



## Notes on the Donaciines (Coleoptera Chrysomelidae Donaciinae) (11-23)

Pascal LAYS

Museum, Institute of Zoology, University of Liège, Quai Ed. Van Beneden 22, B-4020 Liège, Belgium.  
Correspondence : Rue F. Desoer 34, B-4031 Liège, Belgium (e-mail : nymphaea000@hotmail.com).

### Summary

This note presents faunistical data regarding the donaciines (Coleoptera Chrysomelidae Donaciinae) of the Plateumarini tribe preserved in the General Collection of the Royal Belgian Institute of Natural Sciences of Belgium, in Brussels. This collection includes 12 species of the genus *Plateumaris* from the Palaearctic and Nearctic regions : *Plateumaris braccata* (SCOPOLI), *P. consimilis* (SCHRANK), *P. constricticollis* JACOBY, *P. discolor* (PANZER), *P. germari* (MANNERHEIM), *P. metallica* (AHRENS), *P. nitida* (GERMAR), *P. pusilla* (SAY), *P. rufa* (SAY), *P. rustica* (PANZER) (taxa *affinis* PANZER and *rustica* P.), *P. shoemakeri* (SCHAEFFER), *P. weisei* (DUVIVIER).

**Keywords** : Chrysomelidae, Donaciinae, *Plateumaris*, Faunistics, Palaearctic and Nearctic regions.

### Résumé

Cette note présente des données faunistiques relatives aux donacies (Coleoptera Chrysomelidae Donaciinae) de la tribu des Plateumarini conservées dans la Collection générale de l'Institut royal des Sciences naturelles de Belgique, à Bruxelles. La collection inclut 12 espèces du genre *Plateumaris* des régions paléarctique et néarctique : *Plateumaris braccata* (SCOPOLI), *P. consimilis* (SCHRANK), *P. constricticollis* JACOBY, *P. discolor* (PANZER), *P. germari* (MANNERHEIM), *P. metallica* (AHRENS), *P. nitida* (GERMAR), *P. pusilla* (SAY), *P. rufa* (SAY), *P. rustica* (PANZER) (taxa *affinis* PANZER and *rustica* P.), *P. shoemakeri* (SCHAEFFER), *P. weisei* (DUVIVIER).

This second note is a continuation of a preceding article (LAYS, 2002) and provides faunistical data concerning the donaciines preserved in the General Collection of the Royal Belgian Institute of Natural Sciences of Belgium, in Brussels. All the material regarding the Plateumarini tribe are dealt with here. One follows the nomenclature of ASKEVOLD (1991).

Until recently, the studied material was preserved in their respective original collections (A. FAUVEL, P. SIRGUEY, etc.) and scattered here and there in the room holding the General Collection (that contains material collected outside Belgium); on the request of this Museum, the different collections have been merged by the author.

Data are presented as follow : **Country** :  
Department / Province / State (or similar

subdivisions) : number of specimens and sex, date, name(-s) of collector(-s), information, between ( ) name of the former Collection (when it exists).

Quite often, the name of the Department/ Province, etc. does not appear on the label, in that case they are provided here by the author. The problem of localization of places was quite recurrent for localities in France. Some French specimens have several labels of origin, the author has no explanation for that. Some specimens have a label "Type", the validity of these specimens as type is not debated here.

In the list of the host plants, some are probably just adventitious, some could be real food plants but need confirmation, some are known to feed larvae and/or adults, in the latter case, the name of the plant is underlined.

Abbreviations and signs used in the faunistical data: [ ] : data given by the author; « » : hardly decipherable name; n.d. : no date; n.l. : no locality; Collections : CHAPUIS F. : (1); DAILLÉ L. : (2); DONGÉ E. : (3); FAUVEL A. : (4); LE MOULT E. : (5); MALLET P.M. / JOLIVET P. : (6); PANDELLÉ L. : (7); SIRGUEY P. : (8).

## Data

### 11. *Plateumaris braccata* (SCOPOLI, 1772)

**Austria** : 1♀, n.l., n.d. (5); **Styria** : 1♂ - 1♀, n.d., Reitter (8). **France** : Aube : Vulaines : 3♂♂ - 1♀, n.d. (4); Isère : Fontaine : 1♂, n.d. (6); 1♂ (var. *fairmairei* Legrand), --.VI.1903, Agnus (3); Grenoble : 1♂ - 1♀, n.d., Agnus (6); 1♂ - 1♀, 20.V.1905, / roseaux (6); 1♂ (var. *fairmairei* Legrand), n.d. [but prior to 1905], / roseaux, Agnus (6); 1♀, n.d. (2 in 6); 3♂♂ - 1♀, --.VI.1903, Agnus (3); Vienne : 1♀, n.d., L. Falcoz (6); Oise : Saint-Valery : 1♀, n.d. (4); Seine-et-Marne : Fontainebleau : 2♂♂ - 2♀♀, n.d. (7; n° 5904); Val d'Oise : Forêt de Montmorency : 3♂♂ - 1♀, n.d. (3). **Germany** : Vogtland, Saxon. : 1♀, n.d., ex Standing (8). **Kazakhstan** : Syr-Daria : Aulie Ata : 1♂, n.d., ex Standing (8); **Slovakia** : Moravia : Prossnitz : 1♂, n.d., V. Zoufal, Reitter (5); 1♀, n.d., V. Zoufal (3). **Unknown origin** : 1♂ - 2♀♀, n.d. (4).

