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## New species in *Ophrys* (*Orchidaceae*) to the Italian and French Florae

### Keywords

*Orchidaceae*, *Ophrys appennina*, *O. ausonia*, *O. biancae*, *O. candica*, *O. cinnabarina*, *O. classica*, *O. dinarica*, *O. episcopalis*, *O. exaltata*, *O. exaltata* subsp. *arachnitiformis*, *O. exaltata* subsp. *montis-leonis*, *O. fuciflora*, *O. fuciflora* subsp. *lorenae*, *O. garganica* subsp. *castri-caesaris*, *O. gracilis*, *O. heldreichii*, *O. holosericea*, *O. incubacea*, *O. incubacea* subsp. *castri-caesaris*, *O. lacaitae*, *O. ligustica*, *O. litigiosa*, *O. majellensis*, *O. maritima*, *O. massiliensis*, *O. minipassionis*, *O. oxyrrhynchos*, *O. parvimaculata*, *O. passionis*, *O. passionis* subsp. *castri-caesaris*, *O. passionis* subsp. *majellensis*, *O. pinguis*, *O. pseudoscolopax*, *O. scolopax*, *O. sphegodes* subsp. *majellensis*, *O. tarquinia*, *O. tetraloniae*, *O. vetula*, *O. virescens*, *O. 'apuanensis'*, *O. 'de la Siagne'*, *O. ×albertiana*, Flora of France, Italy.

### Summary

Romolini, R. & R. Soca (2011): New species in *Ophrys* (*Orchidaceae*) to the Italian and French Florae.- J. Eur. Orch. 43 (4): 759-784.

After reviewing the Sectio *Fuciflorae* and *Araniferae* in the genus *Ophrys*, several taxa of this genus are described. Three species from each of these two sections are described in this paper. *Ophrys appennina*, has an extensive range from the French border, runs through the whole Apennine chain, to Calabria, with a wide altitudinal range and is the commonest member of the section in Italy. *Ophrys pinguis* range is restricted to semi-mountainous areas of central Italy (Abruzzo, Latium and Tuscany); this taxon is sympatric with many taxa of the '*fuciflora*' series which, in some places, is quite puzzling due to the presence of many hybrids. *Ophrys cinnabarina* is endemic to Basilicata and Puglia, where it blossoms in June. *Ophrys maritima*, whose range is restricted to Liguria and Tuscany; this taxon combines features of *Ophrys aranifera*, *O. exaltata* and *O. tarquinia*. There is a continuum with *Ophrys tarquinia* which grows further inland; *Ophrys maritima* never grows far from the coasts

of the Mediterranean Sea and never reaches elevations higher than 110 m. *Ophrys minipassionis* occurs in the Emilia-Romagna, Latium, Puglia, Tuscany, Umbria regions, and probably elsewhere in Italy. *Ophrys ligustica* can be found both in France, in the Var and Alpes-Maritimes departments, and Italy in the Imperia and Savona provinces.

### **Zusammenfassung**

Romolini, R. & R. Soca (2011): Neue *Ophrys*-Arten (*Orchidaceae*) für die italienische und französische Flora.- J. Eur. Orch. 43 (4): 759-784.

Nach eingehender Untersuchung der Sektionen *Fuciflorae* und *Araniferae* der Gattung *Ophrys* beschreiben die Autoren mehrere neue Taxa dieser Gattung für die italienische und französische Flora. In dieser Arbeit werden für jede dieser zwei Sektionen drei Arten beschrieben. *Ophrys appennina*, deren weite Verbreitung von der französischen Grenze über die ganze Kette der Apenninen bis nach Kalabrien reicht, ist der häufigste Vertreter der Sektion *Fuciflorae* in Italien. *Ophrys pinguis*, deren Verbreitung sich auf die collinen-submontanen Zonen Mittelitaliens beschränkt (Abruzzen, Latium, Toskana), kommt oft gemeinsam mit anderen Vertretern der Serie *fuciflora* vor und bildet an bestimmten Orten zahlreiche, oft verwirrende Hybridschwärme aus. Die Verbreitung von *Ophrys cinnabarina* erstreckt sich von der Basilikata bis nach Apulien, sie ist durch eine späte Blüte im Juni charakterisiert. Aus der Sektion *Araniferae* kommt *Ophrys maritima* von Ligurien bis zur Toskana vor, sie besiedelt ausschließlich küstennahe Areale und überschreitet in der Vertikalen kaum die 100 m Grenze, die höchsten Vorkommen wurden bei 110 m ü.d.M. festgestellt. *Ophrys maritima* besitzt verschiedene Merkmale von *Ophrys aranifera*, *O. exaltata* und *O. tarquinia* in eigenständiger Kombination. Insbesondere bestehen kontinuierliche Übergänge zu *Ophrys tarquinia*, die mehr im Landesinneren wächst. *Ophrys minipassionis* ist bislang aus den Regionen Emilia Romagna, Latium, Apulien, Toskana, Umbrien bekannt und kommt sicherlich auch in weiteren Regionen vor. Das bislang ermittelte Verbreitungsgebiet von *Ophrys ligustica* zieht sich von Südost-Frankreich (Departement Var, Alpes-Maritimes) bis nach Nordwest-Italien (Provinzen Imperia, Savona) hin.

### **Riassunto**

Romolini, R. & R. Soca (2011): Nuove specie del genere *Ophrys* (*Orchidaceae*) per la Flora d'Italia e di Francia.- J. Eur. Orch. 43 (4): 759-784.

Dopo aver studiato le sezioni *Fuciflorae* e *Araniferae* del genere *Ophrys*, vengono descritti diversi taxa di questo genere. In questo lavoro sono descritte, rispettivamente, tre specie per ciascuna di queste due sezioni. *Ophrys appennina*, la cui area di ripartizione è molto ampia dal confine francese, corre attraverso l'intera catena degli Appennini, fino in Calabria, con una grande

ampiezza altitudinale; è il rappresentante più comune della sezione in Italia. *Ophrys pinguis* la cui area di ripartizione si limita alle zone semi-montagnose del centro Italia (Abruzzo, Lazio e Toscana), questo taxon è confrontato con numerosi taxa della serie 'fuciflora' ciò che può causare in alcuni luoghi una grande confusione dovuta alla presenza di numerosi ibridi. *Ophrys cinnabarina* la cui area di ripartizione è limitata a Basilicata e Puglia con la fioritura centrata nel mese di giugno. *Ophrys maritima* la cui area di ripartizione è limitata a Liguria e Toscana, questo taxon possiede i caratteri combinati di *Ophrys aranifera*, *O. exaltata* e *O. tarquinia*. C'è un continuum con *Ophrys tarquinia* che si spinge più verso l'interno; *Ophrys maritima* non si spinge mai bene lontano dalle coste del Mediterraneo e non sale mai oltre a 110 m. di altitudine. *Ophrys minipassionis* presente nelle regioni Emilia Romagna, Lazio, Marche, Puglia, Toscana, Umbria e certamente un po'ovunque altrove in Italia. *Ophrys ligustica* presente in Francia, nel Var e Alpi Marittime, e in Italia nelle province di Imperia e Savona.

