f: 192, 1928g: 30; K. Viets 1939a: 2; C. Angelier 1950d: 357, 1951b: 74; Lundblad 1928e: 2; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Distribution in France: Haute-Savoie, Isère, Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées), Savoie.

Family Pionidae Thor, 1900

Piona alpicola (Neuman, 1880)

Piona alpicola (Neuman, 1880): Smit & Van der Hammen 1992: 56.

Piona uncata (Koenike, 1888): Motaş 1928f: 203; Chaudonneret 1947: 3.

Piona uncata controversiosa (Piersig, 1896): Motaş 1927b: 3 (as *controversiosa uncata*), 1928f: 204; C. Angelier 1953: 220; Petit & Schachter 1954: 244.

Nesaea viridis Koch, 1836: Barrois & Moniez 1887: 7; Barrois 1889b: 433; Moniez 1889e: 6.

New records. **Corsica**: 1/0/0, marsh near Calvi, 7 May 1997, leg. H. van der Hammen. **Haute-Vienne**: 0/1/0, lake, La Chapelle-Montbrandeix,

45°38'35"N 0°51'27": E, 29 April 2002, leg. G. van Ee. **Indre**: 1/0/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 0/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Bouches-du-Rhône, Corsica, Côte-d'Or, Haute-Vienne, Indre, Isère, Nord, Pas-de-Calais, Savoie, Seine-Maritime.

Piona ambigua (Piersig, 1894)

New records. **Pas-de-Calais**: 0/5/0, temporary pool, Les Landes de Blendecques, 50°42'11.31" N 2°16'33.37" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/3/0, pool with Culicidae, Les Landes de Blendecques, 50°42'32.19" N 2°14'32.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/2/0, forest pool, Les Landes de Blendecques, 50°42'12.57" N 2°14'17.64" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/0/0, spring pond, Les Landes de Blendecques, 50°42'30.97" N 2°16'2.51" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/3/0, pool, Les Landes de Blendecques, 50°42'16.47" N 2°16'27.82" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 2/25/0, pool, Les Landes de Blendecques, 50°41'55.87" N 2°14'18.23" E, 19 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Pas-de-Calais. New for the fauna of France.

Piona carnea (Koch, 1836)

Piona carnea (Koch, 1836): K. Viets 1913a: 333; Soudan 1920: 4; Motaş 1928e: 30, 1928f: 203, 1928g: 7; C. Angelier 1950d: 358; Smit & Van der Hammen 1992: 55; Peyrusse et al. 2005: 324.

New records. **Haute-Vienne**: 1/6/0, lake, La Chapelle-Montbrandeix, 45°38'35"N 0°51'27": E, 29 April 2002, leg. G. van Ee. **Hérault**: 8/11/4, Pool at crossing of roads D9 and D130, S of la Vacquerie-et-St.Martin-de-Castries, 43°46.499 N 3°28.101 E, alt. 677 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Haute-Saône, Haute-Vienne, Hérault, Isère, Pas-de-Calais, Pyrénées (Hautes-Pyrénées), Var.

Piona clavicornis (Müller, 1776)

Piona clavicornis (Müller, 1776): Motaş 1928e: 28, 1928f: 199, 1928g: 13; Hubault 1947: 217; Smit & Van der Hammen 1992: 55.

Nesaea clavicornis (Müller, 1776): Barrois & Moniez 1887: 7.

Distribution in France: Isère, Nord, Pas-de-Calais, Vosges.

Piona coccinea (Koch, 1836)

Piona coccinea (Koch, 1836): Motaş & C. Angelier 1927d: 10; Motaş 1928f: 202, 1928g: 5; C. Angelier 1931: 37, 1950a: 5, 1953: 220; Smit & Van der Hammen 1992: 56.

Nesaea nodata (err., non Müller, 1776): Barrois & Moniez 1887: 6; Moniez 1889b: 8.

Nesaea binotata Kramer, 1879: Barrois & Moniez 1887: 6; Moniez 1887a: 162.

Piona longicornis (Koch, 1836): Motaş 1926b: 412.

Distribution in France: Ain, Essonne, Isère, Jura, Loire, Nord, Pas-de-Calais, Savoie, Seine-Maritime, Val-de-Marne, Vosges.

Piona conglobata conglobata (Koch, 1836)

Piona conglobata (Koch, 1836): Soudan 1920: 4; Motaş 1926b: 412, 1928e:17, 1928f: 199, 1928g: 5; Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 35; Lundblad 1956a: 7; E. Angelier et al. 1963: 465; Smit & Van der Hammen 1992: 56.

Piona conglobata punctata (Neuman, 1875): Schwoerbel 1959a: 15.

Piona conglobata conjugula Koenike, 1909: Motaş 1927b: 3, 1928f: 200, 1928g: 5; Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 36.

Piona communis (Kramer, 1875): Barrois & Moniez 1887: 16; Moniez 1889e: 6.

Dispersipiona conglobata (Koch, 1836): Chaudonneret 1947: 3.

Nesaea communis Kramer, 1875: Moniez 1889b: 8.

Nesaea luteola Koch, 1836: Barrois & Moniez 1887: 5; Moniez 1889b: 8.

Nesaea pachydermis Kramer, 1879: Barrois & Moniez 1887: 6.

New records. **Pas-de-Calais**: 0/1/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08"E, 19 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 0/3/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 0/9/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen. **Cantal**: 1/0/0, Lac Cascades, N of Le Claux, 45°11.228 N 2°42.361 E, 997 a.s.l., 18 May 2005, leg H. Smit.

Distribution in France: Ain, Cantal, Charente, Côte-d'Or, Haute-Loire, Haute-Savoie, Indre, Isère, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie, Seine-Maritime, Somme, Tarn, Val-de-Marne, Vosges.

Piona discrepans (Koenike, 1895)

Piona discrepans (Koenike, 1895): Motaş & C. Angelier 1927d: 10; Motaş 1928f: 201, 1928g: 13; Smit & Van der Hammen 1992: 55.

Distribution in France: Haute-Loire, Pas-de-Calais, Puy-de-Dôme.

Piona disparilis (Koenike, 1895)

Piona disparilis (Koenike, 1895): Motaş 1926b: 412, 1927b: 3, 1928e: 3, 1928f: 202, 1928g: 9; Léger & Motaş 1928d: 13, 1928b: 1239; Walter & Motaş 1927: 144; Chaudonneret 1947: 3; Smit & Van der Hammen 1992: 55.

Distribution in France: Ain, Côte-d'Or, Isère, Pas-de-Calais, Savoie.

Piona imminuta (Piersig, 1897)

Piona coccinea confertipora Walter, 1927: In Walter & Motaş 1927: 146; Motaş 1927b: 3, 1928f: 203, 1928g: 5; C. Angelier 1950a: 5; Lundblad 1956a: 7.

Piona longicornis imminuta (Piersig, 1897): Motaş 1926b: 412 (see Motaş 1927b).

Distribution in France: Ain, Charente, Essonne, Indre-et-Loire, Isère.

Piona longipalpis (Krendowsky, 1878)

Piona longipalpis (Krendowsky, 1878): Derône 1914: 46; Vandel 1919a: 90; Motaş 1926b: 412, 1928f: 203, 1928g: 9; C. Angelier 1931: 38, 1953: 220.

Nesaea coccinea Bruzelius, 1854: Moniez 1887a: 162; Barrois & Moniez 1887: 6.

Curvipes longipalpis (Krendowsky, 1878): Schodduyn 1925a: 190, 1926a: 311.

Distribution in France: Ain, Côte-d'Or, Doubs, Isère, Hautes-Pyrénées, Jura, Nord, Pas-de-Calais, Savoie, Seine-Maritime, Val-de-Marne, Vosges.

Piona neumani (Koenike, 1883)

Piona circularis (Piersig, 1896): Motaş 1927b: 3, 1928f: 200, 1928g: 5.

Tetrapiona Neumani (Koenike, 1883): Chaudonneret 1947: 3.

Tetrapiona circularis (Piersig, 1896): Chaudonneret 1947: 3.

New record. **Indre**: 1/0/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Côte-d'Or, Indre.

Piona nodata nodata (Müller, 1776)

Piona nodata nodata (Müller, 1776): Moniez 1889e: 6; Soudan 1920: 4; Motaş 1926b: 412, 1928e: 28, 1928f: 201; Motaş & C. Angelier 1927d: 10; Chaudonneret 1947: 3; Schachter 1950; C. Angelier 1953: 221; Petit & Schachter 1954: 244; Lundblad 1956a: 2; Smit & Van der Hammen 1992: 56; Peyrusse et al. 2005: 324.

? *Nesaea fuscata* Hermann, 1804: Barrois & Moniez 1887: 7; Moniez 1889b: 8.

Nesaea nodata Müller, 1776: Moniez 1889b: 8.

Hydrarachna histrionica Hermann, 1804: 54; De Théis 1832: 61.

New records. **Pas-de-Calais**: 1/9/0, temporary pool, Les Landes de Blendecques, 50°42'11.31" N 2°16'33.37" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 2/9/0, shallow pool, Les Landes de Blendecques, 50°42'20.49" N 2°16'32.82" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 16/23/0,

pool with Culicidae, Les Landes de Blendecques, 50°42'32.19" N 2°14'32.07" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 10/19/0, pool, Les Landes de Blendecques, 50°42'16.47" N 2°16'27.82" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 9/16/0, pool, Les Landes de Blendecques, 50°42'15.56" N 2°16'22.70" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/1/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Aisne, Aude, Bas-Rhin, Bouches-du-Rhône, Côte-d'Or, Haute-Loire, Haute-Saône, Hérault, Isère, Loire, Nord, Pas-de-Calais, Savoie, Seine-Maritime, Somme.

Remark. According to Koenike (1908a) *Hydrarachna histrionica* Hermann, 1804 refers to *P. nodata* and, not, as stated by Motaş (1928f), to *Limnesia histrionica* Bruzelius, 1854 (= *L. fulgida*).

Piona obturbans (Piersig, 1896)

Piona obturbans (Piersig, 1896): Soudan 1920: 4; Motaş 1926b: 412, 1928e: 28, 1928f: 201, 1928g: 5; Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 37, 1953: 221; Chaudonneret 1947: 3; Smit & Van der Hammen 1992: 56.

New records. **Pas-de-Calais**: 0/1/0, temporary pool, Les Landes de Blendecques, 50°42'11.31" N 2°16'33.37" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 5/2/0, shallow pool, Les Landes de Blendecques, 50°42'20.49" N 2°16'32.82" E, 19 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Ain, Ardèche, Côte-d'Or, Haute-Saône, Haute-Savoie, Isère, Pas-de-Calais, Puy-de-Dôme, Savoie, Val-de-Marne.

Piona paucipora (Thor, 1897)

Piona paucipora (Thor, 1897): Motaş 1927b: 3, 1928f: 200; C. Angelier 1953: 221; E. Angelier et al. 1963: 465.

Distribution in France: Savoie, Tarn.

Piona pusilla (Neuman, 1875)

Piona pusilla (Neuman, 1875): Smit & Van der Hammen 1992: 56.

Piona rotunda (Kramer, 1879): Moniez 1889e: 6; Derône 1914: 46; Soudan 1920: 4; Motaş 1928e: 28, 1928f: 201, 1928g: 5; Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 36; Chaudonneret 1947: 3; E. Angelier et al. 1963: 465.