Distribution : Europe : Alps, Austria, Belarus, Belgium, Bulgaria, Denmark, Finland, France, Germany, Grand Duchy of Luxemburg, Hungary, Italy (North), Ireland, Netherlands, Norway, Poland, Slovakia, Spain, Sweden, United Kingdom. Elsewhere : Caucasus, Kazakhstan, Russia (Siberia, West).

Host plants : *Carex*, *Phragmites australis* (CAV.) (imagoes : leaves, inside the young folded shoots).

### 12. *Plateumaris consimilis* (SCHRANK, 1781)

**Austria** : 1♂, n.l., n.d. (5); **Kitsbuhel** : 1♂, 28.VI.1958. **Bosnia-Herzegovina** : Bosna : Mokre poljane : 5♂♂, n.d., Czerny (5). **Czech Republic** : Bohemia : Carlsbad : 1♂, n.d., J. Kafka (8); Brunn [= Brno] : 2♂♂, n.d., J. Kafka (8); Prague (environs) : 1♂, 16.V.1948, J. Bechyné; Bohême orientale : Pribislav : 3♂♂ - 2♀♀, 26.V.1948, J. Bechyné; Moravie occ.[-identale] : Bohkalov : 5♂♂ - 2♀♀, 27.V.1948, J. Bechyné. **France** : Ain : Saint-Rambert[-en-Bugey] : 1♂ - 1♀, n.d., G. Audrac (8); Allier : Mont Dore 7 : 1♀, n.d. (5); Calvados : Fresney-le-Puceux 5 : 1♂, n.d. (5); Eure : Pont-Audemer : 1♂, n.d. (5); Gers : Coche : 5♀♀, n.d., Y. Dayrem; Haute-Marne : Chassigny : 1♀, n.d. (3); Forêt de Maigre-Fontaine : 2♀♀, --.VI.1942 (6); Rolampont : 4♂♂ - 5♀♀, n.d. (3); 1♂

- 1♀, n.d. (5); Hautes-Pyrénées : Maubourguet : 2♂♂ - 4♀♀, n.d. (7; n° 548); Haute-Saône : Champagny : 2♂♂, 27.V.1928 (2 in 6); Hauts-de-Seine : Meudon : étang de Trivaux : 11♂♂ - 4♀♀, n.d. (3); 8♂♂ - 3♀♀, n.d. (5); Isère : Env.[-iron] de Vienne : 1♀, 20.VI.1867, de Horvath; Jura : Bonlieu : 1♂, n.d. (8); Landes : Montfort[-en-Chalosse] : 4♂♂ - 6♀♀, n.d. (3) [5]; Oise : Forêt de Compiègne : 1♀, n.d. (5); Orne : Saint Fraimbault s/ « disse » 6 : 1♀, n.d. (5); Puy-de-Dôme : 1♂, n.l., n.d. (5); Pyrénées-Atlantiques : Gabas : 1♂ - 1♀, --.VI.1935 (2 in 6) [1]; Oise : Pierrefonds : 2♂♂, n.d. (6); Rhône : Lyon : 1♂, 15.V.— (8); Seine-et-Oise : Forêt de Carnelles : 3♀♀, n.d. (3); Tarn : Brassac : 1♀, n.d., Raynaud (8); Territoire de Belfort : Belfort : 5♂♂, n.d. (6); Val d'Oise : Domont : 2♀♀, --.VI.--, F. Lombard (5); Montmorency : 1♀, --.VI.--, F. Lombard (5); Vosges : Col du Stalon : 4♂♂, 7.VII.1938 (2 in 6); 3♀♀, n.l., n.d., P. Sirguey (8); 1♀, n.l., VI.1917, "guerre 1917, tranchées" (8); Yonne : Forêt d'Othe : 1♀, --.VII.1873, M. Le Brun; Yvelines : Chaville : 3♂♂, n.d. (3); Rueil[-Malmaison], étang de Saint Cucufa : 2♂♂ - 3♀♀, --.---.1917 (5); 4♂♂, --.V.1917 (5); 10♂♂ - 11♀♀, n.d. (5); unidentified French Departments : Col de [la] Porte [2] : 3♂♂ - 2♀♀, n.d. (6); Moulins [3] : 1♂ - 1♀, n.d. (5); Chaumes [4] : 1♂, 28.V.1876. Problematic labelling from France (specimens holding several labels of origin) : 1♀, n.d., fossés près (5) : Somme : Forêt de Cerisy 6 // Calvados : Carville 5; 1♂, n.d. (5) : Calvados : falaises de Longues[-sur-Mer], Trou sans fond 5 // Orne : Champosoult // Calvados : Saint Juliens s/ Calonne, fossés près d'un bois // Seine-Maritime : Trouville // Rhône : Décines [Charpieu] près [de] Lyon. **Germany** : Umg.[-ebung] Berlin : 1♂ - 1♀, n.d., Jul. Arendt (5); 2♂♂, n.l., n.d. (6); Thüringen : Fri[e]drichroda : 3♂♂ - 4♀♀, --.VI.1880, A. de Borre; NordRhein WestFale or Sachsen Anhalt : Stolberg : 1♀, 19.VI.1857 (Coll. de Borre). **Hungary** : Barifa [or Barita] : 1♂, n.d. (5). **Switzerland** : Env.[-iron] de Genève : 4♂♂ - 2♀♀, --.VII-VIII.1874, H. Tournier; Genève : 1♀; n.d., H. Tournier (1). **Undetermined origin** (probably from France) : Ceusey : 1♂, n.d., H. Miot; « diemont » : 1♂, n.d. (1); Fonds d'Hestroy : 1♂, 10.VI.1883, R.D. Remy; Le Lorian 7 : 1♀, n.d. (5); Ploujean 7 : 1♀, n.d. (5); Prétriu : 3♂♂, 23.V.1897 (5). **Unknown origin** : 5♂♂ - 1♀, n.l., n.d. (5); 1♂, n.l., n.d. (8); 1♀, n.l., n.d. (5); 2♂♂, n.l., n.d. (1).