## Résumé

Romolini, R. & R. Soca (2011): Nouvelles espèces du genre *Ophrys* (*Orchidaceae*) des flores italienne et française.- J. Eur. Orch. 43 (4): 759-784. Après avoir étudié les Sectio *Fuciflorae* et *Araniferae* du genre *Ophrys*, les auteurs décrivent plusieurs taxons de ce genre pour les flores italienne et française. Dans cet article, sont décrites respectivement trois espèces pour chacune de ces deux sections. *Ophrys appennina* dont l'aire de répartition très vaste va de la frontière française, parcourt toute la chaîne des Apennins, jusqu'en Calabre, avec une grande amplitude altitudinale ; c'est le représentant le plus commun de la section en Italie. *Ophrys pinguis* dont l'aire de répartition se limite aux zones semi-montagneuses du centre de l'Italie (Abruzzes, Latium et Toscane), ce taxon est confronté avec de nombreux taxons de la série fuciflora ce qui peut provoquer dans certains lieux une grande confusion due à la présence de nombreux hybrides. *Ophrys cinnabarina* dont l'aire de répartition se limite à la Basilicate et aux Pouilles avec une floraison en juin. *Ophrys maritima* dont l'aire de répartition se limite à la Ligurie et à la Toscane, ce taxon possède les caractères conjugués d'*Ophrys aranifera*, *O. exaltata* et *O. tarquinia*. Il existe une sorte de continuum avec *Ophrys tarquinia* qui pousse plus à l'intérieur ; *Ophrys maritima* ne pousse jamais bien loin des côtes de la Méditerranée et ne monte jamais au-delà de 110 m d'altitude. *Ophrys minipassionis* présent dans les régions Emilie-Romagne, Latium, Marche, Ombrie, Pouilles, Toscane et certainement un peu partout ailleurs en Italie. *Ophrys ligustica* présent en France, dans le Var et les Alpes-Maritimes, et en Italie dans les provinces d'Imperia et de Savona.

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## 1. Introduction

In this paper we propose to describe several taxa of the genus *Ophrys* (*Orchidaceae*). This is the outcome of twenty years of exploration in search of representatives of the family *Orchidaceae* in Italy. We refer to these results as naturalistic because we do not perceive nature like mathematicians or geneticists, but like mere observers. We try to understand how plants evolve by involving the organisms around them. The pressure exerted by plants on animals, and in the case of *Ophrys* on the Hymenoptera, is now widely acknowledged. If *Ophrys* have chosen to be pollinated by wasps, we think that the most significant distinctive features of the various taxa in this genus are as follows: first, the shape of the stigmatic cavity, the size of basal field, the volume, colour and position of the pseudo-eyes. Second, the shape and arrangement of the humps, the location and length of the hair and the presence of staminodial points. The shape and colour of the lip and the colour of the perianth are accessory features. Of course, no single character is critical. We need a coherent set. Some authors use the binomial *Ophrys holosericea* to designate a taxon from the '*fuciflora*' series. This taxon, which was described from Saint-Florent in Corsica, is synonymous to *Ophrys apifera*, hence there is no reason for including *Ophrys holosericea* in this paper. The system of coordinates used in this paper is WGS84.

## 2. *Ophrys* Sectio *Fuciflorae* Reichenbach 1851

The Sectio *Fuciflorae* was created by REICHENBACH (1851). More recently, DEVILLERS & DEVILLERS-TERSCHUREN (1994) used the term - invalid under the Code - "*fuciflora* complex" followed in this by DELFORGE, who in his latest book (2005), recognized 61 taxa distributed into five "groups" (another misnomer under the Code). The geneticists, in spite of their assertions ("surveyed the entire genus *Ophrys*") only partly studied this genus.

In the genus *Ophrys*, according to BATEMAN et al. (2003), the plants of the Sectio *Fuciflorae* can be divided into two series: a) *episcopalis* - *candica* - *umbilicata* - *levantina* - *scolopax* - *heldreichii* on the one hand and b) *biancae* - *oxyrrhynchos* - *fuciflora* on the other hand, each one occupying a distinct geographical area. The plants of the "a" series would be localised in the eastern part, whereas the representatives of the "b" series would be confined to the western part. We think that this approach is not quite accurate, especially since a restricted number of taxa that may belong to this Sectio has been studied. The same assertion is found in SOLIVA, KOCYAN & WIDMER (2001), but in this case a very small number of plants was studied too, as well as in a study based on

nuclear and plastid DNA sequencing and amplified fragment length polymorphism (AFLP) (DEVEY et al., 2008), as well as in a study on *O. fuciflora* from Kent (DEVEY et al. 2009). In fact, the BATEMAN team is unaware of the difference between non-reproductive isolation and genetic differentiation and is not familiar with ecological speciation.

According to our investigations, the following taxa of the Sectio *Fuciflorae* are currently known to occur in Italy (in alphabetical order):

*Ophrys annae* Devillers-Tersch. & Devillers  
*O. apulica* (O. Danesch & E. Danesch) O. Danesch & E. Danesch  
*O. biancae* (Tod.) Macch. (syn.: *O. discors* Bianca)  
*O. calliantha* Bartolo & Pulv.  
*O. candica* (E. Nelson ex Soó) H. Baumann & Künkele  
*O. chestermanii* (J.J.Wood) Gözl & H.R. Reinhard  
*O. dinarica* Kranjčev & P. Delforge  
*O. fuciflora* (F.W. Schmidt) Moench subsp. *lorenae* E. De Martino & Centur.  
*O. gracilis* (Büel, O. Danesch & E. Danesch) Paulus  
*O. holosericea* (Burm.f.) Greuter subsp. *paolina* Liverani & Romolini  
*O. lacaitae* Lojac.  
*O. oxyrrhynchos* Tod. subsp. *celiensis* (O. Danesch & E. Danesch) Del Prete  
*O. oxyrrhynchos* Tod. subsp. *ingrassiae* Dura, Turco, Gennaio & Medagli  
*O. oxyrrhynchos* Tod. subsp. *oxyrrhynchos*  
*O. parvimaculata* (O. Danesch & E. Danesch) Paulus & Gack  
*O. pseudoscolopax* (Moggr.) Paulus & Gack (syn: *O. linearis* (Moggr.) P. Delforge)  
*O. tetraloniae* W.P. Teschner (syn.: *O. serotina* H. Rolli ex Paulus, *O. posidonia* P. Delforge).  
*O. untchjii* (M. Schulze) P. Delforge

And several micro-taxa like:

*Arachnites fuciflora* (Curtis) Tod. var. *ambigua* Tod.  
*Ophrys benoitiana* Lojac.  
*O. di-stefani* Tineo ex Lojac.  
*O. nicotrae* Zodda  
*O. oxyrrhynchos* var. *aterrima* Lojac.

In Italy, as in south-eastern France, many taxa and micro-taxa are undescribed yet. For some of them, we do not have enough data. For others, we have gathered enough information to allow us to describe them. Such is the case of the following three taxa: *Ophrys appennina*, *O. pinguis* and *O. cinnabarina*.