Nesaea rotunda Kramer, 1879: Moniez 1887a: 162; Barrois & Moniez 1887: 6; Richards 1887: 953.

Curvipes rotundus (Kramer, 1879): Thor 1903d: 16; Schodduyn 1926a: 311.

New records. **Corsica**: 5/1/0, marsh near Calvi, 7 May 1997, leg. H. van der Hammen. **Indre**: 0/2/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 1/0/0, pond near Étang Prieur, La Brenne, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen; 0/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen; 1/0/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen. **Vienne**: 1/1/0, pool, Réserve naturelle du Pinail, 46°42'N 0°31'E, 8 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Corsica, Côte-d'Or, Indre, Isère, Nord, Paris, Pas-de-Calais, Puy-de-Dôme, Seine-Maritime, Tarn, Val-de-Marne, Vienne, Vosges.

Piona rotundoides (Thor, 1897)

Piona rotundoides (Thor, 1897): E. Angelier et al. 1963: 465; Smit & Van der Hammen 1992: 57.

New record. **Pas-de-Calais**: 0/7/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08"E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Pas-de-Calais, Tarn.

Piona stjoerdalensis (Thor, 1897)

Piona coccinea stjoerdalensis (Thor, 1897): E. Angelier et al. 1963: 464.

Piona coccinea oculata Koenike, 1914: Motaş 1927b: 3, 1928f: 202; C. Angelier 1931: 37.

New record. **Indre**: 0/1/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Indre, Savoie, Tarn, Val-de-Marne.

Piona tuberifera Viets, 1910

Piona tuberifera Viets, 1910: Chaudonneret 1947: 3.

Distribution in France: Côte-d'Or.

Piona variabilis (Koch, 1836)

? *Hydrarachna fuscata* Hermann, 1804 (non Müller, 1776): 58.

Piona variabilis (Koch, 1836): Motaş 1926b: 412, 1928f: 200, 1928g: 5; Motaş & C. Angelier 1927d: 10; E. Angelier 1959: 16, 1959a: 69; Smit & Van der Hammen 1992: 56.

Nesaea variabilis Koch, 1836: Moniez 1887a: 162; Barrois & Moniez 1887: 6; Moniez 1889b: 8, 1889e: 6.

? *Nesaea rufa* (Koch, 1836): Barrois & Moniez 1887: 7.

New records. **Pas-de-Calais**: 2/0/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Cantal**: 26/0/0, Lac Cascades, N of Le Claux, 45°11.228 N 2°42.361 E, 997 a.s.l., 18 May 2005, leg. H. Smit.

Distribution in France: Ain, Bas-Rhin (?), Cantal, Corsica, Isère, Nord, Pas-de-Calais, Puy-de-Dôme, Seine-Maritime, Somme, Vosges.

Nautarachna asperrima Moniez, 1888

Nautarachna asperrimum Moniez, 1888: 64; Walter 1925d: 46.

Distribution in France: Somme.

Nautarachna crassa (Koenike, 1908)

Nautarachna crassa (Koenike, 1908): Viets 1936d: 312; E. Angelier et al. 1985: 31.

Distribution in France: Hautes-Pyrénées, Savoie.

Hydrochoreutes krameri Piersig, 1896

Hydrochoreutes krameri Piersig, 1896: Vandel 1919a: 90; Soudan 1920: 4; Motaş 1926b: 412, 1928e: 28, 1928f: 204, 1928g: 5; Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 38, 1953: 219; Chaudonneret 1947: 4; E. Angelier et al. 1963: 465; Smit & Van der Hammen 1992: 56.

New records: **Landes**: 0/1/0, Étang Blanc, 27 July 1989, leg. H. van der Hammen. **Indre**: 0/1/0, reedland S of Étang de Bellebouche, Le Brenne, 46°46.783 N 1°18.641 E, alt. 108 m a.s.l., 25 May 2005, leg. H. Smit.

Distribution in France: Ain, Côte-d'Or, Doubs, Haute-Loire, Haute-Savoie, Indre, Indre-et-Loire, Isère, Jura, Landes, Pas-de-Calais, Puy-de-Dôme, Savoie, Seine-Maritime, Tarn, Val-de-Marne.

Hydrochoreutes ungulatus (Koch, 1836)

Hydrochoreutes ungulatus (Koch, 1836): Barrois & Moniez 1887: 20; Smit & Van der Hammen 1992: 57.

Hydrochoreutes filipes Koch, 1837: Barrois & Moniez 1887: 19.

Hydrochoreutes cruciger Koch, 1837: Barrois & Moniez 1887: 20.

Nesaea brachiata Kramer, 1875: Barrois & Moniez 1887: 10.

Distribution in France: Nord, Pas-de-Calais.

Tiphys (Tiphys) lapponicus (Neuman, 1880)

Tiphys lapponicus (Neuman, 1880): Schwoerbel 1959a: 15.

Distribution in France: Vosges.

Tiphys (Tiphys) latipes (Müller, 1776)

Piona latipes (Müller, 1776): Barrois & Moniez 1887: 17; Schwoerbel 1959a: 17.

New records. **Pas-de-Calais**: 0/3/0, temporary pool, Les Landes de Blendecques, 50°42'11.31" N 2°16'33.37" E, 19 April 1996, leg. H. Smit & H. van der Hammen. **Cantal**: 1/0/0/, marshy area N of Le Claux, along road D262, 45°11.296 N 2°42.509 E,

alt. 958 m a.s.l., 18 May 2005, leg. H. Smit; 0/2/0, Source du Goul (helocrenes), E of Thiézac, 45°00.739 N 2°43.351 E, alt. 1465 m a.s.l., 19 May 2005, leg. H. Smit.

Distribution in France: Cantal, Nord, Pas-de-Calais, Vosges.

Tiphys (Tiphys) ornatus Koch, 1836

Acercus ornatus (Koch, 1836): Soudan 1920: 4; Motaş 1926b: 412, 1928f: 205, 1928g: 5; Motaş & C. Angelier 1927d: 10.

Tiphys ornatus Koch, 1836: Smit & Van der Hammen 1992: 57.

Piona ornata (Koch, 1836): Barrois & Moniez 1887: 16.

Piona loricata Barrois & Moniez, 1887: 18.

New record. **Puy-de-Dôme**: 0/5/0, Lac Estivadoux, SE of Lac Pavin, 45°29.436 N 2°54.136 E, alt. 1326 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ain, Isère, Loire, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie.

Tiphys (Tiphys) scaurus (Koenike, 1892)

Tiphys scaurus (Koenike, 1892): Motaş 1928f: 207; Schwoerbel 1959a: 15.

Distribution in France: Isère, Vosges.

Tiphys (Tiphys) torris (O.F.Müller, 1776)

Acercus torris (O.F.Müller, 1776): Motaş 1928f: 263.

Distribution in France: Isère.

Tiphys (Aceropsis) pistillifer (Koenike, 1908)

Aceropsis pistillifer stylatus (Lundblad, 1924): Motaş 1927b: 3, 1928f: 209.

Distribution in France: Isère.

Tiphys (Pionides) ensifer (Koenike, 1895)

Pionides ensifer (Koenike, 1895): Motaş 1928f: 208; Chaudonneret 1947: 4; C. Angelier 1953: 219.

Distribution in France: Côte-d'Or, Isère, Savoie.

Pionopsis lutescens lutescens (Hermann, 1804)

Hydrarachna lutescens Hermann, 1804: 57; De Théis 1832: 61 (laps. *lutescens*).

Acercus lutescens (Hermann, 1804): Motaş 1926b: 412.

Pionopsis lutescens (Hermann, 1804): Schodduyn 1926a: 311; Motaş 1928f: 209, 1928g: 5; Chaudon-neret 1947: 4; C. Angelier 1953: 219; Schachter 1950; Petit & Schachter 1954: 217; Smit & Van der Hammen 1992: 57.

Piona lutescens (Hermann, 1804): Barrois & Moniez 1887: 15.

Hydracna lutescens Daudebart de Férussac, 1806: 217.

Atax lutescens (Hermann, 1804): A.-L.D. Dugès 1834a: 17, 1834b: 145.

Piona flavescens Neuman, 1875: Moniez 1887a: 162.

Distribution in France: Ain, Aisne, Bas-Rhin, Bouches-du-Rhône, Côte-d'Or, Hérault, Isère, Loire, Lot, Nord, Pas-de-Calais, Savoie, Vosges.

Pionacercus (Pionacercus) leuckarti Piersig, 1894

Pionacercus scutatus Thor, 1898: C. Angelier 1950d: 357, 1951b: 74.

Pionacercus leuckarti Piersig, 1894: Vandel 1919a: 90; Motaş & C. Angelier 1927d: 10; Motaş 1928e: 30, 1928f: 210, 1928g: 13.

Distribution in France: Doubs, Haute-Loire, Loire, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie.

Pionacercus (Pionacercus) uncinatus (Koenike, 1885)

Pionacercus uncinatus (Koenike, 1885): Motaş 1927b: 3, 1928e: 28, 1928f: 209, 1928g: 13; C. Angelier 1953: 220.

Distribution in France: Isère, Savoie.

Pionacercus (Pionacercopsis) vatrax (Koch, 1837)

Acercus vatrax (Koch, 1837): Barrois & Moniez 1887: 10.

Pionacercus vatrax (Koch, 1837): Hubault 1931: 153.

Distribution in France: Marne, Nord.

Forelia (Forelia) brevipes (Neuman, 1880)

Forelia ligulifera (Piersig, 1897): Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 32; Motaş 1927b: 3, 1928e: 28, 1928f: 198, 1928g: 9.

Nesaea brevipes Neuman, 1880: Barrois & Moniez 1887: 6.

Forelia triangularis (Piersig, 1896): Motaş 1926b: 412.

Distribution in France: Ain, Isère, Nord, Puy-de-Dôme, Savoie, Val-de-Marne.

Forelia (Forelia) cetrata (Koenike, 1895)

Forelia cetrata (Koenike, 1895): Motaş 1926b: 412, 1927b: 3, 1928e: 3, 1928f: 198, 1928g: 9; C. Angelier 1931: 33, 1953: 221.

Distribution in France: Ain, Isère, Jura, Savoie, Val-de-Marne.

Forelia (Forelia) curvipalpis K. Viets, 1930

New records. **Pas-de-Calais:** 0/1/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/7/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre:** 0/1/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 0/2/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2' E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Indre, Pas-de-Calais. New for the fauna of France.

Forelia (Forelia) koenikei Barrois & Moniez, 1887

Acercus koenikei Barrois & Moniez, 1887: 13.

Distribution in France: Nord.

Forelia (Forelia) liliacea (Müller, 1776)

Hydrarachna liliacea Müller, 1776: Hermann 1804: 54.

Forelia liliacea (Müller, 1776): Vandel 1919a: 90; Motaş & C. Angelier 1927d: 10;

Motaş 1928f: 197, 1928g: 9; C. Angelier 1931: 32; Chaudonneret 1947: 3; E. Angelier 1953b: 68; Schwoerbel 1959a: 15; Smit & Van der Hammen 1992: 55.

Distribution in France: Bas-Rhin, Côte-d'Or, Doubs, Haute-Loire, Haute-Savoie, Pas-de-Calais, Puy-de-Dôme, Pyrénées-Orientales, Savoie, Val-de-Marne, Vosges.