Notes : [1] : the base of the pronotum of these specimens is singularly narrowed; [2] : could be in Isère or Alpes Maritimes; the first being more probable since Isère is a recurring Department for donaciines; [3] : 2 similar toponyms in Aisne, 1 in Allier, 1 in Ille-et-Vilaine and 1 in Deux-Sèvres; [4] : 1 in Côte d'Or; 1 in Indre-et-Loire; [5] : some specimens of this series are a little bit atypical with a pronotum very distinctly narrowed at the base and

brighter elytra (particularities that were also encountered amongst 1♂ of Rolampont and in 2♂♂ and 1♀ from Maubourguet); though the eadeagus' median lobe is slightly narrower and pointed, endophallus is typical of the species; ovipositor is normal.

**Distribution** : covers almost all Europe : Austria, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Czech Republic, Denmark, France, Germany, Grand Duchy of Luxemburg, Hungary, Italy (North), Netherlands, Poland, Spain (not inland), Sweden, Switzerland. Elsewhere : Russia (including Siberia, Sakhalin). Lacks in United Kingdom, Ireland and Hellenic Balkans. Erroneously reported from Japan.

**Host plants** : *Caltha palustris* L., *Carex* spp. (imagoes / flowers), *Juncus articulatus* L.

### 13. *Plateumaris constricticollis* JACOBY, 1885

**Unknown origin** : 1♀, n.l., n.d., "Type", "*Donacia constricticollis* Jac."

Based on the key and figures provided by TOMINAGA & KATSURA (1984), this specimens belong to the « subspecies » *babai* CHŪJŌ, 1959, a taxon known to occur in Honshu, central Japan. It is well apparent that the taxon *constricticollis* and its five « subspecies » contains more than one species (differences of endophallus are particularly striking), as already pointed out by ASKEVOLD (1991). The nominal subspecies occurs in Japan (Honshu, Hokkaido); the taxon *chugokuensis* TOMINAGA & KATSURA, 1984 lives in Japan (Honshu, South), where it has been observed on *Carex disparata* BOOT (larvae / roots); the taxon *kurilensis* MEDVEDEV, 1978 is known from Russia and Kuril Islands; the taxon *toyamensis* TOMINAGA & KATSURA, 1984 exists in Japan (Honshu, Centre). *Scirpus juncoides* has been also reported as a host plant of *P. constricticollis*.

### 14. *Plateumaris discolor* (PANZER, 1795)

**France** : Cantal : 1♀, n.l., n.d., Bedel (4); Doubs : Erasme : 1♂ - 1♀, 5.VI.1938 (2 in 6); Isère : Prémol : 1♀, 20.VI.1909, Planet (6); Landes : Montfort[-en-Chalosse] : 7♂♂ - 3♀♀, n.d. (3). **Germany** : Harz : 3♀♀, n.d., Kraatz (7, n° 10222). **Slovakia** : Moravia : Umgeg.[end] Paskau : 1♀, n.d., Reitter (5). **Spain** : La Granja : 1♂ (holds a label "Type"; was identified as *Donacia Lacordairei* PERRIS), n.d. (but prior to 1885); 1♂, n.l., n.d. (7, n° 9414). **United Kingdom** : Scotland [Écosse] : 3♂♂, n.l., n.d. (4, n° 940). **Unknown origin** : 1♂, n.d. (5); 3♂♂ - 1♀, n.d. (Coll. E. Candèze); 1♀, n.d.

**Distribution** : Alps, Balkans, Belarus, Belgium, Denmark, Finland, France, Germany, Grand Duchy of Luxemburg, Italy (North), Ireland, Japan, Netherlands, Norway, Poland, Slovakia, Spain (with the subspecies *lacordairei* (PERRIS, 1864)), Sweden, United Kingdom, Switzerland.

**Host plants** : *Caltha palustris* L. (imagoes / flowers); *Carex* spp. (larvae / roots), *Eriophorum angustifolium* HONCK., *E. vaginatum* L., *Sparganium* (imagoes / flowers), *Trichophorum alpinum* L.