## 2.1. New species of Sectio *Fuciflorae*

### 2.1.1. *Ophrys appennina* Romolini & Soca, spec. nov.

Due to its distinctive features, i.e. pink perianth, small pinkish-white petals, entire, broader than long lip, outwardly directed humps, small green pseudo-eyes, which cannot be observed in any other taxon from the section, we are led to describe it as new.

**Descriptio:** Planta robusta, 20 cm alta procera; folia basalia lanceolata: 6; spica laxiflora; flores: 6, instar Ophrydem fucifloram; sepala ovales lanceolata, alba cum venis viridibus, 12 mm longa, 4,5 mm lata; petala triangulata elongata, albo roseo, ciliata cincta, 6 mm longa; labellum integrum, trapeziforme, 12 mm longa, 13 mm lata, bruneum, castaneum velutinum; macula simplicibus delineationibus, in labelli inferiore parte sita; labelli inferior pars quemadmodum colore labellum; lobi laterales acuminati, gibbaeformis, exterior spectans, cum magna pilis; connectivum breve; pseudo-oculi parvi, viridi; labelli appendix flavo viride, tridentata, erecta anterieus versus. Floret medium aprili mense ad medium junio mense.

**Description:** Robust plant with high (20 cm), slender stem bearing 6 lanceolate basal leaves, loose inflorescence with relatively spaced-apart flowers, bearing 6 flowers like those of *Ophrys fuciflora*; lax spike of medium-sized flowers; lanceolate oval sepals, white; hairy-margined, elongated triangular petal, white-pink; entire trapezoidal, brown lip, covered in brown hair; macula consisting of a simple pattern occupying the basal part of the lip; basal field and stigmatic cavity of the same colour as the lip; outwardly directed, pointed humps; short gynostemium, small pseudo-eyes, greenish; large appendage, tridentate, forwardly directed. Flowering from mid-April to mid-June.

**Holotypus:** Italia, Lazio, Roma. Canale Monterano. entre Manziana et Tolfa. Monte Angiano. Chênaie, pelouse. 315 m. 33T-02564/46673. 29.IV.1996. leg. Romieg Soca RS.1996.498-1 (MPU). Isotypi: Romieg Soca RS.1996.498-2, RS.1996.498-3 (MPU).

**Etymology:** Because of its presence in much of the Apennines, a mountain range which runs the entire length of Italy.

**Taxonomy:** Closely related taxa: all taxa in Sectio *Fuciflorae*, particularly *O. fuciflora* subsp. *lorenae* E.De Martino & Centur., *O. pseudoscolopax* (Moggr.) Paulus & Gack, and to a lesser extent *O. vetula* Risso.

**Ecology:** Juniper grasslands, karst grasslands, sometimes with *Ampelodesmos mauritanicus* (Poir.) T. Durand & Schinz, altitude from 50 up to 1300 m.

**Iconography:** LANDWEHR 1977: 460-461, pl. 214, figs. 7-8, sub *Ophrys holosericea* (Burm.f.) Greuter; LANDWEHR 1983: 464-465, pl. 216, figs. 7-8, sub *Ophrys holosericea*

(Burm.f.) Greuter; CONTI 1990: 113, sub *Ophrys holoserica* (Burm.f.) Greuter; FORLENZA & CORSETTI 1990: 68, sub *Ophrys holoserica* (Burm.f.) Greuter; DEL PRETE, TICHY & TOSI 1993: 95, sub *Ophrys holoserica* subsp. *holoserica* (Burm.f.) Greuter, *O. holoserica* subsp. *elator* (Gumprecht) Gumprecht and *O. holoserica* subsp. *parvimaculata* (O.Danesch & E.Danesch) O.Danesch & E.Danesch; Gruppo Naturalistico Valle del Mugnone 1997: 76-77, sub *Ophrys fuciflora* (F.W.Schmidt) Moench; BIAGIOLI, GESTRI, ACCIAI & MESSINA 1999: 110, sub *Ophrys fuciflora* (F.W.Schmidt) Moench; PACIFICO, BERTOZZI & DE ANGELI 2000: 116, sub *Ophrys fuciflora* (F.W.Schmidt) Moench; BUONO 2006: 46, sub *Ophrys fuciflora* subsp. *fuciflora* (F.W.Schmidt) Moench; SQUARCINI 2005: 72-73, sub *Ophrys fuciflora* (F.W.Schmidt) Moench; GARCIA 2006: 41, sub *Ophrys fuciflora* (F.W.Schmidt) Moench; SPAGNOLI 2009: 135, sub *Ophrys ×albertiana* Cam.; G.I.R.O.S. 2009: 205, sub *Ophrys holosericea* subsp. *holosericea* (Burm.f.) Greuter; GULLI, BULGHERI, CIANCHI, DONATI & TOSI 2010: 70, 105, 106, 107, 179, 181, 183 and 194, sub *Ophrys holosericea* subsp. *holosericea* (Burm.f.) Greuter.

**Geographical Distribution in Italy (pers. obs.):** Abruzzo (AQ, CH), Basilicata (MT, PZ), Calabria (CS), Campania (SA), Lazio (FR, LT, RI, RM), Liguria (IM), Molise (IS), Toscana (FI, LU, PI, SI), Umbria (TR).

**Specimina selecta:** Toscana, Firenze, Sesto Fiorentino, Pian di San Bartolo, coteau avec oliviers, 340 m., 15.V.1998, leg. Romieg Soca RS.1998.510-1, RS.1998.510-2 (MPU). Toscana, Pisa, Volterra, Fiume Cecina, Lit du fleuve, graviers. 81 m, 9.V.1999, leg. Romieg Soca RS.1999.507 (MPU). Liguria, Imperia, Pompeiana, coteau avec Cistus, 578 m., 12.V.2011, leg. Romieg Soca RS. 2011.505 (MPU).

### Personal field records

**Abruzzo** (AQ): Alfedena. 879 to 1145 m. 8.VI.2010; Ateleta. 818 to 826 m. 14.V.2007; Ateleta. 829 m. 7.VI.2010; Canistro. 783 m. 10.VI.2010; Capistrello. Pescocanale. 757 m. 10.VI.2010; Collelongo. Valle Rosa. 1003 m. 11.VI.2010; Magliano de Marsi. Monte Cattiviglie. 1230 m. 20.V.2011; Montereale. Santa Lucia. 982 m. 22.VI.2010.

**Abruzzo** (CH): Collepietro. 649 to 666 m. 3.V.2010. 20.V.2011; San Benedetto in Perillis. 757 m. 3.V.2010. 20.V.2011.

**Basilicata** (MT): Ginosa. 389 m. 5.IV.2005.

**Basilicata** (PZ): Bella. 529 m. 29.IV.2001; Bella. Fossa del Luppo. 422 m. 29.IV.2001; Senise. Diga di Monte Cotugno. 237 m. 27.IV.2006.