Forelia (Forelia) spatulifera (Marucci, 1907)

Forelia ligulifera obtusata Lundblad, 1924: Motaş 1928f: 198, 1928g: 12.

Distribution in France: Puy-de-Dôme.

Forelia (Forelia) variegator variegator (Koch, 1837)

Forelia variegator (Koch, 1837): C. Angelier 1951b: 77, 1953: 222; Schwoerbel 1959a: 17; Motaş & C. Angelier 1967: 17; Vinçon 1987: 240.

Forelia parmata Koenike, 1906: Migot 1926b: 129; Motaş & C. Angelier 1927d: 10; Motaş 1928e: 28, 1928f: 199, 1928g: 7; C. Angelier 1931: 33; Motaş & Şoarec 1939a: Appendix.

New record. **Indre**: 0/1/0, Ruisseau de Fosse Noire near Vendroeuves, La Brenne, 46°46'28.14"N 1°21'42.58" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Corrèze, Haut-Rhin, Indre, Isère, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Pyrénées-Atlantiques), Savoie, Val-de-Marne, Var.

Pseudofeltria scourfieldi Soar, 1904

Pseudofeltria scutigera Walter, 1922: Schwoerbel 1959a: 20.

Distribution in France: Vosges.

Family Wettinidae Cook, 1956

Wettina podagrica (Koch, 1837)

Wettina podagrica (Koch, 1837): Motaş 1926b: 412, 1927b: 3, 1928e: 3, 1928f: 204, 1928g: 7; Motaş & C. Angelier 1927d: 10; C. Angelier 1953: 219.

Distribution in France: Corrèze, Haute-Loire, Isère, Puy-de-Dôme, Savoie, Var.

Family Frontipodopsidae Viets, 1931

Frontipodopsis reticulatifrons reticulatifrons Szalay, 1945

Frontipodopsis reticulatifrons Szalay, 1945: Schwoerbel 1962e: 256, 1965: 477.

Frontipodopsella subterranea Walter, 1947: E. Angelier 1949b: 228.

Frontipodopsis subterranea (Walter, 1947): E. Angelier 1953b: 106 (laps. *Frontipoda*), 1959: 16, 1959c: 164; Santucci 1970: 193, 1971: 83, 1977: 83.

Distribution in France: Corsica, Haut-Rhin, Pyrénées (Pyrénées-Orientales).

Family Aturidae Thor, 1900

Barbaxonella angulata (K. Viets, 1955)

Barbaxonella pilosa Angelier, Decamps & Rey, 1963: 480. Nov. syn.

Material examined: MNHN Paris, Tarn Céret (?), uncertain sites, (red inscription, only numbers): 72, 1/0/0; 76, 1/0/0; 83, 1/0/0; 100, 0/1/0; 128, 0/5/0; 160, 0/1/0; 161, 2/0/0; 196, 1/3/0; (14 further, unstudied specimens numbered 95, 107, 141, 151, 152, 157, 177, 186).

Discussion: Short time after the first description of *B. pilosa*, Gledhill (1964) discovered that the species described as *Axonopsalbia angulata* K. Viets, 1955 in reality was a representative of the genus *Barbaxonella* and gave the first description of a male of this species. *Barbaxonella pilosa*, in the original description compared only with *B. ovalis* Lundblad, 1954, was not treated again since then. A revision of 30 syntypes recently discovered at MNHN

Smit H. and Gerecke R.

Paris (for details concerning the material see discussion of *Atractides phreaticus*) does not reveal any remarkable differences to *B. angulata* of which *B. pilosa* is consequently a junior synonym. In France, it is known exclusively from the seven sites in the Cevennes published by Angelier et al. (1963).

Distribution in France: Tarn.

Barbaxonella reverendissima Gerecke, 1994

Barbaxonella reverendissima Gerecke, 1994: 277.

Distribution in France: Corsica.

Hexaxonopsalbia lautieni (Motaş, 1928)

Axonopsalbia lautieni Motaş, 1928f: 252, 1928g: 7.

Sumatralbia lautieni (Motaş, 1928): E. Angelier 1953b: 68.

Distribution in France: Pyrénées-Orientales, Var.

Albaxona (Vietsaxona) lundbladi Motaş & Tanasachi, 1947

Vietsaxona lundbladi Motaş & Tanasachi, 1947: E. Angelier et al. 1963: 463.

Albaxona elegans Walter, 1947: E. Angelier 1953b: 109 (see Schwoerbel 1962b).

Distribution in France: Isère, Tarn.

Prymnopsella bucculata Gerecke, 1991

Prymnopsella bucculata Gerecke, 1991: Gerecke 1994: 279.

Distribution in France: Corsica.

Brachypoda (Brachypoda) versicolor (Müller, 1776)

Brachypoda versicolor (Müller, 1776): Moniez 1889b: 8, 1889e: 6; Derône 1914: 46; Vandel 1919a: 90; Soudan 1920: 5. Schodduyn 1926a: 311; Motaş 1926b: 411, 1928f: 230, 1928g: 5; Motaş & C. Angelier 1927d: 10; C. Angelier 1931: 39, 1953: 222; Chaudonneret 1947: 4; Smit & Van der Hammen 1992: 56.

Axonopsis versicolor (Müller, 1776): Moniez 1887a: 162; Richards 1887: 953; Barrois & Moniez 1887: 22.

Hydrarachna versicolor Müller, 1776: Hermann 1804: 54.

New record: **Pas-de-Calais**: 0/2/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Ain, Bas-Rhin, Côte-d'Or, Doubs, Isère, Jura, Nord, Pas-de-Calais, Puy-de-Dôme, Savoie, Seine-Maritime, Somme, Val-de-Marne, Vosges.

Brachypoda (Hemibrachypoda) modesta Koenike, 1911

Brachypoda modesta Koenike, 1911: Lundblad 1956a: 7.

Distribution in France: Gironde.

Albia stationis Thor, 1899

Albia stationis Thor, 1899: Motaş 1928f: 250, 1928g: 9.

Distribution in France: Haute-Savoie, Savoie.

Aturus asserculatus asserculatus Walter, 1906

Aturus asserculatus Walter, 1906: Motaş 1926b: 411, 1927b: 3, 1928e: 4, 1928f: 232, 1928g: 23; K. Viets 1951d: 285, 1952c: 245; Vaillant 1956: 178.

Distribution in France: Isère, Savoie, Var.

Aturus barbatulus Viets, 1936

Aturus barbatulus Viets, 1936: C. Angelier 1949d: 697, 1951b: 75; E. Angelier 1953b: 61, 1957a: 27, 1959: 16, 1959a: 67, 1965: 106; Motaş & C. Angelier 1967: 17.

Distribution in France: Corsica, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Ariège).

Aturus brachypus Viets, 1936

Aturus brachypus Viets, 1936: E. Angelier et al. 1963: 464; E. Angelier 1965: 106.

Aturus paucisetus Motaş & Tanasachi, 1946: E. Angelier 1953b: 93.

Distribution in France: Pyrénées (Pyrénées-Orientales), Tarn.

Aturus crinitus Thor, 1902

Aturus crinitus Thor, 1902: Motaş 1926b: 411, 1927b: 3, 1928e: 4, 1928f: 233, 1928g: 23; Motaş & C. Angelier 1927d: 14; C. Angelier 1931: 41; K. Viets 1939a: 2; 1951d: 285, Lundblad 1956a: 2; E. Angelier 1965: 105; Giudicelli 1970: 112; Santucci 1971: 83; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Distribution in France: Ain, Corsica, Isère, Haute-Savoie, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Atlantiques, Hautes-Pyrénées), Savoie, Val-de-Marne.

Aturus elongatus elongatus Walter, 1927

Aturus elongatus Walter, 1927: In Walter & Motaş 1927: 148; Motaş 1927b: 3, 1928e: 17, 1928f: 237, 1928g: 30.

Distribution in France: Isère.

Aturus elongatus processiger Lundblad, 1956

Aturus elongatus processiger Lundblad, 1956: E. Angelier 1965: 105; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Distribution in France: Pyrénées (Ariège, Hautes-Pyrénées).

Aturus gallicus K. Viets, 1939

Aturus gallicus K. Viets, 1939a: 12; E. Angelier 1965: 105; Vinçon 1987: 240.

Distribution in France: Pyrénées (Pyrénées-Atlantiques, Hautes-Pyrénées, Ariège).

Aturus intermedius Protz, 1900

Aturus intermedius Protz, 1900: Motaş 1927b: 3, 1928e: 4, 1928f: 232, 1928g: 23; C. Angelier 1951b: 77; Nicolau-Guillaumet 1959: 237; E. Angelier et al. 1963: 463; E. Angelier 1965: 106; Motaş & C. Angelier 1967: 17.

New record. **Hérault**: 1/5/0, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Hérault, Isère, Pyrénées (Pyrénées-Orientales), Savoie, Tarn.

Aturus karamani K. Viets, 1936

Aturus karamani K. Viets, 1936: E. Angelier 1953b: 109.

Aturus pauciporus Walter, 1947: E. Angelier 1965: 106.

Distribution in France: Isère, Pyrénées-Orientales.

Aturus natangensis Protz, 1900

Aturus natangensis Protz, 1900: Motaş 1928f: 233, 1928g: 23; C. Angelier 1931: 41.

Distribution in France: Savoie, Val-de-Marne.

Aturus prenanti E. Angelier, 1965

Aturus prenanti E. Angelier, 1965: 103; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Distribution in France: Pyrénées (Ariège, Hautes-Pyrénées).

Aturus protzi Piersig, 1901

Aturus scitulus C. Angelier, 1950b: 81, 1951b: 75; E. Angelier 1953b: 61, 1957a: 27, 1959: 16, 1959a: 67; Santucci 1971: 83.

Aturus protzi Piersig, 1901: E. Angelier et al. 1963: 462; E. Angelier 1965: 105; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New record. **Ardèche**: 1/0/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Pyrénées (Ariège, Pyrénées-Orientales, Pyrénées-Atlantiques, Hautes-Pyrénées), Tarn.

Aturus scaber scaber Kramer, 1875

Aturus scaber Kramer, 1875: Hubault 1927: 104; Motaş 1926b: 411, 1927b: 3, 1928e: 4, 1928f: 230; Motaş & C. Angelier 1927d: 12; C. Angelier 1931: 40, 1951b: 74; K. Viets 1939a: 2; Lundblad 1956a: 2; E. Angelier 1957a: 27, 196: 105; Nicolau-Guillaumet 1959: 237; Schwoerbel 1959a: 15, 1965: 477; E. Angelier et al. 1963: 464; Motaş & C. Angelier 1967: 17; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

New recordss. **Ardèche**: 0/1/0, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit; 1/2/0, La Drobie Rivière, NW of Ribes, 44°32.256 N 4°03.364 E, 1 May 2003, leg. H. Smit. **Gard**: 0/2/0, Le Trèvezet Rivière, between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit. **Cantal**: 0/1/0, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit. **Puy-de-Dôme**: 0/1/0, La Planchette at Jassat, S of Murol, 45°33.716 N 2°56.339 E, alt. 894 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Gard, Gers, Haut-Rhin, Isère, Loire, Meurthe-et-Moselle, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Tarn, Val-de-Marne.