Based on comparative morphological examination between Japanese material (usually identified as *P. sericea*) and European specimens of *sericea* and *discolor*, I came to the conclusion that the taxon *discolor* occurs in the Japanese archipelago (LAYS, 1989), an opinion likewise shared by Dr Y. KOMIYA (personal communications : 25.II and 9.VI.1989). Concerning structures of the male genitalia : tegmen, median lobe and endophallus are similar to European specimens' (but, as mentioned below, even between *sericea* and *discolor* no substantial difference can be found). As for female genitalia, in the Japanese specimens examined (Mitsumori [340 m.], Omotegou, FMA, 29.V.1988, Y. KOMIYA leg.), the lateral apical margins of the ventral valve of the ovipositor is as large as in *sericea*, but very finely serrated (barely visible under × 40), seeming almost smooth as in *discolor*. No appreciable difference was observed between the spermatheca of these specimens and those of European specimens of *sericea* and *discolor*. In fact, it seems that the two taxa, *sericea* and *discolor*, coexist in Japan, just as they do in Europe (see data on *P. sericea* in this text).

ASKEVOLD (1991 : 86-87), who found no marked difference between the genitalia of the two taxa, placed *P. discolor* as junior subjective synonym of *P. sericea*, and states that characters traditionally used to separate the two taxa (ratio of antennomeres 2 and 3; coarseness of pronotal rugosity) are variable and that « in many series of specimens a complete range of pronotal structure, from uniformly alutaceous to entirely coarsely-rugose on the disc can be found ». This last statement does not fit at all with what one has observed, based on abundant material (1,346 specimens that result from 380 collections) from Belgium, where the simultaneous occurrence of *sericea* and *discolor* within the population of the

same locality is extremely rare : 0.3% of the total of occurrences. Generally, the external morphology of specimens within a population remains relatively homogenous and allows a not too difficult identification. Concerning the eadeagus, and more specially the endophallus, I have compared them ( $\times 80$ ) from French and Belgian specimens of both taxa, but, as ASKEVOLD (*loc. cit.*) already showed, no special difference appears. As for characteristics of the female genitalia, compared to *discolor*, *sericea*'s lateral apical margins of the ventral valve (= sternum VIII) of the ovipositor is stronger and larger, finely serrated ( $\times 40$ ), whereas *discolor*'s has fine margins that seem to be smooth (indeed, extremely minute serrae are visible under a  $\times 80$  magnification).

The respective ecological requirements of the two taxa seem also to be unequal; as pointed out by MENZIES & COX (1996), *discolor*, or more exactly its food plants, shows a greater affinity for acidic waters, whereas *sericea* lives in neutral or basic waters. *P. discolor* inhabits mainly mountainous regions : in France, the taxon is common in stations above an altitude of 800 m. (BORDY, 1983) and has even been observed at 2,160 m. in the Pyrenees (BOURDONNÉ & DOGUET, 1986).

Regarding the preimaginal stages of these two taxa. NISHIO *et alii* (1959) were the first to describe the larva of *P. sericea* from Japanese material (in the original title, it appears as *Donacia simplex* L., a mistake later corrected in NISHIO, 1960). Later, also working on Japanese specimens, LEE (1991) provides a description of the *P. sericea* last instar larva. There are some noticeable differences as for the general shape and chaetotaxy of some represented larval parts provided by the two authors, but LEE makes no comment about these dissimilarities. The latter author does not mention the method he used in order to identify the described larva as belonging to *P. sericea*.

With regard to *P. discolor*, its larva was first described by BIENKOWSKY (1992), who attributes to *discolor* the discovered larvae by the fact that they come from a site where adults of only one species : *P. discolor*, were seen. Taking the just mentioned remarks into account, and if one presumes that the larvae have been properly identified, it is obvious that larval chaetotaxy of both taxa is well characterized and reinforces the idea that *discolor* and *sericea* constitute two distinct taxa, and that the status of a valid species

can be attributed to them, an opinion also shared by HANSEN, LILJEHULT & PALM (1993).

#### 15. *Plateumaris germari* (MANNERHEIM, 1843)

USA : Alaska : Sitka : 2♂♂ - 1♀, n.d. (1) (one of the ♂ holds a label "Type"); Pennsylvania [Pennsylvania] : 1♀, n.d. (1). **Unknown origin** : 1♀, n.d. (1).

Distribution : North America, transcontinental (for details see ASKEVOLD, 1991).

Host plants : *Carex* (*C. rostrata* STOKES), *Eleocharis*, *Scirpus*.

#### 16. *Plateumaris metallica* (AHRENS, 1810)

Canada : Québec : Env.[-iron] de Québec : 1♂, n.d., Provancher. **Unknown origin** : 1♂, n.d.

Distribution : Eastern North America (for details see ASKEVOLD, 1991).

Host plants : *Carex*, *Juncus affinis* R. BROWN (= *J. alpinus* VILL.), *Scirpus*.