**Calabria** (CS): Acquaformosa. Torrente Grondo. 417 m. 2.V.2006; Firmo. 219 m. 28.IV.2006.

**Campania** (SA): Celle di Bulgheria. 56 m. 7.V.2008; Ascea. 114 m. 25.IV.2010.

**Lazio** (FR): Esperia. Monticelli. Pozzo la Corte. 187 to 212 m. 5.V.2006; Esperia. Monticelli. Pozzo la Corte. 200 m. 17.IV.2009; Esperia. Monticelli. Pozzo la Corte. 21.V.2007; Esperia. Monticelli. Pozzo la Corte. 291 m. 28.IV.2002; Esperia. Monticelli. Pozzo la Corte. 295 m. 5.V.2006; Esperia. Monticelli. Pozzo la Corte. 80 m. 28.IV.2002; Esperia. Monticelli. Pozzo la Corte. San Ermo. 270 m. 28.IV.2002; Esperia. Monticelli. Pozzo la Corte. Selvi. 206 m. 28.IV.2002.

**Lazio** (LT): Campodimele. 510 m. 22.V.2007.

**Lazio** (RI): Amatrice. San Martino. 1152 to 1271 m. 22.VI.2010.

**Lazio** (RM): Canale Monterano. Monte Angiano. 315 m. 28.IV.1995. - 29.IV.1996. - 9.V.1999. - 1.V.2001. - 5.V.2006. - 12.V.2008; Gavignano. 235 m. 4.VI.2010; Marcellina.

650 m. 17.IV.2009.

**Liguria** (IM): Imperia. 370 m. 12.V.2011; Pompeiana. 578 m. 12.V.2011.

**Molise** (IS): Isernia. 610 m. 7.VI.2010; Isernia. 696 m. 2.V.2010; Isernia. 700 m. 7.VI.2010; Isernia. Valico Macerone. 680 m. 28.V.2011.

**Toscana** (FI): Barberino del Mugello. Santa Lucia. 600 m. 15.V.2008; Borgo San Lorenzo. Polcanto. Candigliana. 505 m. 5.VI.2009; San Casciano in Val di Pesa. Chiesanuova. 26.V.2007; Scarperia. Bosco di Panna. 445 m. 6.V.2010; Sesto Fiorentino. Pian di San Bartolo. 337 m. 6.V.2010. - 2.V.2001.

**Toscana** (LU): Lucca. Santa Maria di Giudice. 112 m.

**Toscana** (PI): Volterra. Fiume Cecina. 76 m. 9.V.1999. - 30.IV.2002. - 14.V.2008.

**Toscana** (SI): Sarteano. Monte Cetona. 918 m. 4.VI.2009. - 4.VI.2010.

**Umbria** (TR): San Venanzo. Monte Peglia. 464 m. 29.IV.2002; San Venanzo. Monte Peglia. 501 m. 29.IV.2002.

### 2.1.2. *Ophrys pinguis* Romolini & Soca, spec. nov.

Due to its distinctive features, i.e. large flowers, triangular petals, protruding lip, narrow horizontal stigmatic cavity, appendix inserted into a very deep notch, which cannot be observed in any other taxon from the section, we are led to describe it as new. This taxon often grows together with *Ophrys appennina*, *O. dinarica*, *O. gracilis*, *O. lacaitae*, *O. tetraloniae*, etc., so that it is sometimes hardly identifiable.

**Descriptio:** Planta robusta, 40 cm alta procera; folia basalia lanceolata: 6; spica laxiflora; flores: 6, instar *Ophrydem fucifloram*; sepala ovales lanceolata, alba cum venis viridibus, 12 mm longa, 4,5 mm lata; petala triangulara, albo roseo, ciliata cincta, 6 mm longa; labellum integrum convexissimum, globosum, trapeziforme-rotundatum, 14 mm longa, 15 mm lata, castaneum, bruneo-rufo velutinum cinctum; macula simplicissima, in labelli inferiore parte sita; labelli inferior pars viride aurantiacus; cava stigmatica fusca; lobi laterales acuminati, gibbaeformis, antice eriguntur; connectivum breve; pseudo-oculi parvi, viridi; labelli appendix viride, tridentata, erecta deorsum versus, distincte lacinia includum. Floret medium maio mense ad medium junio mense.

**Description:** Robust plant with high (40 cm), slender stem bearing 6 lanceolate basal leaves; loose inflorescence of relatively spaced-apart flowers, bearing 6 flowers like those of *Ophrys fuciflora*; lax spike of large flowers; lanceolate oval sepals, white; hairy-margined triangular petals, white-pink; entire lip, very convex, bulging, rounded-trapezoidal, brown, covered in extensive brush-like hair around the reddish brown lip; little, simple macula, consisting of a simple pattern occupying the basal part of the lip; basal field green-orange; dark stigmatic cavity; forwardly directed pointed humps; short gynostemium; small pseudo-eyes, greenish; green appendage, very large,



inserted into a large indentation, facing up. Flowering from mid-May to mid-June.

**Holotypus:** Italia, Lazio, Latina. Itri. Campello. Chênaie, pelouse karstique. 1050 m. 33T-03817/45780. 24.V.2007. leg. Romieg Soca. RS.2007.501 (MPU).

**Etymology:** Due to the size of the lip.

**Ecology:** Karst grasslands, undergrowth of *Quercus pubescens*, altitude from 500 up to 1200 m.

**Geographical Distribution in Italy (pers. obs.):** Abruzzo (AQ, CH), Lazio (FR, LT), Toscana (SI).

**Iconography:** SOUCHE 2008: 10, sub *Ophrys fuciflora* grande fleur tardif, Lazio; SPAGNOLI 1996: 53, sub *Ophrys holoserica* (Burm.f.) Greuter; SPAGNOLI 2009: 73, sub *Ophrys fuciflora* (F.W.Schmidt) Moench.

**Specimina selecta:** Abruzzo, L'Aquila, Capistrello, Pescocanale vers Canistro. à 1 km de Pescocanale, coteau herbeux avec Rosa. 757 m, 8.VI.2011, leg. Romieg Soca RS. 2011.510 (MPU).

### Personal field records

**Abruzzo** (AQ): Aielli. 1025 m. 21.V.2011; Capistrello. Pescocanale. 757 m. 22.V.2011. 8.VI.2011; Avezzano. Monte Salviano. 950 m. 24.V.2011; Ateleta. 829 m. 25.V.2011; Pacentro. 1049 m. 9.VI.2010. 11.VI.2011.

**Abruzzo** (CH): Gamberale. 800 m. 26.V.2011; Gamberale. 1150 m. 26.V.2011; Gamberale. 1190 m. 6.VI.2010; Palena. 900 m. 26.V.2011; Palena. 906 m. 6.VI.2010.

**Lazio** (FR): Acquafondata. Madonna del Carmine. 990 m. 28.V.2011.

**Lazio** (LT): Campodimele. Le Crocette. 502 m. 5.VI.2010. 7.VI.2011; Formia. Maranola. San Michele. 856 m. 22.V.2007; Itri. Campello. 890 m to 1058 m. 24.V.2007; Itri. Campello. 805 m to 935 m. 5.VI.2010; Itri. San Nicola. 655 m. 5.VI.2010; Lenola. Camposarianni. Monte Appiolo. 562 m to 743 m. 5.VI.2010.