Aturus scaber rotundus Romijn, 1921

Aturus scaber rotundus Romijn, 1921: Motaş 1928f: 231, 1928g: 23 (*rotunda*).

Distribution in France: Savoie.

Aturus serratus Viets, 1922

Aturus serratus Viets, 1922: Lundblad 1956a: 2.

Distribution in France: Isère.

Aturus spatulifer Piersig, 1904

Aturus spatulifer Piersig, 1904: M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Distribution in France: Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques).

Aturus villosus Motaş & Şoarec, 1939

Aturus villosus Motaş & Şoarec, 1939a: 8; E. Angelier 1949b: 228, 1965: 105; C. Angelier 1950d: 358; Motaş & C. Angelier 1967: 17; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Distribution in France: Pyrénées (Ariège, Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques).

Kongsbergia (Kongsbergia) alata Szalay, 1945

Kongsbergia alata Szalay, 1945: E. Angelier 1949b: 229, 1950b: 244, 1953b: 91, 1959: 16, 1959c: 164; Santucci: 1977: 84.

Distribution in France: Corsica, Drôme, Haute-Savoie, Isère, Pyrénées (Pyrénées-Orientales), Savoie.

Kongsbergia (Kongsbergia) angusta Walter, 1947

Kongsbergia (Kongsbergia) angusta Walter, 1947: E. Angelier 1950b: 238, 1953b: 109.

Distribution in France: Isère, Savoie.

Kongsbergia (Kongsbergia) arenaria E. Angelier, 1951

Kongsbergia arenaria E. Angelier, 1951b: 509; E. Angelier 1959: 16, 1959c: 164; Santucci: 1977: 84.

Distribution in France: Corsica.

Kongsbergia (Kongsbergia) clypeata Szalay, 1945

Kongsbergia clypeata Szalay, 1945: E. Angelier 1949b: 229, 1950b: 240, 1953b: 93, 1953c: 478; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

Distribution in France: Pyrénées (Pyrénées-Orientales, Pyrénées-Atlantiques, Hautes-Pyrénées).

Kongsbergia (Kongsbergia) dentata Walter, 1947

Kongsbergia dentata Walter, 1947: E. Angelier 1950b: 243, 1953b: 91, 1953c: 478; Schwoerbel 1965: 478; Santucci: 1977: 84.

Distribution in France: Corsica, Haut-Rhin, Haute-Savoie, Isère, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales), Savoie.

Kongsbergia (Kongsbergia) elliptica E. Angelier, 1950

Kongsbergia elliptica E. Angelier, 1950b: 242.

Distribution in France: Pyrénées (Pyrénées-Atlantiques, Ariège).

Kongsbergia (Kongsbergia) largaiollii (Maglio, 1909)

Kongsbergia largaiollii (Maglio, 1909): Motaş 1927b: 3, 1928e: 4, 1928f: 242, 1928g: 23; Lundblad 1956a: 2; E. Angelier 1953b: 61, 1959: 16, 1959a: 67.

Distribution in France: Corsica, Isère, Savoie.

Kongsbergia (Kongsbergia) materna Thor, 1899

Kongsbergia materna Thor, 1899: Motaş & C. Angelier 1927d: 14; Motaş 1927b: 3, 1928e: 4, 1928f: 242; Lundblad 1956a: 2; E. Angelier 1957a: 27; E. Angelier et al. 1963: 463; Santucci 1977: 84; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31; Vinçon 1987: 240 (?).

Hjartdalia runcinata Thor, 1901: Motaş 1926b: 411.

Distribution in France: Corsica, Isère, Puy-de-Dôme, Pyrénées (Ariège, Pyrénées-Atlantiques, Hautes-Pyrénées), Tarn.

Kongsbergia (Kongsbergia) pectinigera Motaş & Tanasachi, 1946

Kongsbergia pectinigera Motaş & Tanasachi, 1946: Schwoerbel 1962e: 256, 1965: 477.

Distribution in France: Haut-Rhin, Vosges.

Kongsbergia (Kongsbergia) ruttneri Walter, 1930

Kongsbergia ruttneri Walter, 1930: Motaş 1928e: 31, 1928f: 243 (as *nomen nudum*); Schwoerbel 1962e: 256, 1965: 477; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New record: **Puy-de-Dôme**: 1/0/0, La Planchette at Jassat, 45°33.716 N 2°56.339 E, alt. 894 m a.s.l., 20 May 2005, leg. H. Smit.

Distribution in France: Haut-Rhin, Isère, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées), Vosges.

Kongsbergia (Kongsbergia) simillima Viets, 1949

Kongsbergia simillima Viets, 1949: E. Angelier 1950b: 240 (?), 1953b: 109.

Distribution in France: Haute-Savoie, Isère.

Kongsbergia (Kongsbergia) walteri Motaş, 1928

Kongsbergia walteri Motaş, 1928: Motaş 1928e: 31 (as *nomen nudum*), 1928f: 243.

Distribution in France: Isère.

Axonopsis (Brachypodopsis) gracilis (Piersig, 1903)

Axonopsis gracilis (Piersig, 1903): E. Angelier 1949b: 228; E. Angelier et al. 1963: 462.

New record. **Hérault**: 4/5/0, Rivière La Vis at Gorniès, 43°53.591 N 3°37.200 E, alt. 708 m a.s.l., 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Hérault, Pyrénées (Pyrénées-Orientales), Tarn.

Axonopsis (Brachypodopsis) inferorum Motaş & Tanasachi, 1947

Axonopsis inferorum (Motaş & Tanasachi, 1947): E. Angelier 1949b: 244, 1953b: 93; Pesic & Gerecke 2003: 568.

Distribution in France: Corsica, Pyrénées (Pyrénées-Orientales).

Axonopsis (Hexaxonopsis) armata Chaudonneret & Angelier, 1949

Axonopsis armata Chaudonneret & C. Angelier, 1949: 542.

Distribution in France: Jura.

Axonopsis (Hexaxonopsis) romijni Viets, 1923

Axonopsis romijni Viets, 1923: Léger & Motaş 1928a: 176; Motaş 1928f: 226, 1928g: 7; Motaş & C. Angelier 1967: 17.

Distribution in France: Ardèche, Pyrénées (Pyrénées-Orientales), Var.

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Axonopsis (Paraxonopsis) vietsi Motaş & Tanasachi, 1947

Axonopsis vietsi (Motaş & Tanasachi, 1947): E. Angelier 1949b: 243, 1959: 16, 1959a: 67; Pesic & Gerecke 2003: 568.

Paraxonopsis vietsi (Motaş & Tanasachi, 1947): E. Angelier 1953b: 61.

Distribution in France: Corsica, Pyrénées (Pyrénées-Orientales).

Woolastookia rotundifrons (Viets, 1922)

Axonopsis rotundifrons Viets, 1922: E. Angelier 1953b: 57, 1959: 16, 1959a: 65; Santucci 1971: 83; E. Angelier et al. 1985: 31; Vinçon 1987: 240.

Hexaxonopsis rotundifrons (K. Viets, 1922): M.-L. Angelier 1980: 14.

New records. **Cantal**: 2/5/0, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 18 May 2005, leg. H. Smit; 1/1/0, La Cère at St. Jacques-des-Blats, 45°03.159 N 2°42.777 E, alt. 967 m a.s.l., 16 May 2005, leg. H. Smit. **Gard**: 0/1/0, Le Trèvezet Rivière between l'Esperou and Meyrueis, 44°06.497 N 3°29.049 E, alt. 1115 m a.s.l., 16 May 2005, leg. H. Smit; 3/10/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Cantal, Corsica, Gard, Gers, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées, Pyrénées-Atlantiques).

Ljanina bipapillata Thor, 1898

Ljanina bipapillata Thor, 1898: Vandel 1920: 56; E. Angelier 1949b: 229, 1959: 16, 1959a: 67, 1959c: 164; Schwoerbel 1959a: 16; E. Angelier et al. 1963: 462; Santucci 1965: 546, 1971: 83; M.-L. Angelier 1980: 14; E. Angelier et al. 1985: 31.

New records. **Ardèche**: 1/0/0, La Lande Ruisseau, NW of Chazeaux, 44°36.351 N 4°17.003 E, 30 April 2003, leg. H. Smit. **Gard**: 0/1/0, helocrene at campsite Mourétou, N of Valleraugue, 44°05.203 N 3°36.500 E, alt. 418 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Corsica, Gard, Doubs, Haut-Rhin, Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Tarn.

Ljanina macilenta Koenike, 1908

Ljanina macilenta Koenike, 1908: Motaş 1927b: 3, 1928e: 17, 1928f: 225, 1928g: 30.

New records. **Ardèche**: 0/1/0, La Drobie Rivière, upstream of Sablières, 44°32.256 N 4°03.364 S, leg. H. Smit. **Cantal**: 0/1/0, Jordanne Rivière at Mandailles-Saint Julien, 45°04.225 N 2°39.510 E, alt. 927 m a.s.l., 927 m a.s.l., leg. H. Smit. **Gard**: 0/1/0, l'Hérault 3 km upstream of Valleraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Cantal, Gard, Isère, Puy-de-Dôme.

Family Lethaxonidae Cook, I.M. Smith & Harvey, 2000

Lethaxona (Lethaxona) cavifrons Szalay, 1943

Lethaxona cavifrons Szalay, 1943: E. Angelier 1953b: 106; Schwoerbel 1962e: 257, 1965: 477.

Distribution in France: Haut-Rhin, Pyrénées-Orientales.

Lethaxona (Lethaxona) gallica E. Angelier, 1949

Lethaxona gallica E. Angelier, 1949a: 89, 1949b: 240.

Distribution in France: Pyrénées (Pyrénées-Orientales).

Lethaxona (Lethaxona) pygmaea Viets, 1932

Lethaxona pygmaea Viets, 1932: E. Angelier 1953b: 106; Schwoerbel 1962e: 257, 1965: 477.

Distribution in France: Haut-Rhin, Isère, Pyrénées-Orientales.

Family Mideidae Thor, 1911*Midea orbiculata* (Müller, 1776)

Midea elliptica Koenike, 1881: Barrois & Moniez 1887: 21; Moniez 1889b: 8; Vandel 1919a: 90; Schodduyn 1923: 143, 1926a: 311; Motaş 1928f: 225, 1928g: 13;

Midea orbiculata (Müller, 1776): Motaş & C. Angelier 1927d: 10; Giudicelli et al. 1980: 289.

Distribution in France: Bouches-du-Rhône, Doubs, Nord, Puy-de-Dôme, Somme.

Family Momoniidae Viets, 1926*Momonias falcipalpis* Halbert, 1911

Momonias falcipalpis Halbert, 1911: Léger & Motaş 1928a: 176; Motaş 1927f: 321, 1928f: 211, 1928g: 7; Smit et al. 2000: 203.

Distribution in France: Pyrénées-Atlantiques, Var.

Momonides lundbladi E. Angelier, 1951

Momonides lundbladi E. Angelier, 1951b: 509, 1953b: 58, 1959: 16, 1959c: 161; Santucci 1970: 193, 1971: 83, 1977: 83; Gerecke 1994: 279.

Distribution in France: Corsica.

Momoniasia phreatica Petrova, 1974

Momoniasia phreatica Petrova, 1974: Gerecke 1994: 280.

