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The genus *Orobanche* in Sicily. Taxa described by V. Tineo and M. Lojacono Pojero

Abstract

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Current knowledge of the taxonomy, distribution and ecology of *Orobanche* in Sicily is based on collections made at the beginning of the XX century or earlier. A revision of this genus, often neglected in Italy and other Mediterranean countries, has therefore been started. The taxa described as new by Vincenzo Tineo and Michele Lojacono Pojero, 2 and 13 respectively, are here examined. For each, the nomenclatural type has been established, and the synonymy, taxonomic status and known distribution are presented.

Introduction

The genus *Orobanche* has often been neglected in the floristic surveys carried out in Italy, so that our knowledge is mostly based on collections and records dating back to the first half of the last century or before.

According to recent floras, 20 to 22 species of *Orobanche* (including *Phelipaea*), i. e. two thirds of the taxa growing in Italy, occur in Sicily, and many of them were first described from here. Nevertheless, no critical evaluation of their appropriate taxonomic status, distribution, ecology and nomenclature has been made subsequent to the monographic treatment by Beck (1890, 1930) which, with respect to Sicily, is mostly based on information provided by Lojacono Pojero (1881-1883; 1887). In the frame of a programme to typify the names of taxa described by Sicilian authors, revision of the Sicilian *Orobanche* taxa has therefore been given priority, starting from the material kept in the *Herbarium Mediterraneum Panormitanum* (PAL). This herbarium, which was the Lojacono Pojero's main data source, consists primarily of collections made between 1821 and 1900 and, to a lesser extent, between 1960 and the present day. It includes the original material used by Tineo and Lojacono to describe their new taxa. Tineo (in Gussone 1843) described *O. alexandri* from Monte Catalfano and *O. nebrodensis* from the Madonie mountains. Lojacono (1881-1883; 1887) published 11 new species and 3 new varieties: *O. chironii*, *O. lutea*, *O. pubescens* var. *campuliflora*, *O. sabulicola*, *O. sanguinea* var. *maritima*, *O. crinita* var. *straminea*, *O. sicula*, *O. stenantha*, *O. tinei*, *O. todaroi*, *O. thapsoides*, *Phelipaea panormitana*, *P. elongata*, and *P. gussoneana*. Ten of these taxa were based on material collected by Lojacono himself around Palermo, on the Eolian islands, near

Balestrate, and near Terranova (now Gela). For the remainder, Lojacono used specimens collected by Tineo on the Madonie mountains. With the single exception of *O. chironii*, still in use for a species endemic to Sicily, all of Tineo's and Lojacono's new names have been relegated to synonymy by subsequent authors.

Materials and Methods

Original material was found primarily in the *Herbarium Mediterraneum Panormitanum* (PAL), where most of Tineo's and Lojacono's specimens are kept. Other visited herbaria were B, BOLO, FI, NAP, P, PRC, RO, W, and WU.

As for the transcription of the labels the following conventions have been followed:

Different labels fixed on the same sheet are referred to by small letters (a, b, c,...etc.), not implying hierarchy.

Typographical transcription symbols:

/ = line break;

Italic script corresponds to handwritten text (underlined as in original),

Roman script denotes handwriting printed by lithography,

Bold script denotes printed text, **roman** or *italicised* in original,

[...] = illegible word(s),

the authors' own comments are added in square brackets.

Orobanche alexandri Tin. in Guss., Fl. Sicul. Syn. 2: 845 (1843)

[*O. alba* Steph. ex Willd., Sp. Pl. 3: 350 (1800)]

Ind. loc. In montosis; Palermo sopra S. Maria a Gesù, Montepellegrino, Catalfano; sed rara. Aprili, Majo.

Lectotype (here designated): NAP-Gussone Sicilia

(a) *Orobanche alexandri* Tin. / Catalfano [manu Tineo].

Note: Two specimens from different gatherings are mounted together on one sheet. The first (our lectotype) bears Tineo's label (unsigned). The second, belonging to *Orobanche caryophyllacea* Sm., is by G. Gasparrini (unsigned) who noted some characters but no collecting locality on the corresponding label (b). Gussone added the following label (c), in common for both: *8.b Orobanche alexandri* Tin. / *Aprili Majo* / *In apricis montosis* [manu Gussone].

Orobanche alba occurs, but is rare, on the mountainous areas of the Madonie, and also around Palermo, on Monte Cammarata, the Peloritani mountains and Mt Etna. It has been observed to parasitise *Satureja graeca*, *Satureja fruticulosa*, *Thymus spinulosus* and *Calamintha nepeta*. The plants growing around Palermo have a corolla larger than those found elsewhere.

Orobanche nebrodensis Tin. in Guss., Fl. Sicul. Syn. 2: 845 (1843)

O. sanguinea f. *nebrodensis* (Tin.) G. Beck, Monogr. Orob.: 207 (1890)]

Ind. loc. In montosis; sopra Isnello presso al fiume. Majo.