**Toscana** (SI): Sarteano. Monte Cetona. 920 m. 4.VI.2009.

### 2.1.3. *Ophrys cinnabarina* Romolini & Soca, spec. nov.

Due to its distinctive features, i.e. large flowers, vermilion (cinnabar) basal field, small green pseudo-eyes and a very late flowering period, which cannot be observed in any other taxon from the section, we are led to describe it as new.

**Descriptio:** Planta robusta, 40 cm alta procera; folia basalia lanceolata: 6; spica laxiflora; flores: 6, instar *Ophrydem fucifloram*; sepala ovales lanceolata, rosea, 12 mm longa, 4,5 mm lata; petala triangulata elongata, roseo-rubro, 5 mm longa; labellum integrum convexum, trapeziforme elongatum, 15 mm longa, 15 mm lata, haematitico, velutinum cinctum in labelli inferiore parte;

macula simplicibus delineationibus, in labelli medium parte sita; labelli inferior pars cinnabarino; cava stigmatica fusca; lobi laterales acuminati, gibbaeformis, antice eriguntur; connectivum breve; pseudo-oculi parvi, viridi; labelli appendix flavo viride, tridentata, erecta deorsum versus, distincte lacinia includum. Floret fine maio mense ad fine junio mense.

**Description:** Robust plant with high (40 cm), slender stem bearing 6 lanceolate basal leaves; loose inflorescence of relatively spaced-apart flowers, bearing 6 flowers like those of *Ophrys fuciflora*; lax spike of large flowers; sepals lanceolate oval, pink; elongated triangular petals, dark pink; entire lip, convex, trapezoidal elongate, reddish-brown, covered in brush-like hair at the base of the brownish-red lip; little macula, simple, consisting of a simple pattern occupying the center of the lip; large basal field, bright red; dark stigmatic cavity; large, forwardly directed humps; short gynostemium; small pseudo-eyes, greenish; greenish yellow appendage, bulky, inserted into a slot, upwardly directed. Flowers from late May to late June.

**Holotypus:** Italia, Puglia, Foggia. San Marco in Lamis. Chênaie, pelouse karstique. 756 m. 33T-05549/46174. 1.VI.2009. leg. Romieg Soca. RS.2009.601. (MPU).

**Etymology:** because of the vermilion red (cinnabar) colour of the basal field.

**Taxonomy:** Closely related taxa: the morphologically closest taxon is *Ophrys pinguis*. Both inhabit karst grasslands in *Quercus* undergrowth. Given the low altitude and the even later flowering date, *Ophrys cinnabarina* does not seem to have affinities with other taxa.

**Ecology:** Karst grasslands, undergrowth of *Quercus pubescens*, altitude from 280 up to 800 meters.

**Iconography:** DEL FUOCO 2003: 188, sub *Ophrys fuciflora* (F.W.Schmidt) Moench.

**Geographical Distribution in Italy (pers. obs.):** Basilicata (MT, PZ), Puglia (BA, FG).

**Specimina selecta:** Basilicata, Potenza, Genzano di Lucania. vers Spinazzola, Bois de chênes, 416 m., 3.VI.2011, Romieg Soca. RS.2011.605 (MPU). Puglia, Foggia. San Marco in Lamis. Chênaie, pelouse karstique. 756 m. 4.VI.2011. Romieg Soca. RS.2011.615. (MPU). Puglia, Foggia. San Marco in Lamis. Chênaie, pelouse karstique. 757 m. 5.VI.2011. Romieg Soca. RS.2011.625. (FI).

### Personal field records

**Basilicata** (MT): Matera. Contrada Serritella. 500 m. 2.VI.2011.

**Basilicata** (PZ): Genzano di Lucania. 416 m. 3.VI.2011.

**Puglia** (BA): Gravina in Puglia. Bosco Difesa Grande. 2.VI.2011.

**Puglia** (FG): Apricena. Ingarano. 285 m. 4.VI.2011; Monte Sant'Angelo. Monte Spigno. 800 m. 6.VI.2011; San Marco in Lamis. 750 m. 3.VI.2011; San Marco in Lamis. 757 m.

5.VI.2011; San Marco in Lamis. Borgo Celano (Locus classicus). 756 m. 1.VI.2009.  
4.VI.2011; San Marco in Lamis. Convento San Matteo. 762 m. 1.VI.2009; San Nicandro  
Garganico. 280 m. 6.VI.2011.

### 3. *Ophrys* Sectio *Araniferae* Reichenbach 1851

The Sectio *Araniferae* was created by REICHENBACH (1851). This Sectio is divided into several series at the discretion of the authors who do not use the same features and determination criteria. The type of the Sectio - *Ophrys aranifera* Huds. - has been wrongly considered during the last thirty years as synonymous to *Ophrys sphegodes* Mill., which previously was not the case. The Sectio has recently been studied by SOCA (2001, 2003a, 2003b), VÉLA (2000, 2002), Véla et al. (2000, 2007) and partially by SOLIVA & WIDMER (2003).

List of taxa of the Sectio *Araniferae* occurring in Italy:

- Ophrys argentaria* Devillers-Tersch. & Devillers
- O. ausonia* Devillers, Devillers-Tersch. & P. Delforge
- O. brutia* P.Delforge
- O. classica* Devillers-Tersch. & Devillers
- O. exaltata* Ten. (syn.: *O. mateolana* Medagli, D'Emerico, Bianco & Ruggiero)
- O. exaltata* Ten. subsp. *arachnitiformis* (Gren. & M.Philippe) Del Prete
- O. exaltata* Ten. subsp. *archipelagi* (Gözl & H.R. Reinhard) Del Prete
- O. exaltata* Ten. subsp. *cilentana* (Devillers-Tersch. & Devillers) Kreutz
- O. exaltata* Ten. subsp. *montis-leonis* (O. Danesch & E. Danesch) Soca (syn.: *O. tyrrhena* Gözl & H.R. Reinhard)
- O. exaltata* Ten. subsp. *morisii* (Martelli) Del Prete
- O. exaltata* Ten. subsp. *splendida* (Gözl & H.R. Reinhard) Soca
- O. incubacea* Bianca (syn.: *O. atrata* Lindl.)
- O. litigiosa* E.G. Camus
- O. massiliensis* Viglione & Véla
- O. panormitana* (Tod.) Soó (syn.: *O. panormitana* (Tod.) Soó var. *praecox* (Corrias) P. Delforge)
- O. passionis* Sennen (syn.: *O. garganica* O. Danesch & E. Danesch)
- O. passionis* Sennen subsp. *majellensis* (Helga Daiss & Herm.Daiss) Romolini & Soca
- O. pseudoatrata* S. Hertel & Presser
- O. riojana* C.E. Hermos.
- O. sipontensis* R. Lorenz & Gembardt (syn.: *O. murgiana* Cillo, Medagli & Margh.)

*O. sphegodes* subsp. *grassoana* Cristaudo, Galesi, R. Lorenz & Zelesny, nom. inval.

*O. sphegodes* Mill. subsp. *sicula* E. Nelson, nom. inval.

*O. tarquinia* P. Delforge.