Distribution in France: Corsica.

Stygomomonias (Stygomomonias) latipes latipes Szalay, 1943

Stygomomonias latipes Szalay, 1943: E. Angelier 1953b: 91, 1953c: 478, 1959: 16, 1959c: 162; Schworerbel 1965: 477; Santucci 1977: 84; Smit et al. 2000: 205.

Stygomomonias gracilis Walter, 1947: E. Angelier 1949b: 228.

Distribution in France: Corsica, Haut-Rhin, Isère, Pyrénées (Pyrénées-Orientales), Vosges.

Family Mideopsidae Koenike, 1910*Mideopsis (Mideopsis) crassipes* Soar, 1904

Mideopsis crassipes Soar, 1904: Motaş 1927b: 3, 1928f: 224, 1928g: 21; C. Angelier 1953: 222.

Distribution in France: Côte-d'Or, Haute-Saône, Isère, Savoie, Var.

Mideopsis (Mideopsis) orbicularis (Müller, 1776)

Mideopsis orbicularis (Müller, 1776): Vandel 1919a: 90; Motaş 1928e: 17, 1928f: 224, 1928g: 6; C. Angelier 1931: 39, 1953: 222; Chaudonneret 1947: 4; E. Angelier 1953b: 93, 1959: 16, 1959a: 70, 1959c: 162; Lundblad 1956a: 3; E. Angelier et al. 1963: 463; Schworerbel 1965: 479; Motaş & C. Angelier 1967: 17; Santucci 1965: 546, 1971: 83; E. Angelier et al. 1985: 31; Smit et al. 2000: 206.

Mideopsis depressa Neuman, 1880: Moniez 1887a: 162; Barrois & Moniez 1887: 21.

New records. **Pas-de-Calais:** 0/4/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pond, Landes de Blendecques, 50°42'13.21" N 2°16'53.08"E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/2/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre:** 0/1/0, Ruisseau de Fosse Noire near Vendroeuves, La Brenne, 46°46'28.14"N 1°21'42.58" E, 9 July 2000, leg. H. van der Hammen. **Hérault:** 0/1/0, La Buèges, upstream of St. Jean-de-Buèges, 43°49.549 N 3°37.076 E, 23 July 2008, leg. H. Smit & P. Martin.

Distribution in France: Ain, Corsica, Côte-d'Or, Doubs, Gironde, Hérault, Indre, Isère, Jura, Nord, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Seine-Maritime, Tarn, Val-de-Marne, Var, Vosges. See remark under *M. roztozcensis*.

Mideopsis (Mideopsis) roztozcensis Biesiadka & Kowalik, 1979

New records. **Indre:** 2/11/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2'E, 7 July 2000, leg. H. van der Hammen. **Vienne:** 2/4/0, Riv. Vienne, at Saint-Martin-de-la-Rivière, 46°30'34.25" N 0°37'57.46" E, 7 July 2000, leg. H. van der Hammen. **Puy-de-Dôme:** 0/1/0, Ruisseau de Chareire, upstream of Chareire, 45°29.069 N 2°46.947 S, alt. 1263 m a.s.l., 20 May 2005, leg. H. Smit. **Ardèche:** 0/1/0, l'Ardèche Rivière at Balazuc, 44°30.692 N 4°22.869 E, 29 April 2003, leg. H. Smit; 0/1/0, Le Lignon Rivière, upstream of La Souche, 44°37.770 N 4°9.610 E, 30 April 2003, leg. H. Smit. **Gard:** 0/1/0, l'Hérault, 3 km upstream of Villeraugue, 44°05.190 N 3°36.475 E, alt. 405 m a.s.l., 15 May 2005, leg. H. Smit.

Distribution in France: Ardèche, Gard, Indre, Puy-de-Dôme, Vienne. New for the fauna of France.

Remark. Many of the old records of *M. orbicularis* might refer to this species, especially those from streams.

Family Nudomideopsidae I.M. Smith, 1990

Nudomideopsis (Nudomideopsis) latipalpis Angelier, Decamps & Rey, 1963

Mideopsis latipalpis E. Angelier, Decamps & Rey, 1963: 487.

Material examined. **Tarn:** Syntypes, MNHN Paris, Céret (? - slides only with numbers, see under *Atractides phreaticus*); 16, 1/0/0; 164, 0/3/0.

Distribution in France: Tarn.

Family Neoacaridae Motaş & Tanasachi, 1947

Neoacarus hibernicus Halbert, 1944

Neoacarus hibernicus Halbert, 1944: E. Angelier et al. 1963: 462; Schwoerbel 1962e: 256, 1965: 477.

New record. **Var:** 1/0/0, unnamed creek, Massif des Maures, 43°15.312 N 6°23.954 E, 5 May 2003, leg. H. Smit.

Distribution in France: Haut-Rhin, Tarn, Var.

Family Chappuisididae Motaş & Tanasachi, 1946

Chappuisides (Chappuisides) hungaricus Szalay, 1943

Chappuisides hungaricus Szalay, 1943: E. Angelier 1953b: 109; Schwoerbel 1961a: 275.

New record. **Corsica:** 1/0/0, Murato (Bastia, 2B), Bevinco downstream Cinquerue, 50 m, 09°24'E, 42°36'N, 3 October 1991, interstitial, F 39 I, leg. R. Gerecke.

Distribution in France: Corsica, Pyrénées-Orientales, Vosges.

Family Athienemanniidae Viets, 1922

Mundamella germanica K. Viets, 1913

Mundamella germanica K. Viets, 1913: Motaş 1928f: 262, 1928g: 7.

Distribution in France: Var.

Family Hungarohydracaridae Motaş & Tanasachi, 1959

Hungarohydracarus subterraneus Szalay, 1943

Hungarohydracarus subterraneus Szalay, 1943: E. Angelier 1953b: 58, 1959: 16, 1959a: 73; Santucci 1970: 193, 1971: 83; Smit et al. 2000: 212.

Hungarohydracarus subterraneus multiporus E. Angelier, 1949a: 90, 1949b: 252.

Distribution in France: Corsica, Isère, Pyrénées (Pyrénées-Orientales).

Family Krendowskiidae Viets, 1926

Krendowskia (Krendowskia) latissima Piersig, 1895

Krendowskia latissima Piersig, 1895: Prevot et al. 1983: 27.

Distribution in France: Bouches-du Rhône.

Family Arrenuridae Thor, 1900

Arrenurus (Arrenurus) abbreviator Berlese, 1888

Arrenurus abbreviator Berlese, 1888: Motaş 1927b: 3, 1928f: 279; C. & E. Angelier 1953a: 69; E. Angelier 1959: 16, 1959a: 69; Cassagne-Méjean 1966a: 30.

Petiolorus abbreviator (Berlese, 1888): Chaudon-neret 1947: 4.

Distribution in France: Corsica, Côte-d'Or, Essonne, Isère, Pyrénées (Hautes-Pyrénées).

Arrenurus (Arrenurus) affinis Koenike, 1887

Arrenurus affinis Koenike, 1887: Motaş 1927b: 3, 1928f: 281 (?).

New record. **Vienne**: 1/0/0, pool, Réserve naturelle du Pinail, 46°42'N 0°31' E, 8 July 2000, leg. H. van der Hammen.

Distribution in France: Savoie (?), Vienne.

Remarks. The previously published records of France must be considered as doubtful. According to Smit et al. (2000) the record of C. Angelier (1953) refers to *A. pyrenaicus* (see under the latter species).

Arrenurus (Arrenurus) albator (Müller, 1776)

Arrenurus albator (Müller, 1776): A.-L.D. Dugès 1834a: 17, 1834b: 154; Vandell 1919a: 91; Migot 1926b: 130; Motaş 1926b: 411, 1928f: 278, 1928g: 7; C. Angelier 1931: 44, 1953: 223; Motaş & Şoarec 1939a: Appendix; C. & E. Angelier 1953a: 223; Do 1962: 67; Motaş & C. Angelier 1967: 17; Smit & Van der Hammen 1992: 55.

Micrarrenurus albator (Müller, 1776): Cassagne-Méjean 1966a: 79.

Petiolurus albator (Müller, 1776): Chaudonneret 1947: 4 (laps. *albater*).

New records. **Pas-de-Calais**: 0/4/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/3/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 1/15/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/4/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 0/17/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2'E, 7 July 2000, leg. H. van der Hammen. **Haute-Vienne**: 0/14/0, lake, La Chapelle-Montbrandeix, 45°38'35"N 0°51'27: E, 29 April 2002, leg. G. van Ee.

Distribution in France: Ain, Doubs, Haute-Saône, Haute-Savoie, Haute-Vienne, Hérault, Indre, Isère, Jura, Landes, Pas-de-Calais, Pyrénées (Pyrénées-Orientales), Savoie, Seine-Maritime, Val-de-Marne, Var.

Arrenurus (Arrenurus) angelieri Cassagne-Méjean, 1966

Arrenurus angelieri Cassagne-Méjean, 1966a: 37.

Distribution in France: Hérault.

Arrenurus (Arrenurus) batillifer Koenike, 1896

Arrenurus batillifer Koenike, 1896: Motaş 1927b: 3, 1928f: 280, 1928g: 6; C. & E. Angelier 1953a: 70; Cassagne-Méjean 1966a: 43; Smit & Van der Hammen 1992: 55.

Petiolurus batillifer (Koenike, 1896): Chaudonneret 1947: 4.

Distribution in France: Ain, Cantal, Côte-d'Or, Isère, Pas-de-Calais, Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques).

Arrenurus (Arrenurus) bicuspidator Berlese, 1885

Arrenurus bicuspidator Berlese, 1885: Motaş 1927b: 3, 1928f: 283; C. Angelier 1931: 44; Cassagne-Méjean 1966a: 36; Smit & Van der Hammen 1992: 55.

Petiolurus bicuspidator (Berlese, 1885): Chaudonneret 1947: 4.

New records. **Pas-de-Calais**: 1/3/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/2/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 0/1/0, pond near Étang Prieur, La Brenne, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Côte-d'Or, Indre, Isère, Pas-de-Calais, Val-de-Marne.

Arrenurus (Arrenurus) bruzelii Koenike, 1885

Arrenurus bruzelii Koenike, 1885: Barrois & Moniez 1887: 25; Derône 1914: 46, 1915: 560; Vandell 1919a: 91; Soudan 1920: 5; Motaş 1926b: 411, 1928f: 280, 1928g: 6; C. Angelier 1950a: 6, 1953: 223; Do 1962: 67; Cassagne-Méjean 1966a: 69.

Petiolurus Bruzelii (Koenike, 1885): Chaudon-neret 1947: 4.

New record. **Indre**: 1/0/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40" E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Cantal, Côte-d'Or, Doubs, Essonne, Haute-Saône, Hérault, Indre, Isère, Jura, Nord, Pas-de-Calais, Savoie, Var.

Arrenurus (Arrenurus) claviger Koenike, 1885

Arrenurus claviger Koenike, 1885: Barrois & Moniez 1887: 25; Vandel 1919a: 91; Motaş 1926b: 412, 1928f: 282, 1928g: 13; C. Angelier 1953: 225; C. & E. Angelier 1953a: 70; Cassagne-Méjean 1966a: 34; Smit & Van der Hammen 1992: 55; Smit et al. 2000: 216.