#### 17. *Plateumaris nitida* (GERMAR, 1811)

North America [Amérique boréale] : 1♀, n.l., n.d. .  
Canada : Québec : Env.[-iron] de Québec : 2♀♀, n.d., Provancher; Saguenay [River] : 1♂, n.l., 1877, V. Huart. USA : California : Dunsmuir : 1♂ - 1♀, n.d., Wickham.

Distribution : North America, transcontinental (for details see ASKEVOLD, 1991).

Host plants : yellow *Arum*, *Caltha palustris* L., *Carex* (*Carex microcarpus* PERS.), *Eleocharis*, *Iris missouriensis* NUTT, *Juncus*, *Scirpus*, *Smilacina stellata* (L.) DESF.

#### 18. *Plateumaris pusilla* (SAY, 1827)

North America [Amérique boréale] : 1♀, n.l., n.d. .  
USA : North Carolina : 1♂, n.l., n.d. (Coll. Duvivier); Pennsylvania : 1♀, n.l., n.d. (1).

Distribution : North America, transcontinental (for details see ASKEVOLD, 1991).

Host plants : *Carex*, *Eleocharis* spp. (*Eleocharis palustris* (L.) R. & S.), *Juncus*, *Scripus*.

#### 19. *Plateumaris rufa* (SAY, 1827)

North America [Amérique boréale] : 1♂, n.l., n.d. [but prior to 1885]. Canada : Québec : Joliette : 1♀, --VI--; Lachute : 1♂, 05.VI.1935, J. Ouellet (6; n° 15218); Env.[-iron] de Québec : 1♂ - 1♀, n.d., Provancher; Saguenay [River] : 1♀; n.l., n.d., V. Huart. USA [États-Unis] : 1♀, n.l., n.d.. **Unknown origin** : 2♂♂, n.d. (Coll. Duvivier).

Distribution : Eastern half of North America (for details see ASKEVOLD, 1991).

Host plants : *Caltha palustris* L., *Carex stricta* LAM., *Ranunculus acris* L., *Scirpus*.

**20. *Plateumaris rustica* (KUNZE, 1818)**

= *Plateumaris affinis* (KUNZE, 1818) [ASKEVOLD, 1991 : 37]

*Plateumaris affinis* (KUNZE, 1818) was placed in synonymy with *P. rustica* (KUNZE, 1818) by ASKEVOLD (1991). That these taxa could be conspecific was also suggested by GOECKE (1943). ASKEVOLD (*loc. cit.*) states that these two taxa « are typically separated in keys by colours of the appendages and underside, and by metafemoral tooth size »; to this, one has also to add two other often used characters : length of antennae and shape of pronotum. Usually, the name *affinis* is applied to specimens with a trapezoidal pronotum as well as entirely testaceous antennae, whereas the name *rustica* is reserved for specimens with a square pronotum and black antennae; but between these two phenotypes, many specimens with mixed characters occur. The author has compared the aedeagus (tegmen, median lobe and endophallus) of Belgian and French specimens bearing the typical respective characters of the two taxa : no striking difference appears, including in the morphology of the endophallus, and the observed minute variations can be considered as normal and in harmony with what is encountered elsewhere within conspecific populations. Although it is likely that ASKEVOLD (1991) compared the aedeagus of the two taxa, he did not mention this specifically and provides only one photograph of the endophallus (p. 143 : fig. 175). If one admits that *rustica* and *affinis* are conspecific taxa, *affinis* becomes, *ipso facto*, a variety of *rustica*; if so, some problems that arise from biogeographical data remain difficult to solve : 1- the general distribution of the two taxa presents net differences, although some areas are common to both of them : *rustica*, that shows a clear affinity for mountainous regions, is mainly located in some countries of Western and Central Europe, but is missing in the United Kingdom and Scandinavia, whereas *affinis* exists over a larger area : Europe (including U.K., Ireland and Scandinavia), Bielorrussia and Russia (Siberia). In some zones (e.g. : France, Belgium), besides the two taxa, cooccur also specimens with mixed characters of both taxa. 2- In a given region, where the two taxa co-exist, they seldom occur in the same locality, or the same site : less than 5% observed in Belgium (LAYS, 1997). 3- In

Belgium, one of the two taxa (*rustica*) has vanished from the fauna (prior to 1950) (LAYS, 1997).

The imaginal phenology of both taxa, as far as one knows, is similar : in Belgium, May and June gather the bigger number of observations (LAYS, 1997). Confirmation of their food plants and more details on the ecology of both taxa are still needed and it would be useful to find out. The study, morphological and ecological, of the larvae could equally contribute to solve the problem (only the larvae of *P. affinis* has been described so far [STEINHAUSEN, 1996]).

Could we be in presence of semispecies ? The question remains open and, anyway, can not be solved here. For the reasons evoked above, the two morphs will be treated separately regardless of their exact taxonomic status.