### 3.1. New species of Sectio *Araniferae*

#### 3.1.1. *Ophrys maritima* Pacifico & Soca, spec. nov.

Due to its distinctive features, i.e. gynostemium making an acute angle with the lip, large green pseudo-eyes, which cannot be observed in any other taxon from the section, we are led to describe it as new. This taxon is the link between *Ophrys tarquinia* and the *Ophrys* from the '*aranifera*' and '*exaltata*' series. This taxon does not grow at low elevations, probably not above 110 m. In the Pisan mountains, for example, as and as one rises in altitude *Ophrys maritima* becomes scarcer and *Ophrys classica* is more abundant.

**Descriptio:** Planta robusta, 38 cm alta procera; folia basalia lanceolata: 6; spica laxiflora; flores: 8, instar Ophrydem araniferam; sepala ovales lanceolata pallide viridi cum venis viridibus, 12,5 mm longa, 6 mm lata; petala viridia cum marginibus fuscior, oblonga lanceolata, margine parallelo ondulatoque, 9 mm longa, 4 mm lata; labellum integrum, convexum, rotundum-ovalum, 12 mm longa, 12 mm lata, bruneum, castaneum velutinum, cum limbato lutea; macula simplicibus delineationibus; labelli inferior pars bruneum; connectivum ad labellum proclive; pseudo oculi viridescencia; appendix parva, triangulata distincte lacinia includum. Floret martio mensis ad medium novarum mensis.

**Description:** Robust plant with high (38 cm), slender stem bearing 6 lanceolate basal leaves; loose inflorescence of relatively spaced-apart flowers, bearing 8 flowers like those of *Ophrys aranifera*; lax spike of rather large flowers; lanceolate oval sepals, light green, with a central vein of darker green colour; oblong lanceolate petals rather rectangular, green, darker than the sepals, with parallel and wavy margins, truncated at the tip; entire lip, convex, rounded-oval, surrounded by large brown hair and a yellow border, the border colour of the lip is the same as that of the edges of the petals; macula consisting of a simple pattern; basal field and stigmatic cavity of the same colour as the lip; gynostemium tilted towards the lip; big pseudo-eyes, greenish; small appendage, triangular, inserted into a notch. Flowers in March.

**Holotypus:** Italia, Toscana, Massa e Carrara, Montignoso, Cinquale. Pelouse. 1 m. 32T-05919/48712. 8.IV.2000. leg. Romieg Soca RS.2000.401A. (MPU). Isotypi: Romieg Soca RS.2000.401B, RS.2000.401C (MPU).

**Etymology:** because of its presence along the coast in Liguria and Tuscany regions.

**Taxonomy:** *Ophrys maritima* is morphologically and geographically positioned between *O. exaltata* Ten. subsp. *arachnitiformis* (Gren. & M.Philippe) Del Prete and *O. massiliensis* Viglione & Vélà on the first hand and *O. exaltata* Ten. subsp. *montis-leonis* (O.Danesch & E.Danesch) Soca on the other hand.

**Ecology:** Grasslands and coastal undergrowth, olive groves and abandoned orchards, altitude from sea level up to 310 meters, and one place above 600 m.

**Iconography:** SOUCHE 2009: 140, sub *Ophrys 'apuanensis'*; PACIFICO, BERTOZZI & DE ANGELI 2000: 118, sub *Ophrys garganica* O.Danesch & E.Danesch.

**Geographical Distribution in Italy (pers. obs.):** Liguria (GE, IM, SP), Toscana (LU, MS, PI, PT).

**Specimina selecta:** Toscana, Massa e Carrara, Montignoso, Cinquale. Grassland. 1 m. 30.III.2010. leg. Romieg Soca RS.2010.0313. (MPU). Toscana, Massa e Carrara. Fosdinovo. Caniparola. 90 m. 30.III.2010. leg. Romieg Soca RS.2010.0312. (MPU.)

### Personal field records

**Liguria (GE):** Santa Margherita Ligure. Nozarego. 109 m. 30.III.2010.

**Liguria (IM):** Perinaldo. Monte Lombardo. 619 m.

**Liguria (SP):** Castelnuovo Magra. Marciano Santa Rosa. 315 m. 9.III.2007; Santo Stefano di Magra. fiume Magra. 22 m. 14.IV.2009.

**Toscana (LU):** Lucca. Mastiano. 160 m. 14.IV.2004; Lucca. Santa Maria di Giudice. 112 m. 2.IV.2001; Pietrasanta. Capezzano monti. 234 m. 15.IV.2007; Pietrasanta. Capezzano. 76 m. 4.IV.2007; Pietrasanta. Capezzano. 78 m. 22.IV.1996. 13.IV.2006; Pietrasanta. Capezzano. 90 m. 15.IV.2007; Seravezza. 90 m. 29.III.2007; Seravezza. Ceragiola. 90 m. 6.IV.2001; Seravezza. Ceragiola. 160 m. 6.IV.2001; Strettoia. 90 m. 25.III.2002; Viareggio. Marina di Torre del Lago Puccini. 3 m. 8.IV.2009.

**Toscana (MS):** Carrara. Codena. 230 m. 18.III.1996; Carrara. Codena. 237 m. 14.III.2007; Carrara. Fontia. 226 m. 14.III.2007; Carrara. Ortonovo. 130 m. 7.IV.2003; Carrara. Ortonovo. 260 m. 7.IV.2003; Fosdinovo. Caniparola. 82 m to 92 m. 6.IV.1994. 8.IV.1996. 5.IV.1997. 2.IV.2008. 14.IV.2009. 30.III.2010; Massa. 23 m. 12.IV.2006; Massa. 25 m. 16.IV.1996; Massa. 28 m. 30.III.2006; Massa. 3 m. 27.III.2006; Massa. 3 m. 27.III.2006; Massa. 4 m. 2.IV.2007; Massa. Marina di Massa. 4 m. 2.V.2001 (in fruit); Massa. Ricortola. 3 m. 16.IV.1987. 12.IV.2006; Massa. Turano Lumachella. 50 m. 18.III.1994; Massa. Via dei Fortini. 10 m. 14.IV.1992. 2.IV.1994. 4.IV.1996; Massa. via Foce. 143 m. 23.IV.1992. 31.III.2006; Massa. via Foce. 165 m. 31.III.2006; Massa. via Foce. 205 m. 31.III.2006; Montignoso, Cinquale. 1 m. 8.IV.2000. 2.V.2001 (in fruit). 30.IV.2005. 30.III.2010; Montignoso, Cinquale. 2 m. 19.IV.2006; Montignoso, Cinquale. 4 m. 1.IV.2005; Montignoso. Rupi di Porta. 50 m. 1983.

**Toscana (PI):** Pisa. Colle Bruceto. 80 m. 22.III.1998; Vecchiano. Avane. Monte Spazzavento. 190 m. 28.III.2004; Vecchiano. Filettole. 10 m. 8.IV.2009; Vecchiano. Filettole. 25 m. 13.IV.2006; Vecchiano. Monte Bastione. 5 m. 13.III.2006. 13.IV.2006;

Vecchiano. Monte Bruceto. 30 m. 8.IV.2009; Vecchiano. Monte Bruceto. 85 m. 8.IV.2009; Vecchiano. Monte Bruceto. 110 m. 8.IV.2009; Vecchiano. Monte Spazzavento. 155 m. 31.III.1994.