New records. **Indre**: 0/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen. **Haute-Vienne**: 1/0/0, lake, La Chapelle-Montbrandeix, 45°38'35" N 0°51'27" E, 29 April 2002, leg. G. van Ee. **Vienne**: 0/1/0, pool, Réserve naturelle du Pinail, 46°42' N 0°31' E, 8 July 2000, leg. H. van der Hammen; 3/21/0, pool, Réserve naturelle du Pinail, 46°42' N 0°31' E, 8 July 2000, leg. H. van der Hammen.

Distribution in France: Corsica, Côte-d'Or, Doubs, Haute-Vienne, Indre, Isère, Landes, Nord, Pas-de-Calais, Pyrénées (Hautes-Pyrénées), Savoie, Var, Vienne.

Arrenurus (Arrenurus) compactus Piersig, 1894

Arrenurus compactus Piersig, 1894: Vandel 1919a: 91; Motaş 1928e: 28, 1928f: 280, 1928g: 13; C. & E. Angelier 1953a: 70; Cassagne-Méjean 1966a: 53.

Distribution in France: Doubs, Haute-Saône, Isère, Pyrénées (Hautes-Pyrénées).

Arrenurus (Arrenurus) crassicaudatus Kramer, 1875

Arrenurus crassicaudatus Kramer, 1875: Vandel 1919a: 91; Motaş & C. Angelier 1927d: 14; Motaş 1928e: 28, 1928f: 278, 1928g: 9; C. Angelier 1953:

226; E. Angelier et al. 1963: 465; Smit & Van der Hammen 1992: 55.

Micrarrenurus crassicaudatus (Kramer, 1875): Cassagne-Méjean 1966a: 83.

New records. **Pas-de-Calais**: 0/1/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/4/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 3/11/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40" E, 7 July 2000, leg. H. van der Hammen; 1/0/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Doubs, Haute-Loire, Haute-Savoie, Indre, Isère, Jura, Pas-de-Calais, Puy-de-Dôme, Savoie, Tarn.

Arrenurus (Arrenurus) crenatus Koenike, 1896

Arrenurus crenatus Koenike, 1896: Motaş 1927b: 3, 1928f: 279, 1928g: 6.

Distribution in France: Ain.

Arrenurus (Arrenurus) cuspidator (Müller, 1776)

Arrenurus cuspidator (Müller, 1776): A.-L.D. Dugès 1834b: 154; Soudan 1920: 5; Motaş 1927b: 3, 1928e: 7, 1928f: 281; Brumpt 1929: 293; C. Angelier 1950a: 6, 1953: 224; C. & E. Angelier 1953a; Cassagne-Méjean 1966a: 45; Smit & Van der Hammen 1992: 55.

Petiolurus cuspidator (Müller, 1776): Chaudon-neret 1947: 4.

Distribution in France: Côte-d'Or, Essonne, Indre-et-Loire, Hérault, Isère, Manche, Pas-de-Calais, Pyrénées (Hautes-Pyrénées), Savoie.

Arrenurus (Arrenurus) cuspidifer Piersig, 1894

Arrenurus cuspidifer Piersig, 1894: Motaş 1927b: 3, 1928f: 282, 1928g: 6; C. Angelier 1953: 225; C. & E. Angelier 1953a: 70; E. Angelier 1959: 16, 1959a: 69; Cassagne-Méjean 1966a: 58; Smit & Van der Hammen 1992: 56.

Distribution in France: Bouches-du-Rhône, Corsica, Hérault, Isère, Pas-de-Calais, Landes, Rhône, Savoie, Var.

Arrenurus (Arrenurus) denticulatus Motaş, 1927

Arrenurus (Arrenurus) denticulatus Motaş, 1927: In Walter & Motaş 1927: 157; Motaş 1928f: 283; Cassagne-Méjean 1966a: 75.

Arrenurus walteri (non Koenike, 1911): Motaş 1927b: 3.

New records. **Pas-de-Calais**: 2/0/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/1/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Isère, Pas-de-Calais.

Arrenurus (Arrenurus) distans Walter, 1927

Arrenurus (Arrenurus) distans Walter, 1927: In Walter & Motaş 1927: 152; Motaş 1927b: 3, 1928f: 281.

Distribution in France: Isère.

Arrenurus (Arrenurus) fimbriatus Koenike, 1885

Arrenurus sica Barrois & Moniez 1887: 30.

Micrarrenurus fimbriatus (Koenike, 1885): Cassagne-Méjean 1966a: 78.

New record. **Indre**: 6/2/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Indre, Nord, Pas-de-Calais.

Arrenurus (Arrenurus) furcillatus Viets, 1930

Arrenurus (Arrenurus) furcillatus Viets, 1930: Cassagne-Méjean 1966: 194, 1966a: 32.

Distribution in France: Hérault.

Arrenurus (Arrenurus) latus Barrois & Moniez, 1887

Arrenurus (Arrenurus) latus Barrois & Moniez, 1887: 30; Motaş 1928f: 278, 1928g: 6; C. & E. Angelier 1953a: 73; E. Angelier et al. 1963: 465.

Arrenurus (Micruracarus) sinuator commutatus Viets, 1930: C. & E. Angelier 1953a: 74 (see Smit 1996).

Micrarrenurus latus latus (Barrois & Moniez, 1887): Cassagne-Méjean 1966a: 81.

Arrenurus latus ligulator Koenike, 1905: C. Angelier 1950a: 6.

New records. **Indre**: 1/1/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40" E, 7 July 2000, leg. H. van der Hammen; 1/1/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Essonne, Indre, Landes, Nord, Pas-de-Calais, Pyrénées (Pyrénées-Orientales, Pyrénées-Atlantiques), Tarn, Var.

Arrenurus (Arrenurus) leuckarti Piersig, 1894

Arrenurus (Arrenurus) leuckarti Piersig, 1894: Motaş 1927b: 3, 1928f: 283; Cassagne-Méjean 1966a: 59, 1971: 152; Smit & Van der Hammen 1992: 55.

New records. **Vienne**: 4/5/0, pool, Réserve naturelle du Pinail, 46°42' N 0°31' E, 8 July 2000, leg. H. van der Hammen; 10/14/0, pool, Réserve naturelle du Pinail, 46°42' N 0°31' E, 8 July 2000, leg. H. van der Hammen.

Distribution in France: Hérault, Indre-et-Loire, Pas-de-Calais, Vienne.

Arrenurus (Arrenurus) maculator (Müller, 1776)

Hydrarachna maculator Müller, 1776: Hermann 1804: 54.

Arrenurus (Arrenurus) maculator (Müller, 1776): Barrois & Moniez 1887: 26 (?; see K. Viets 1956); Vandel 1919a: 91; Motaş 1928f: 281, 1928g: 6; Brumpt 1929: 293 (?); C. Angelier 1953: 224; Cassagne-Méjean 1966a: 48; Smit & Van der Hammen 1992: 55.

Petiolurus maculator (Müller, 1776): Chaudonneret 1947: 4.

New record. **Indre**: 1/0/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40" E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Bas-Rhin, Côte-d'Or, Doubs, Hérault, Indre, Isère, Jura, Manche (?), Nord, Pas-de-Calais, Savoie, Seine-Maritime.

Arrenurus (Arrenurus) mathiasi Cassagne-Méjean, 1966

Arrenurus (Arrenurus) mathiasi Cassagne-Méjean, 1966a: 39.

Distribution in France: Hérault.

Arrenurus (Arrenurus) muenchbergi K.O. Viets, 1964

Arrenurus (Arrenurus) muenchbergi K.O. Viets, 1964: In: K.O. Viets & Cassagne-Méjean 1964: 499, 1966a: 41.

Distribution in France: Hérault.

Arrenurus (Arrenurus) neumani Piersig, 1895

Arrenurus neumani Piersig, 1895: Vandel 1919a: 91; Motaş 1928e: 28, 1928f: 282, 1928g: 7; C. Angelier 1951: 74; C. & E. Angelier 1953a: 70; Cassagne-Méjean 1966a: 63.

New record. **Indre**: 0/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Cantal, Côte-d'Or, Doubs, Hautes-Alpes, Haute-Saône, Indre, Isère, Pyrénées (Pyrénées-Atlantiques, Pyrénées-Orientales, Hautes-Pyrénées), Var.

Arrenurus (Arrenurus) ornatus George, 1900

Arrenurus ornatus George, 1900: C. Angelier 1951: 77; C. & E. Angelier 1953a; Cassagne-Méjean 1961: 2403, 1963: 1589, 1963a: 357, 1966: 51; Do 1962: 67; Motaş & C. Angelier 1967: 17; Smit & Van der Hammen 1992: 55.

New records. **Indre**: 1/0/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen. **Vienne**: 1/0/0, pool, Réserve naturelle du Pinail, 46°42'N 0°31'E, 8 July 2000, leg. H. van der Hammen; 0/1/0, pool, Réserve naturelle du Pinail, 46°42'N 0°31'E, 8 July 2000, leg. H. van der Hammen.

Distribution in France: Hérault, Indre, Pas-de-Calais, Pyrénées (Pyrénées-Orientales), Vienne.

Arrenurus (Arrenurus) papillator (Müller, 1776)

Arrenurus (Arrenurus) papillator (Müller, 1776): Schachter 1950; Petit & Schachter 1954: 217; Cassagne-Méjean 1963b: 1964, 1966a: 24.

Hydrachna abstergens Müller, 1781: De Théis 1832: 61.

Distribution in France: Aisne, Bouches-du-Rhône, Cantal, Hérault.

Arrenurus (Arrenurus) pustulator (Müller, 1776)

Arrenurus (Arrenurus) pustulator (Müller, 1776): Vandel 1919a: 91; Motaş 1926b: 411, 1928e: 28, 1928f: 279, 1928g: 13; C. & E. Angelier 1953a: 69; Cassagne-Méjean 1966a: 26.

Distribution in France: Doubs, Hérault, Isère, Pyrénées (Pyrénées-Orientales).

Arrenurus (Arrenurus) pyrenaicus C. & E. Angelier, 1953

Arrenurus (Arrenurus) pyrenaicus C. & E. Angelier, 1953a: 70; C. Angelier 1953: 224 (as *A. affinis*); Cassagne-Méjean 1966a: 62; Smit et al. 2000: 226.

Distribution in France: Pyrénées (Hautes-Pyrénées), Savoie.

Arrenurus (Arrenurus) radiatus Piersig, 1894

Arrenurus (Arrenurus) radiatus Piersig, 1894: Motaş 1927b: 3, 1928f: 281, 1928g: 6; C. Angelier 1953: 225; E. Angelier 1959: 16, 1959a: 69; Cassagne-Méjean 1966a: 60; Bouzidi et al. 1984: 115.

Distribution in France: Corsica, Hérault, Savoie, Var.

Arrenurus (Arrenurus) robustus Koenike, 1894

Arrenurus (Arrenurus) robustus Koenike, 1894: Vandel 1919a: 91; Motaş 1928f: 279, 1928g: 13; C. Angelier 1953: 225 C. & E. Angelier 1953a; 1959: 16, 1959a: 69; Cassagne-Méjean 1966a: 73; Smit & Van der Hammen 1992: 55.

Distribution in France: Corsica, Doubs, Isère, Jura, Landes, Pas-de-Calais, Pyrénées (Hautes-Pyrénées), Savoie.