Holotype (illustrated in Raimondo & Mazzola 2000: t. 12), PAL 43117

16 Maggio 1830 / Orobanche nebrodensis Nob. / *Sopra Isnello presso il fiume / Stylo obso-*

lete villoso seu / glaberrimo ut in O. sanguinea [manu Tineo].

Note: Individuals similar to the holotype plant (i.e., with a rather lax spike and bracts much longer than the flower) occur occasionally within populations of typical *Orobanche sanguinea*. In Sicily, that species occurs occasionally inland on the Madonie mountains; both here and along the coast, where it is widespread, it parasitises *Lotus cytisoides* s. l.

Orobanche pubescens var. *campuliflora* Lojac., Naturalista Sicil. 2: 82 (1883)

≡ *O. campuliflora* (Lojac.) Lojac., Fl. Sicul. 2(2): 170 (1904)

[= *O. pubescens* d'Urv., Mem. Soc. Linn. Paris: 332 (1822)]

Ind. loc. In sylvaticis fruticetis maritimis, specimen unicum inveni in Palermo M. Gallo die 10 majo 1881.

Ic. Naturalista Sicil. 1: t. 9, f. 1.

Holotype: PAL 43240

O. pubescens / Orobanche / olim todari mihi / color sanguineis sordide / pallidissimi amarantheus / difficile definiendus / ex unico specimine / ad pedes M. sferracavallo / lect. / Leg M. Lojacono / majo 1881 [manu Lojacono].

Note: The specimen PAL 43240 was used to draw-up the iconography tab. IX, fig. 1 Lojac, 1882. *Orobanche pubescens* occurs in the coastal belt of Sicily parasitic on *Asteraceae*.

Orobanche chironii Lojac., Contr. Fl. Sic.: 12 (1878)

Ind. loc. Ad radices *Opopanax Chironii*, in nemoribus saxosis apricis, Basse rupi di Busambra. Junio.

Holotype: PAL 43117

Herbarium Horti Bot. Panormitani / *Orobanche / chironii* Mihi / Contrib. Fl. Sic. / ad radices *Opopanax chironii* / Basse rupi di Busambra / anno 1878 / Leg. M. Lojacono P. [manu Lojacono].

Epitype (here designated): PAL 56361 (Fig. 1).

Herbarium Mediterraneum Panormitanum / *Orobanche chironii* Lojac. / su *Anthemis cupaniana* / basse rupi di Busambra (Palermo) / 20.06.2004 / Leg.: G. Domina / Det.: G. Domina.

Note: It has been decided to designate a supporting epitype since the holotype, even if quite recognisable, has seriously deteriorated.

The species, endemic to Sicily, was known only from the bottom of the cliff at Rocca Busambra (South of Palermo). Recently it has also been found in the Madonie Mountains on *Asteraceae* (*Anthemis cupaniana* above all), not on *Opopanax chironium* as stated in the protologue. In the *locus classicus*, *Opopanax chironium* is very frequent and there it could play some ecological influence on seed germination.

Orobanche sabulicola Lojac., Naturalista Sicil. 2: 61 (1882)

[*O. litorea* Guss., Fl. Sicul. Prod. 2: 184. (1828)]

Ind. loc. In dunis sabulosis maritimis ad radices *Anthemidis maritimae* parasitica, inveni prope Balestrate in Aprili 1881.

Lectotype (here designated): PAL 43213

Herbarium horti Bot. Panormitani / *Orob. sabulicola* / mihi monogr. / *Orob. Sicilia* / In sabulosis / maritimis / Balestrate / Aprili 1881 / leg. M. Lojacono / Lojac. num. 20. [manu Lojacono].