**Toscana** (PT): Pistoia. 285 m. 10.IV.2004.

### 3.1.2. *Ophrys minipassionis* Romolini & Soca, spec. nov.

Its morphological similarity with *Ophrys passionis* is unquestionable, but the flower size is twice as small, the pseudo-eyes are green and more prominent, it flowers two weeks later.

**Descriptio:** Planta robusta, 28 cm alta procera; folia basalia lanceolata: 6; spica laxiflora; flores: 7, instar Ophrydem passionim; sepala ovales lanceolata viridi, 12,5 mm longa, 6 mm lata; petala oblonga lanceolata, viridia fuscior quam sepala, margine parallelo ondulatoque, 9 mm longa, 3 mm lata; labellum integrum, convexissimum, rotundum, 9 mm longa, 9 mm lata, bruneum fuscum, bruno ferrugineo velutinum cinctum, cum limbato lutea; macula simplicibus delineationibus, in labelli inferiore parte sita; labelli inferior pars bruneum; pseudo oculi parvi, nigricantes; appendix parvissima, distincte lacinia includum. Floret aprilis mense et maius mense.

**Description:** Robust plant with slender and high (28 cm) stem bearing 6 lanceolate basal leaves; loose inflorescence bearing 7 flowers like those of *Ophrys passionis*; flowers small to medium, dark, arranged in a loose spike; lanceolate oval sepals, green; elongate oval petals, with parallel, sinuous margins, with truncated tips, green, darker than the sepals; small to medium-sized lip, wide, very convex, rounded, general colour dark brown to blackish, surrounded by rust-brown hair, lighter margin of a yellowish tone; macula consisting of a small, simple pattern occupying the basal half of the lip, colour slightly different from that of the lip; basal field of the same tone as lip; small pseudo-eyes, blackish; appendage very small inserted into a large indentation. Flowering April-May.

**Holotypus:** Italia, Umbria, Terni, Alleron, San Pietro Acquaeortus. Clairière dans pinède avec genévrier. 603 m. 32T-07391/47474. 5.V.2006. leg. Romieg Soca RS.2006.501. (MPU).

**Etymology:** because of its morphological similarity with *Ophrys passionis*.

**Taxonomy:** Closely related taxa: *Ophrys minipassionis* is morphologically close to *O. litigiosa* E.G.Camus, *O. virescens* Philippe in Gren. and *O. ausonia* Devillers, Devillers-Tersch. & P.Delforge by flower size, and to *O. passionis* Sennen, but has smaller dimensions and flowers later.

**Ecology:** Karst grasslands, olive groves, dense undergrowth, pine clearings with juniper, Altitude from 50 up to 900 meters.

**Iconography:** DEL FUOCO 2003: 212, sub *Ophrys virescens* Philippe ex Gren.

**Geographical Distribution in Italy (pers. obs.):** Emilia-Romagna (RA), Lazio (VT), Puglia (FG), Toscana (FI, GR, SI), Umbria (PG, TR).

**Specimina selecta:**

**Italia : Toscana:** Grosseto. Manciano. Pelouse, bord route. 220 m. 11.IV.1996. leg. Romieg Soca RS.1996.407. (MPU).

**Puglia:** Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-1A. (MPU); Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-1B. (MPU); Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-1C. (MPU); Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-2. (MPU); Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-3A. (MPU); Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-3B. (MPU); Foggia. Mattinata. Coteau pentu avec Oliviers et Caroubiers. 50 m. 13.IV.1999. leg. Romieg Soca RS.1999.413-3C. (MPU); Foggia. Cagnano Varano. Oliviers, Paliures, Asphodèles, pelouse. 190 m. 11.IV.1999. leg. Romieg Soca RS.1999.452. (MPU).

**Personal field records**

**Emilia-Romagna (RA):** Cervia. 10 m. 7.V.2004.

**Lazio (VT):** Acquapendente. 699 m to 718 m. 5.V.2006.

**Puglia (FG):** Mattinata. 50 m. 13.IV.1999; San Marco in Lamis. 876 m. 23.IV.2006; San Marco in Lamis. Chiancata. 890 m. 23.IV.2006.

**Toscana (FI):** Barberino Mugello. Panna. 430 m. 25.IV.2000; Fiesole. Poggio Pratone. 660 m. 5.V.2002.

**Toscana (GR):** Capalbio. 119 m. 1.IV.2008; Manciano. 220 m. 11.IV.1996; Orbetello. Tombolo di Giannella. 1 m. 31.III.2008.

**Toscana (SI):** Badesse. 220 m. 7.V.2003; Bagni San Casciano. Fighine. 640 m. 12.V.2002; Croce Fiorentina. 540 m. 5.V.2003; Quegna. 470 m. 2.V.2005; Sarteano. 485 m. 7.V.2003.

**Umbria (PG):** Sigillo. Ranco. 678 m. 6.V.2006.

**Umbria (TR):** Allerona. San Pietro Acquaeortus. 603 m. 5.V.2006; San Venanzo. Monte Peglia. 801 m. 1.V.2008.

**3.1.3. *Ophrys ligustica* Romolini & Soca, spec. nov.**

Due to its distinctive features, i.e. oval dome-shaped stigmatic cavity, prominent, dark olive green pseudo-eyes surrounded by a lighter line, flowering after May 10, which cannot be observed in any other taxon from the section, we are led to describe it as new. Thus, this taxon is more closely related to *Ophrys passionis* than to *O. incubacea*.

**Descriptio:** Planta robusta, 28 cm alta procera; folia basalia lanceolata: 6; spica laxiflora; flores: 5, instar Ophrydem incubaceam; sepala viridia, 12,5 mm

longa, 6 mm lata, sepalum dorsalum elongata, marginibus parallelibus, apice curto, sepala lateralibus oblonga; petala oblonga, 9 mm longa, 4 mm lata, viridia rubro suffusa, margine clarior tincta coloribus undulatoque; labellum integrum, convexum, rotundum, 12 mm longa, 12 mm lata, rubrum fuscum; macula simplicibus delineationibus, caerulea margine albo-cinereo; labelli inferior pars non limitata; cavitas stigmatica concolorata labello, cum unguiculus albo-viride in centrum; pseudo oculi prominentes, olivaceo fusco, linea flavo-viridescens cincta; appendix parva, distincte lacinia includum; polliniorum moles flava. Floret fine maii mense ad fine iunii mense.

**Description:** Robust plant with a slender, high (28 cm) stem bearing 6 lanceolate basal leaves; loose inflorescence with relatively spaced-apart flowers, bearing 5 flowers like those of *Ophrys incubacea*; lax spike of large, dark flowers; green sepals, dorsal sepal elongated, parallel margins and truncated tip, lateral sepals oblong; oblong petals, reddish-tinted with a greenish central line, wavy margins, tinged with brighter colours; entire lip, convex, rounded, dark reddish; simple macula, bluish, surrounded by a white greyish margin; stigmatic cavity concolorous with the lip, with a greenish white tab in the center; basal field not defined; prominent pseudo-eyes, dark olive green surrounded by a greenish-yellow line; small appendage, directed forward, inserted into a notch; yellow pollinia. Flowers from late May to late June.