Arrenurus (Arrenurus) rodrigensis Lundblad, 1954

Arrenurus (Arrenurus) rodrigensis Lundblad, 1954: Cassagne-Méjean 1966: 193; 1966a: 65.

Distribution in France: Hérault.

Arrenurus (Arrenurus) securifer Viets, 1930

Arrenurus securifer Viets, 1930: C. Angelier 1951: 77; C. & E. Angelier 1953a: 73; Cassagne-Méjean 1966a: 71; Motaş & C. Angelier 1967: 17.

Distribution in France: Landes, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées).

Arrenurus (Arrenurus) suecicus Lundblad, 1917

Arrenurus (Arrenurus) suecicus Lundblad, 1917: C. & E. Angelier 1953a: 70; Cassagne-Méjean 1966a: 29.

Distribution in France: Pyrénées (Hautes-Pyrénées, Pyrénées-Atlantiques).

Arrenurus (Arrenurus) tetracyphus Piersig, 1894

Arrenurus (Arrenurus) tetracyphus Piersig, 1894: Vandel 1919a: 91; Cassagne-Méjean 1966a: 50.

Petiolurus tetracyphus (Piersig, 1894): Chaudonneret 1947: 4.

Distribution in France: Côte-d'Or, Doubs.

Arrenurus (Arrenurus) tricuspikator (Müller, 1776)

Arrenurus (Arrenurus) tricuspikator (Müller, 1776): Moniez 1887a: 162; Derône 1914: 46; Do 1962: 67; Vandel 1919a: 91; Motaş 1928g: 13; C. Angelier 1931: 45; C. & E. Angelier 1953a: 70; Cassagne-Méjean 1966a: 55; Smit & Van der Hammen 1992: 55.

Petiolurus tricuspikator (Müller, 1776): Chaudonneret 1947: 4.

New records. **Pas-de-Calais:** 0/3/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen. **Indre:** 2/0/0, pond near Étang Prieur, La Brenne,

46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen.

Distribution in France: Côte-d'Or, Doubs, Hérault, Indre, Isère, Landes, Pas-de-Calais, Val-de-Marne, Vosges.

Arrenurus (Arrenurus) virens Neuman, 1880

Arrenurus virens Neuman, 1880: C. Angelier 1950a: 6.

Arrenurus crassipetiolatus Koenike, 1885: Barrois & Moniez 1887: 26; Moniez 1889e: 6; Vandel 1919a: 91; Motaş 1928f: 282; Cassagne-Méjean 1966a: 67.

Petiolurus crassipetiolatus (Koenike, 1885): Chaudonneret 1947: 4.

Distribution in France: Côte-d'Or, Doubs, Essonne, Nord, Haute-Saône, Seine-Maritime.

Arrenurus (Megaluracarus) buccinator (Müller, 1776)

Arrenurus caudatus (Geer, 1778): Moniez 1887a: 162; Barrois & Moniez 1887: 24; Barrois 1889d: 6; K. Viets 1913a: 335; Vandel 1919a: 91; Soudan 1920: 5; Motaş 1928e: 28, 1928f: 268, 1928g: 13.

Megaluracarus caudatus (Geer, 1778): Chaudonneret 1947: 5.

Arrenurus buccinator (Müller, 1776): Hubault 1947: 217; Smit & Van der Hammen 1992: 56.

Hydrachna elliptica Müller, 1781: De Théis 1832: 61.

Distribution in France: Aisne, Alpes-Maritimes, Côte-d'Or, Doubs, Haute-Saône, Isère, Nord, Pas-de-Calais, Vosges.

Arrenurus (Megaluracarus) conicus Piersig, 1894

Arrenurus conicus Piersig, 1894: Motaş 1927b: 3, 1928e: 29, 1928f: 267, 1928g: 15; C. Angelier 1950d: 358, 1951b: 74; C. & E. Angelier 1953a: 73.

Distribution in France: Isère, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées).

Arrenurus (Megaluracarus) cylindratus Piersig, 1896

Arrenurus (Megaluracarus) cylindratus Piersig, 1896: Vandel 1919a: 91; Soudan 1920: 5; Motaş 1926b: 411, 1928e: 3, Motaş 1928f: 326, 1928g: 6; Motaş & C. Angelier 1927d: 14; C. Angelier, 1953a: 74; C. & E. Angelier 1953a: 74; Schwoerbel 1959a: 15; Smit & Van der Hammen 1992: 55; Smit et al. 2000: 234.

New record: **Pas-de-Calais**: 1/0/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen.

Distribution in France: Corsica, Doubs, Haute-Loire, Haute-Savoie, Isère, Jura, Loire, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Hautes-Pyrénées, Pyrénées-Orientales), Savoie, Var, Vosges.

Arrenurus (Megaluracarus) globator (Müller, 1776)

Arrenurus globator (Müller, 1776): Barrois & Moniez 1887: 24; Moniez 1889b: 8; Moniez 1889e: 6; Schodduyn 1904: 18, 1923: 143, 1926a: 311; Vandel 1919a: 91; Soudan 1920: 5; Motaş 1926b: 411, 1928f: 267, 1928g: 6; Motaş & C. Angelier 1927d: 14; Brumpt 1929: 293; C. Angelier 1931: 42, 1950a: 6, 1951b: 77, 1953: 227; C. & E. Angelier 1953a: 74; Cassagne-Mejean 1966a: 23; Smit & Van der Hammen 1992: 56; Smit et al. 2000: 235.

Megaluracarus globator (Müller, 1776): Chaudon-neret 1947: 4.

New records. **Pas-de-Calais**: 0/5/0, fish pond, Les Landes de Blendecques, 50°41'59.32" N 2°14'32.55"E, 20 April 1996, leg. H. Smit & H. van der Hammen; 0/10/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 3/10/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre**: 0/4/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 0/1/0, Riv. Anglin near Roche, S of Le Blanc, 46°35'N 1°2' E, 7 July 2000, leg. H. van der Hammen; 5/6/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen. **Vienne**: 0/1/0, pool, Réserve

naturelle du Pinail, 46°42'N 0°31'E, 8 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Bouches-du-Rhône, Calvados, Côte-d'Or, Doubs, Essonne, Haute-Loire, Hérault, Indre, Isère, Jura, Landes, Manche, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Seine-Maritime, Somme, Val-de-Marne, Var, Vienne.

Arrenurus (Megaluracarus) latigenitalis Lundblad, 1956

Arrenurus (Megaluracarus) cylindratus latigenitalis Lundblad, 1956: Schwoerbel 1959a: 21.

Distribution in France: Vosges.

Arrenurus (Megaluracarus) mediorotundatus Thor, 1898

Arrenurus mediorotundatus Thor, 1898: Motaş 1928f: 268.

New record. **Pas-de-Calais**: 1/2/0, stream near Quiestède, 50°40'52.73" N 2°18'57.90" E, 20 April 1996, leg. H. van der Hammen.

Distribution in France: Isère, Pas-de-Calais.

Arrenurus (Megaluracarus) securiformis Piersig, 1894

Arrenurus (Megaluracarus) securiformis Piersig, 1894: Vandel 1919a: 91; Motaş 1928f: 268; C. Angelier 1953: 226.

New records. **Pas-de-Calais**: 3/0/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 0/1/0, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E, 20 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Doubs, Jura, Pas-de-Calais, Savoie.

Arrenurus (Megaluracarus) stjoerdalensis Thor, 1899

Arrenurus adnatus Koenike, 1902: Vandel 1919a: 90; Hubault 1947: 217.

Distribution in France: Doubs, Vosges.

Arrenurus (Megaluracarus) tubulator (Müller, 1776)

New record. **Cantal**: 2/11/0, Lac Cascades, N of Le Claux, 45°11.228 N 2°42.361 E, alt. 997 m a.s.l., 18 May 2005, leg. H. Smit.

Distribution in France: Cantal.

Remark: This is the first record for France.

Arrenurus (Megaluracarus) zachariae Koenike, 1886

Arrenurus (Megaluracarus) zachariae Koenike, 1886: Motaş & Şoarec 1939a: 1 (Appendix); C. Angelier 1950d: 358; C. & E. Angelier 1953a: 73.

Arrenurus (Megaluracarus) Zachariasii (laps.): Migot 1926b: 130; Motaş & Şoarec 1939a: Appendix.

Distribution in France: Pyrénées (Hautes-Pyrénées).

Arrenurus (Micruracarus) bifidicodulus Piersig, 1897

Arrenurus (Micruracarus) bifidicodulus Piersig, 1897: K. Viets 1913a: 335; Soudan 1920: 5; Motaş 1928f: 270; Brumpt 1929: 293; C. Angelier 1953: 229.

Micruracarus bifidicodulus (Piersig, 1897): Chaudonneret 1947: 5 (laps. *bifidicadulus*).

Distribution in France: Côte-d'Or, Isère, Manche, Savoie.

Arrenurus (Micruracarus) bipapillosus Halbert, 1911

Arrenurus bipapillosus Halbert, 1911: Walter & Motaş 1927: 155; Motaş 1927b: 3, 1928f: 277, 1928g: 7; Léger & Motaş 1928a: 176; C. Angelier 1951b: 77; 1953: 229; C. & E. Angelier 1953a: 74; Smit et al. 2000: 239.

Distribution in France: Corsica, Pyrénées (Pyrénées-Orientales), Savoie, Var.

Arrenurus (Micruracarus) biscissus Lebert, 1879

Arrenurus biscissus Lebert, 1879: Motaş 1928f: 277; C. & E. Angelier 1950a: 6, 1953a: 74.

Arrenurus fissus Viets, 1908: Motaş 1927b: 3.

Distribution in France: Essonne, Landes, Pyrénées (Hautes-Pyrénées), Savoie.

Arrenurus (Micruracarus) detruncatus C. & E. Angelier, 1953

Arrenurus (Micruracarus) detruncatus C. & E. Angelier, 1953a: 74; E. Angelier 1959: 16, 1959a: 67; Motaş & C. Angelier 1967: 17.

Distribution in France: Corsica, Pyrénées (Pyrénées-Orientales).

Arrenurus (Micruracarus) dorieri Motaş & C. Angelier, 1967

Arrenurus (Micruracarus) dorieri Motaş & C. Angelier, 1967: 41.

Distribution in France: Pyrénées (Pyrénées-Orientales).

Arrenurus (Micruracarus) forcipatus Neuman, 1880

Arrenurus (Micruracarus) forcipatus Neuman, 1880: Vandel 1919a: 91 (laps. *forcipatus*); Motaş 1928f: 278; C. Angelier 1953: 227; C. & E. Angelier 1953a: 74.

Distribution in France: Doubs, Jura, Pyrénées (Pyrénées-Orientales), Savoie.

Arrenurus (Micruracarus) integrator (Müller, 1776)

Arrenurus (Micruracarus) integrator (Müller, 1776): Barrois & Moniez 1887: 25 (? , possibly *A. bifidicodulus*, see K. Viets 1956); Motaş 1928f: 270; C. Angelier 1953: 229.

Micruracarus integrator (Müller, 1776): Chaudonneret 1947: 5.

Distribution in France: Côte-d'Or, Nord, Savoie.

Arrenurus (Micruracarus) novus George, 1884

Arrenurus (Micruracarus) novus George, 1884: Lundblad 1956a: 7.