**20a. *Plateumaris rustica* taxon *affinis* (KUNZE, 1818)**

**Austria** [Autriche]: Vienne (environ de) : 3♂♂, 1.VI.[18-]68, de Horvath. **Czech Republic** [Tchécoslovaquie] : Bohême orientale : Probislav : 8♂♂- 17♀♀, 26.V.1948, J. Bechyně. **France** : Allier [1] : 1♂, n.l., n.d. (5); Aube : Bouy-sur-Orvin : 1♂ ("accouplé avec [*P.*] *sericea*"), n.d. (5); Env.[-iron] de Troyes : 1♀, 31.V.1876, M. Le Brun; Troyes : 8♂♂ - 4♀♀, 30.IV.1874, M. Le Brun; Bas-Rhin : Strasbourg : 1♂, n.d. (1); Eure : La Vacherie p.[-rès de] Troyes : 2♂♂ - 1♀, 20.V.1873, M. Le Brun; Haute-Marne : Rolampont : 2♀♀, n.d. (3); Hauts-de-Seine : Meudon, étang de Triviaux : 12♂♂ - 2♀♀, n.d. (3); 5♂♂ - 4♀♀, n.d. (5); 3♂♂, 2.VI.1908 (5); Isère : Env.[-iron] de Vienne [2] : 1♂ - 3♀♀, 1.VI.1868, de Horvath; Loiret : Orléans : 12♂♂, n.d. (5); Nord : Lille : 1♂ (n° 6001), n.d., Lethierr (7); Paris : Paris : 1♂, n.d. (5); Rhône : Décines : 2♂♂ - 1♀, n.d. (5); 1♂ - 1♀, n.l., n.d. (Coll. Schramm, in 5); 1♂, n.l.; n.d., Beaunant (5); Yvelines : Chaville : 2♂♂ - 2♀♀, n.d. (3); 1♂ - 1♀, n.d. (5); Val d'Oise : Vallangoujard : 1♂ - 3♀♀, n.d. (3). **Germany** [Allemagne] : 1♂, n.d. (5); Pommern : Coeslin : 1♂ - 1♀, n.d., Lüllwitz (3). **Hungary** [Hongrie] : 1♂ - 1♀, n.l., n.d. (5). **Romania** : Comana Vlasca : 4♂♂ - 6♀♀, n.d., A.L. Montandon (5). **Lithuania** : Wilna : 11♂♂ - 6♀♀, n.d., Wankowicz. **Unknown origin** : 1♂ - 1♀, n.d. (7); 1♀, n.d. (Coll. Estienne); 5♂♂ - 1♀, n.d. (5); 1♂, n.d. (8).

Notes : [1] : here, and elsewhere in the text, one presumes that this name refers to the Department and not to a locality of the same toponym in the Department of Hautes-Pyrénées; [2] : here, and elsewhere, it is presumed that this refers to the French locality of Vienne, and not to the capital of Austria,

Wien, which is also written « Vienne » in French.

Distribution : mainly in Central and North Europe, at least in : Belarus, Belgium, Bulgaria, Denmark, Finland, France, Germany, Grand Duchy of Luxemburg, Hungary, Ireland, Netherlands, Norway, Poland, Romania, Sweden, United Kingdom. Elsewhere : ex-USSR. Not recorded in the Iberian peninsula and Italy.

This taxon has been probably erroneously reported from North Africa. LACORDAIRE (1845 : 180) was the first to mention *affinis* from the town of Algiers in Algeria (from a specimen of Mr. REICHE). The information is later repeated by several authors, e.g. : REITTER (1920), CLAVAREAU (1913), GOECKE (1960) or more recently by BOROWIEC (1984) and ASKEVOLD (1991). In his notes on the donaciines of North Africa, JOLIVET (1968) mentions *P. affinis* from Algeria (although in his list of African species of Donaciinae, in 1972, neither this species nor the genus *Plateumaris* is reported). BEDEL (1889-1892 : 218) clearly stated that the origin (Algeria) of REICHE's specimen examined by LACORDAIRE was incorrect : apparently, this information did not catch the attention of several scholars. The absence of this taxon in North Africa is probably not surprising : very often, amongst donaciines, species that occur in North Africa exist also in Spain, but neither *affinis* nor *rustica* has been recorded from the Iberian peninsula (PETITPIERRE, 2001).

Host plants : *Carex* (imagoes : leaves, stems), *Iris*, *Menyanthes trifoliata* L. (imagoes / flowers).

#### 20b. *Plateumaris rustica* taxon *rustica* (KUNZE, 1818)

**France** : Aube : Vulaines : 1♂, n.d. (5); Hauts-de-Seine : Meudon : 1♀, n.d. (3); Nord : Douai : 1♂ - 1♀, n.d. (5); Oise : Forêt de Compiègne : 1♂, n.d. (3); Val d'Oise : Vallangoujard : 1♀, n.d. (3); Yonne : Tonnerre : 1♂, n.d. (5). **Germany** : Umg.[-ebung] Berlin : 2♀♀, n.d., Jul. Arendt (5); Pommern, Coeslin : 1♂ - 2♀♀, n.d., Lüllwitz (3). **Italy** : Venezia Giulia : Monfalcone : 1♂ - 1♀, n.d., A. Schatzmyer (8); Monfalcone : 2♀♀, n.d., Mai. A. Kniz (ex Standings in 8). **Romania** : Comana Vlasca : 3♂♂, n.d., A.L. Montandon (5). **Unknown origin** : 1♀, n.d. (7); 1♂ - 2♀♀, n.d. (5); 1♂, n.d. (1)

Distribution : Alps, Austria, Balkans, Belarus, Belgium, France, Denmark, Germany, Grand Duchy of Luxemburg, Italy (North), Netherlands, Poland, Romania, Russia. Erroneously reported

from Japan.