**Holotypus:** Italia, Liguria, Imperia. Pompeiana. Pelouse. 578 m. 32T-04120/48582. 7.VI.2009. leg. Romieg Soca RS.2009.601. (MPU).

(=) *Ophrys incubacea* Bianca subsp. *castri-caesaris* Looken, Liparis 11: 58. 2005 (sub '*incubacea* Bianca ex Tod.')

(=) *Ophrys passionis* Sennen subsp. *castri-caesaris* (Looken) Kreutz, Eurorchis 17: 109. 2005.

(=) *Ophrys garganica* E.Nelson ex O.Danesch & E.Danesch subsp. *castri-caesaris* (Looken) Kreutz, Ber. Arbeitskreis. Heimische Orchid. 24(1): 171. 2007. (nom. inval.).

**Etymology:** From Liguria, in its ancient meaning in times when the Ligurian people occupied a larger area than that covered by its present name (from the Var to Lerici).

**Taxonomy:** There already exists a binomial *Ophrys ligustica*, but this one has been assigned by Gandoger (1883-1891). It is rejected, like many others of Gandoger, by the Botany Code as belonging to a work considered '*opera oppressa*' (Appendix VI, ICBN Vienna Code 2005).

Van Looken (2001, 2002, 2005) attempted to describe this taxon, but none of the binomials is valid.

**Ecology:** Light woodland of *Quercus pubescens* Willd., grasslands, broom heath (*Cytisus scoparius* (L.) Link). Altitude from 300 up to 800 meters.

**Iconography:** WUCHERPFENNIG 2001: 135-136, sub *Ophrys majellensis* (Helga Daiss & Herm.Daiss) P.Delforge; SOUCHE 2004: 216, sub *Ophrys passionis* Sennen subsp. *majellensis* (Helga Daiss & Herm.Daiss) Romolini &



Soca; BACCINO 2007: 140, sub *Ophrys sphegodes* Mill. subsp. *majellensis* Helga Daiss & Herm.Daiss; SOUCHE 2008: 10, sub *Ophrys* “de la Siagne”; SOUCHE 2009: 132, sub *Ophrys* “de la Siagne”.

### **Geographical Distribution in Italy & France (pers. obs.):**

Italy, Liguria (IM, SV) and in France, Provence-Alpes-Côte d’Azur (Var, Alpes-Maritimes).

### **Personal field records**

**France. Provence-Alpes-Côte d’Azur** (Alpes-Maritimes): Saint-Cézaire-sur-Siagne. 440 m. 24.V.2002. 23.V.2008; Saint-Cézaire-sur-Siagne. 446 m. 24.V.2002. 23.V.2008; Saint-Vallier-de-Thiery. 751 m. 24.V.2002. 23.V.2008; Tournettes-sur-Loup. 408 m. 25.V.2002.

**Provence-Alpes-Côte d’Azur** (Var): Mons. 742 m. 18.V.2008. 23.V.2008; Mons. 766 m. 8.VI.2009.

**Italia. Liguria** (IM): Civezza. Civezza vers Santa Brigida. 369 m; Civezza. Civezza vers Santa Brigida. 376 m; Civezza/Dolcedo/Imperia. Civezza vers Santa Brigida. 370 m; Dolcedo. 380 m. 8.V.2010; Dolcedo. Between Poggi and Santa Brigida 400 m. 8.V.2010; Dolcedo. Civezza vers Santa Brigida. 348 m; Dolcedo. Civezza vers Santa Brigida. 385 m; Dolcedo. Civezza vers Santa Brigida. 413 m; Dolcedo. Civezza vers Santa Brigida. 423 m; Imperia. 370 m. 12.V.2011; Pietrabruna. Boscomare. 580 m; Pietrabruna. Boscomare. 652 m; Pietrabruna. Monte Croce vers Monte Selletta. 564 m; Pietrabruna. Monte Croce. 577 m; Pompeiana. 571 m. 2.VI.2010; Pompeiana. 578 m. 7.VI.2009; Pompeiana. Boscomare. 556 m; Pompeiana. Case Zunchi. 474 m; Pompeiana. Monte Croce. 563 m; Pompeiana. Monte Selletta. 576 m; Pompeiana. Terzorio. 405 m; Pompeiana. Terzorio. 485 m; Pompeiana. 578 m. 12.V.2011; Pompeiana/Pietrabruna. Boscomare. 584 m.

**Liguria** (SV): Toirano. 618 m. 2.VI.2010.

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**Colour plate page 781** (phot. R. Soca)

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Fig. 1: *Ophrys appennina*, Italia, Lazio (RM), Canale Monterano, 5.V.2006.

Fig. 2: *Ophrys appennina*, Italia, Toscana (SI), Sarteano, 4.VI.2010.

Fig. 3: *Ophrys pinguis*, Italia, Abruzzo (AQ), Capistrello, 10.VI.2010.

Fig. 4: *Ophrys cinnabarina*, Italia, Puglia (FG), San Marco in Lamis, 1.VI.2009.

**Colour plate page 782** (phot. R. Soca)

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Fig. 5: *Ophrys appennina*, Italia, Lazio (RM), Canale Monterano, 5.V.2006.

Fig. 6: *Ophrys appennina*, Italia, Liguria (IM), Imperia, 12.V.2011.

Fig. 7: *Ophrys cinnabarina*. Italia, Basilicata (MT), Matera, 2.VI.2011.

Fig. 8: *Ophrys cinnabarina*, Italia, Puglia (BA), Gravina in Puglia, 2.VI.2011.

Fig. 9: *Ophrys pinguis*, Italia, Abruzzo (AQ), Ateleta, 7.VI.2010.

Fig. 10: *Ophrys pinguis*, Italia, Abruzzo (AQ), Capistrello, 8.VI.2011.

**Colour plate page 783** (phot. R. Soca)

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Fig. 11: *Ophrys ligustica*, Italia, Liguria (IM), Imperia, 12.V.2011.

Fig. 12: *Ophrys ligustica*, France, Provence-Alpes-Côte d'Azur (06), Saint-Cézaire-sur-Siagne, 20.V.2008.

Fig. 13: *Ophrys maritima*, Italia, Toscana (MS), Montignoso, 30.III.2010.

Fig. 14: *Ophrys minipassionis*, Italia, Lazio (VT), Acquapendente, 5.V.2006.

**Colour plate page 784** (phot. R. Soca)

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Fig. 15: *Ophrys ligustica*, Italia, Liguria (IM), Imperia, 12.V.2011.

Fig. 16: *Ophrys ligustica*, France, Provence-Alpes-Côte d'Azur (06), Saint-Cézaire-sur-Siagne, 20.V.2008.

Fig. 17: *Ophrys maritima*, Italia, Toscana (LU), Lucca, 2.IV.2011.

Fig. 18: *Ophrys maritima*, Italia, Toscana (LU), Lucca, 2.IV.2011.

Fig. 19: *Ophrys minipassionis*, Italia, Puglia (FG), San Marco in Lamis, 23.IV.2006.

Fig. 20: *Ophrys minipassionis*, Italia, Toscana (LI), Sassetta, 20.IV.2010.