New record. **Haute-Vienne**: 0/7/0, lake, La Chapelle-Montbrandeix, 45°38'35"N 0°51'27": E, 29 April 2002, leg. G. van Ee.

Distribution in France: Charente, Haute-Vienne.

Arrenurus (Micruracarus) octagonus Halbert, 1906

Smit H. and Gerecke R.

New record. **Indre:** 0/1/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Indre. New for the fauna of France.

Arrenurus (Micruracarus) perforatus George, 1881

Arrenurus (Micruracarus) perforatus George, 1881: Smit & Van der Hammen 1992: 55.

New records. **Vienne:** 0/7/0, pool, Réserve naturelle du Pinail, 46°42'N 0°31'E, 8 July 2000, leg. H. van der Hammen. **Pas-de-Calais:** 1/0/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 1/0/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen.

Distribution in France: Pas-de-Calais, Vienne.

Arrenurus (Micruracarus) pygmaeus E. Angelier, 1959

Arrenurus (Micruracarus) pygmaeus E. Angelier, 1959: 136.

Distribution in France: Corsica.

Arrenurus (Micruracarus) sculptus Halbert, 1903

Arrenurus (Micruracarus) sculptus Halbert, 1903: Motaş 1928e: 28, 1928f: 270, 1928g: 13.

Arrenurus pugionifer Koenike, 1908: Motaş 1927b: 3 (erron.).

Distribution in France: Isère.

Arrenurus (Micruracarus) sinuator (Müller, 1776)

Arrenurus sinuator (Müller, 1776): Barrois & Moniez 1887: 25; Motaş 1928f: 277, 1928g: 13; C. Angelier 1931: 42, 1950a: 6, 1951b: 77; 1953: 228; C. & E. Angelier 1953a: 74.

New records. **Pas-de-Calais:** 0/5/0, pond, Les Landes de Blendecques, 50°42'13.21" N 2°16'53.08" E, 19 April 1996, leg. H. Smit & H. van der Hammen; 9/0, pond, Les Landes de Blendecques, 50°42'1.46" N 2°14'10.91" E, 19 April 1996, leg. H.

Smit & H. van der Hammen; 1/3/0, fish pond, Les Landes de Blendecques, 50°42'13.72" N 2°16'53.52" E, 20 April 1996, leg. H. Smit & H. van der Hammen; 0/2/0, pool with seepage, Les Landes de Blendecques, 50°42'2.67" N 2°14'30.76" E, 20 April 1996, leg. H. Smit & H. van der Hammen. **Indre:** 1/6/0, Étang Prieur, SW of Méobecq, 46°42'48.18" N, 1°23'40.40"E, 7 July 2000, leg. H. van der Hammen; 0/1/0, pond near Étang Prieur, La Brenne, 46°34'54.00" N 1°9'0.79" E, 7 July 2000, leg. H. van der Hammen; 0/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Essonne, Indre, Isère, Nord, Pas-de-Calais, Puy-de-Dôme, Pyrénées (Pyrénées-Orientales, Hautes-Pyrénées), Savoie, Val-de-Marne.

Arrenurus (Micruracarus) walkanoffi Viets, 1926

Arrenurus walkanoffi Viets, 1926: C. Angelier 1951b: 77; C. & E. Angelier 1953a: 74 (laps.: *A. walkanoffi*).

Distribution in France: Pyrénées (Pyrénées-Orientales).

Arrenurus (Truncaturus) corsicus (E. Angelier, 1951)

Balcanohydracarus corsicus E. Angelier, 1951b: 510, 1953b: 58, 1959: 16, 1959c: 164; Santucci 1970: 193, 1971: 83, 1977: 83.

Distribution in France: Corsica.

Arrenurus (Truncaturus) fontinalis Viets, 1920

Truncaturacarus fontinalis (Viets, 1920): Chaudonneret 1947: 5 (laps. *fantinalis*).

Distribution in France: Côte-d'Or.

Arrenurus (Truncaturus) nodosus Koenike, 1896

Arrenurus (Truncaturus) nodosus Koenike, 1896: Soudan 1920: 5; Motaş 1927b: 3, 1928f: 269; Smit & Van der Hammen 1992: 55.

Truncaturacarus nodosus (Koenike, 1896): Chaudonneret 1947: 4.

Distribution in France: Côte-d'Or, Isère, Pas-de-Calais.

Arrenurus (Truncaturus) stecki Koenike, 1894

Arrenurus stecki Koenike, 1894: Motaş 1926b: 411, 1927b: 3, 1928e: 28, 1928f: 269, 1928g: 6.

New records. **Indre:** 0/1/0, pond in meadow near Étang Pied du Tour, La Brenne, 46°44'41.39" N 1°14'55.40" E, 9 July 2000, leg. H. van der Hammen; 0/2/0, Étang Nuret, La Brenne, 46°47'30.57" N 1°12'35.98" E, 9 July 2000, leg. H. van der Hammen.

Distribution in France: Ain, Côte-d'Or, Indre, Isère.

Arrenurus (Truncaturus) troglobius E. Angelier, 1951

Arrenurus (Truncaturus) troglobius E. Angelier, 1951b: 510, 1953b: 58, 1959: 16, 1959c: 162; Santucci 1970: 193, 1971: 83; 1977: 83.

Distribution in France: Corsica.

Arrenurus (Truncaturus) truncatellus (Müller, 1776)

Arrenurus (Truncaturus) truncatellus (Müller, 1776): Motaş & C. Angelier 1927d: 14; Motaş 1928f: 269, 1928g: 6; C. Angelier 1953: 230; C. & E. Angelier 1953a: 77.

Truncaturacarus truncatellus (Müller, 1776): Chaudonneret 1947: 4.

New record. **Corsica:** 0/11/0, marsh near Calvi, 7 May 1997, leg. H. van der Hammen.

Distribution in France: Ain, Corsica, Côte-d'Or, Loire, Pyrénées (Pyrénées-Atlantiques), Savoie.

DISCUSSION

Water mites in limnologic research: a neglected resource

Kurt Otto Viets (1978) listed 931 species for Europe, but Gerecke & Lehmann (2005) come to a total of 1235 species. This figure undoubtedly will change with more research, and also with more revisions. The high total species number, as well as the generally high diversity in most types of naturally-conserved habitats (e.g. Schwoerbel 1967, Wiggins et al. 1980, Gerecke 2002, Di Sabatino et al.

2003), suggest that mites are of outstanding importance for understanding the ecology of inland water invertebrate communities. In fact, in a large-scale study directed to the identification of indicator taxa best suited for stream types and environmental conditions in Luxembourg, water mites resulted at first place, outnumbering also Diptera in the number of significant characteristic species (Dohet et al. 2008). Also in spring habitats, where they are represented by a high percentage of species strictly bound to habitats of this type, water mites resulted in a comparative survey as exceptionally suited for observation of environmental change (Cantonati & Ortler 1998), and a particular significance as water quality indicators was documented also in standing waters (Pieczyński 1976 and bibliography cited there).

A big share of their particular sensitivity to habitat quality (Schwoerbel 1964, Gerecke & Schwoerbel 1991, Van der Hammen & Smit 1996) may be explained by the particular life cycle of water mites: Individual development includes a larval stage parasitic on selected insect hosts, two pupa-like quiescent stages, a predatory nymphal stage and adults again being predators of microcrustaceans, eggs and early larval instars of insects (Martin 2005).

On this background, it is deplorable that a group of invertebrates with an outstanding potential for ecological research was excluded from the European water framework directive. The only explanation for the neglect of water mites in water quality research (Resh & McElravy 1993) may be found in the widely scattered bibliography, with a lack of comprehensive check lists and determination keys (Dohet et al. 2008). Our contribution aims at filling a gap for the french fauna. The publication of updated taxonomic keys for Northern and Central Europe (including continental France) is on the way (Gerecke ed, 2007, 2010).

State of knowledge

At present state of knowledge, with 420 species and seven subspecies, France has about 34 % of the European water mite species, but the fauna is still not well known. A number of biotopes have hardly been examined, e.g. temporary habitats like terrestrializing waters, temporary pools and reed-

TABLE 2: Numbers of water mite species and subspecies per French department.

Department	Nb of species	Department	Nb of species	Department	Nb of species
Ain	50	Gironde	9	Meurthe-et-Moselle	14
Aisne	9	Haut-Loire	30	Moselle	3
Alpes-de-Haute-Provence	4	Haut-Rhin	45	Nord	50
Alpes-Maritimes	5	Haute-Garonne	4	Paris	2
Ardèche	28	Haute-Saône	22	Pas-de-Calais	91
Ariège	26	Haute-Savoie	41	Puy-de-Dôme	66
Aude	5	Haute-Vienne	8	Pyrénées-Atlantiques	76
Bas-Rhin	15	Hautes-Alpes	20	Pyrénées-Orientales	127
Bouches-du-Rhône	16	Hautes-Pyrénées	110	Rhône	3
Calvados	1	Hérault	58	Savoie	127
Cantal	37	Indre	44	Seine-Maritime	24
Charente	4	Indre-et-Loire	4	Seine-et-Marne	1
Corrèze	4	Isère	187	Somme	15
Corsica	121	Jura	36	Tarn	52
Côte-d'Or	56	Landes	14	Val-de-Marne	43
Doubs	51	Loire	12	Var	51
Drôme	5	Lot	2	Vienne	11
Essonne	23	Manche	6	Vosges	73
Gard	31	Marne	3	Yvelines	1
Gers	24				

lands. Moreover, the distribution of research on water mites in France is askew. The French Alps, Corsica and the Pyrénées are better examined, including hyporheic habitats, but central, northern and western are very incompletely known. France has 95 departments, but only of 59 departments water mites have been reported (Table 2). Only from four departments more than 100 species are known. From Isère and Savoie (French Alps) 187 and 127 species have been reported respectively, and from the Hautes-Pyrénées and the Pyrénées-Orientales (Pyrénées) 110 and 128 species are known respectively. Moreover, from the two departments of Corsica combined 114 species have been reported. Ten departments have species numbers between 50 and 100, from the remaining 47 departments less than 50 species are known. The water mite faunas of central, northern and western parts of France are incompletely known. In these areas especially water mites of standing waters can be found. More research on the water mites of these parts of France will undoubtedly increase the number of water mite species.

Although quite a few hyporheic water mites are known from France, recent studies (Valdecasas et al. 2005, own observations) indicate that also the hyporheic water mite fauna is more speciose than currently known. The species reported here for the first time from France derive mostly from stagnant waters: *Atractides orghidani* Motaş & Tanasachi, *Hydrachna goldfeldi* Thor, *Hydrodroma pilosa* Besseling, *Limnesia curvialpis* Tuzovskij, *Limnesia undulatoidea* Davids, *Piona ambigua* (Piersig), *Forelia curvialpis* K. Viets, *Mideopsis roztozensis* Biesiadka & Kowalik, *Arrenurus octagonus* Halbert and *Arrenurus tubulator* (Müller). Moreover, *Arrenurus affinis* Koenike is reported for the first time with certainty. These species derive mostly from casual collections or revision of material formerly published under a different name. The publication of this checklist should help to understand the major gaps in our knowledge and attract appropriate attention to this important, but underinvestigated group of invertebrates.

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