Host plants : *Caltha palustris* L., *Carex* (*C. elata* ALL.), *Cladium mariscus* L., *Iris*.

#### 21. *Plateumaris sericea* (LINNÉ, 1761)

**Czech Republic** [Tchécoslovaquie] : Bohême or.[-ientale] : Pribislav : 1♂, 26.V.1948, J. Bechyné; Moravie occ.[-identale] : Bohkalov : 6♂♂ - 9♀♀, 27.V.1948, J. Bechyné. **France** : Allier : 1♀, n.l., n.d. (5); Alpes-de-Haute-Provence : Riez (Basses-Alpes) : 1♂, n.d. (4); Aube : Chenegy : 1♀, 28.IV.1874, M. Le Brun (5); Troyes : 22♂♂ - 16♀♀, 30.IV.1874, M. Le Brun (5); Bas-Rhin : Strasbourg : 2♂♂ - 1♀, n.d. (6); Calvados : Falaise : 1♀, n.d., Donai (4) (n° 464 N//38 O//133 N); Cher : Env.[-iron] de Bourges : 1♂, 12.VI.1911, F. Gruarden (6); Essonne : Lardy : 3♂♂ - 2♀♀, n.d. (3); Saclas : 1♂ - 1♀, ---.1907 (5); Eure : La Vacherie p.[-rès de] Troyes : 2♀♀, 20.V.1873, M. Le Brun (5); Eure-et-Loire : Hanches : 20♂♂ - 21♀♀, n.d., Gervais (5); Gironde : Bordeaux : 3♂♂, n.d. (3); Haute-Marne : Neuilly l'Évêque : 1♀, 17.VI.1890 (6); 2♂♂ - 1♀, n.d. (6); Rolampont : 3♂♂ - 6♀♀, n.d. (3); Hautes-Pyrénées : Maubourguet : 2♂♂ - 3♀♀, n.d. (7); n° 546; Indre-et-Loire : Loches : 1♂, n.d. (4); Tours : 1♂ - 1♀, --.V.-- (8); Isère : Prunières : 2♂♂ - 3♀♀, n.d. (3); 1♂, n.l., n.d. (3); Loiret : Montargis : 6♂♂ - 6♀♀, n.d., P.M. Mallet (6); Orléans : 2♂♂ - 1♀, n.d., Agnus (6); Manche : Percy 6 : 1♀, n.d., Bedel (4); Portbail 6 : 1♂ - 1♀, n.d. (4); Tesseny-sur-Vire : 1♂ - 1♀, n.d. (6); Oise : Compiègne : 3♂♂ - 5♀♀, n.d. (3); Coye[-la-Forêt] : 1♂ - 1♀, --.VI.1942 (6); Marais de Coye[-la-Forêt] : 1♀, 29.V.1898; 2♀♀, n.d. (6); Puy-de-Dôme : 1♂, n.l., n.d. (5); Pyrénées-Atlantiques : Moustis, Val d'Aran : 1♀, n.d., P. Sirguy (8); Seine-et-Marne : Hermé : 1♂, n.d. (3); Nemours : 1♀, n.d., P.M. Mallet (6); Tarn-et-Garonne : Montauban : 2♀♀, n.d., J. Farenc (6); Vosges : 2♂♂ - 1♀, n.l., n.d., P. Sirguy (8); 2♂♂ - 1♀, n.l., n.d. (3); Gérardmer : 1♂, n.d. (6) [5]; Yonne : Forêt d'Othe : 1♂ - 1♀, --.VII.1873, M. Le Brun (5); Sens : 2♂♂ - 3♀♀, n.d. (5); Tonnerre : 10♂♂ - 13♀♀, n.d. (5); Vincelottes : 141♂♂ - 77♀♀, n.d. (5); Yvelines : Chaville : 1♂, n.d. (3); 2♂♂ - 1♀, n.d. (6); undetermined French Departments : Saint-Germain, Mare aux Ganes : 1♂, n.d. (4); Lassay [2] : 1♀, 5.6 [n° or V.1906 ?]; Sérézin [3] : 2♂♂, 19.V.1910 (8); French specimens holding several labels : 1♀, n.d.(4) (n°157 D) Calvados : Saint-Julien-sur-Calonne, mares // Manche : Coutances // Seine-Maritime : Trouville, fossés; 1♀, n.d., (4) (n° 161 K//265 X//36 O), Calvados : Ranville 4 // Grignon 5 [4] // Calvados : Argences; 3♂♂, n.d. (4), Forêt de Cinglais, étangs H, Falaise 03. **Germany** : Umg.[-ebung] Berlin : 1 ex., n.d., Jul. Arendt (5); Thüringen : Fridri[-e]chroda : 5♂♂ - 3♀♀, --.VI.1880, A. de Borre (5). **Italy** : Lombardy : 5♀♀, n.l., n.d., Nap. Pini (5); Prov. di

Rovigo : Aiguillara Veneta : 1♀, n.d., ex Mancini (8); 1♀, --.VI-VII.1918, C. Mancini (8); Milano : 14♂♂ - 5♀♀, n.d. (6); Milano, Monlué : 1♀, --.V.1921, F. Muzzi; Modena : 2♀♀, n.l., n.d. (6). **Japan** : Honshu : Fukushimakan, Minami-aizugun, Narahara-chô, Ôuchi : 1♂ - 1♀, 13.VI.1948 (6). **Spain** : Catalogne : 4♂♂ - 2♀♀ [1], n.l., n.d., Cuny y Martorell. **Undetermined origin** : Pedolie : 3♀♀, n.d. (6). **Unknown origin** : 1♂, n.d. (Coll. Estienne in 4); 1♂, n.d. (8); 1♀, n.d. (but prior to 1885) (5); 1♀, n.d. (1); 1♀, n.d. (but prior to 1885).

Notes : [1] : Compared with French or Belgian material, these specimens are smaller, only cupreous, with pronotal anterolateral calli less marked; [2] : there are Lassay-les-Châteaux in Mayenne and Lassay-sur-Croisne in Loir-et-Cher; [3] : there are Sérézín-de-la-Tour in Isère and Sérézín-du-Rhône in Rhône; [4] : this toponym exists in Côte-d'Or, Loiret and Savoie; [5] : specimens entirely dark brown except antennae and pronotum that are black.

Distribution : Europe : Belarus, Belgium, Bulgaria, Denmark, Finland, France, Germany, Grand Duchy of Luxemburg, Ireland, Italy (North and South), Netherlands, Norway, Poland, United Kingdom, Sweden, Spain (North-East), Switzerland. Elsewhere : Kazakhstan, Korea, Japan (Hokkaido, Honshu, Sadi Is., Kyushu), Mongolia, Russian Federation (including Kuril Islands, Sakhalin, Siberia). The subspecies *sibirica* (SOLSKY, 1872) exists in Mongolia and on Sakhalin.

In the past, after an examination of some material originating from Japan, I expressed some doubts about the presence of *sericea* in that archipelago (LAYS, 1989), but the material studied in this revision removes now my doubts on this matter : *P. sericea*, as well as *P. discolor* (see above), well occurs in Japan.

Citing BOROWIEC (1984), ASKEVOLD (1991 : 87) reports the existence of *P. sericea* from North Africa up to Japan (although in his key [p. 34] of the Palaearctic species, he states « from Europe to Japan »). In fact, BOROWIEC (*loc. cit.*) does not mention this species from North Africa, neither in his data (p. 452, n° 139) nor on the map of *sericea* (p. 509 : fig. 65; p. 510 : fig. 67). Here too, *P. sericea* does not appear in JOLIVET's articles (1968, 1972) devoted to African donaciines. GOECKE (1957 : 125, n° 1577) reported this species from Algeria, but in his 1960 (p. 9) publication, North Africa is not included ? This problem, as well as the one related to *P. affinis* (see elsewhere in the text), should receive special attention because they call the occurrence of the genus *Plateumaris* on the

African continent into question.

Host plants : *Carex* spp. (*C. disparata* BOOTT. (larvae / roots), *Eleocharis* spp., *Eriophorum*, *Glyceria*, *Iris ensata* var. *spontanea* (imagoes), *Iris pseudacorus* L. (larvae, cocoons / roots; imagoes / flowers), *Iris setosa* (imagoes), *Menyanthes trifoliata* L., *Oryza sativa* L. (larvae, cocoons / roots), *Scripus*, *Sparganium erectum* L., *Typha latifolia* L.

## 22. *Plateumaris shoemakeri* (SCHAEFFER, 1925)

**Canada** : Québec : Env.[-iron] de Québec : 1♀, n.d., Provancher. **North America** [Amérique boréale] : 1♂, n.l., n.d. [but prior to 1885]. **USA** : Philadelphia [1] : 1♂, n.d. (1); New York : Rochester [2] : 2♀♀, n.d., De Kempeneer; 1♀, n.d.

Notes : [1] : several toponyms of this name exist in several states, but it is likely that it refers to the main one in the State of Pennsylvania; [2] : several toponyms of this name exist in several states, but it is likely that it refers to the main one in the State of New York.

Distribution : North America, mainly in the Eastern part (for details see ASKEVOLD, 1991).

Host plants : *Acorus calamus* L., *Iris versicolor* L., *Juncus*, *Nuphar advena* AITON, *Nuphar variegatum* ENGELM., *Peltandra*, *Potamogeton*, *Sparganium*.

## 23. *Plateumaris weisei* (DUVIVIER, 1885)

**Russian Federation** : Amur [Amour; river] : 1♀, n.l., n.d. (holds a label "Type"); Siberia [Sibérie] : 1♂ (n° 111) - 1♀ (n° 110), n.l., n.d. (both hold a label "Type").

Distribution : North of the Palaearctic zone : northern Europe, East of Sweden, Russia (Sakhalin, Primorskij, Amur, Yakut), Mongolia, China (North), Japan (Hokkaido).

Host plants : *Carex* spp. (*Carex vesicaria* L.).

Note : see recent taxonomic treatment by HAYASHI, 2001.

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