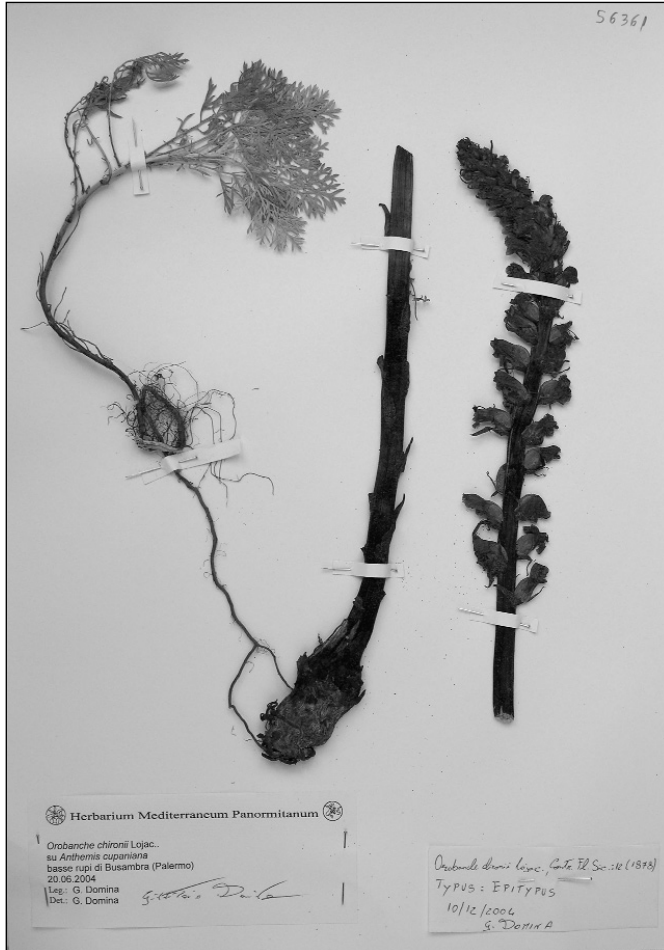


Fig. 1. Sheet PAL 56361 designated in this paper as the Epytype of *Orobanche chironii* Lojac.

Note: The type and other examined specimens are indistinguishable from *Orobanche litorea* Guss. which is spread along the sandy coasts. Other similarities between *O. sabulicola* and *O. canescens* supposed by Beck (1930) had already been excluded by Domina & Mazzola (2004).

Orobanche sanguinea var. *maritima* Lojac., *Naturalista Sicil.* 2:109 (1883)

[*O. sanguinea* f. *crinita* (Viv.) G. Beck, *Monogr. Orob.*: 206 (1890)]

Ind. loc. Inveni in herbis rupestribus umbrosis mari imminentibus. Montis Gallo al Malo Passo, a Sferracavallo ad radices *Loti cytisoidi*?

Lectotype (here designated): FI

Plantae siculae rariores / 463. *Orobanche sanguinea* Presl / del. Prag. p. / *O. densiflora* Salzm. (Auch) / var. *maritima* mihi monogr. / orob. ined. / In sylvaticis herbosis maritimi / mayo 1881 ... in Gallo parte di / Sferracavallo / leg. M. Lojacono.

Note: It differs from *Orobanche sanguinea* s. str. by the spike denser and the stem densely hairy. It occurs along the coast parasitic on *Lotus cytisoides*.

Orobanche crinita var. *straminea* Lojac., Naturalista Sicil. 2:107 (1883)

[*O. sanguinea* f. *crinita* (Viv.) G. Beck, Monogr. Orob.: 206 (1890)]

Ind. loc. Ad radices *Loti cytisoidi* in sabulosis maritimis satis obvia simul cum varietate quae magis rara a Mondello legi et a Carini eodem tempore et supra eadem planta parasitica ! Aprili-Majo.

Lectotype (here designated): WU-herb. generale 28134

Orobanche / *crinita* Viv. / fl. *albescens* ! / *bellissima* var. / *sferracavallo* / *Aprili 1877 in arenosis marit.* / M. Lojacono. [manu Lojacono].

Note: Described on yellowish individuals that sometimes occur within *Orobanche sanguinea* populations.

Orobanche sicula Lojac., Naturalista Sicil. 1: 255 (1882)

[*O. variegata* Wallr., Orob. Gen.: 40 (1825)]

Ind. loc. In Sylvaticis, Valdemone (locus specialis non indicatus) Junio.

Lectotype (here designated): PAL 43216

Herbarium horti Bot. Panormitani / n. 33 *Orob.* / *spartii Guss.* / *an forma altera / Valdemone / O. sicula mihi* ! [manu Lojacono].

Note: Individuals that morphologically agree with *O. sicula* Lojac. occur parasitic on woody *Leguminosae* like *Calicotome villosa*, *C. infesta*, *Spartium junceum*, etc.

Orobanche tinei Lojac., Naturalista Sicil. 6: 133 (1887)

[*O. cernua* L. in Loeft., Iter Hispan.: 152 (1758)]

Ind. loc. In pascuis elatioribus Nebrodes. Ad radices *Artemisiae camphorata*. Serre delle Croci. Tineo.

Holotype: PAL 43119

(a) *Sopra le terre / delle Croci di / Castelbuono / amaranto colore* [manu Tineo]

(b) *Orobanche ... / O. glandulosa squamis lanceolatis adpressis, spica cylindrica, / lasiuscula, elongata, bracteis, sepalis basi ovatis, acuminatis, integri raro bifidis equalibus...tubulosis rectis costrictis...labiis denticulatis crispis, inferiore trilobo, lobis lateralibus* [manu Tineo].

(c) *Orobanche cumana / Wallr. / Questa sembra la vera Orobanche / cumana di cui c'è / pure scritto nel Reich. / sta bene a questa il detto / del Gussone habitus / fere O. ramosae* [manu Lojacono]

(d) *Orobanche cernua* L. / A. Pujadas / IX 2001 [manu Pujadas]

Note: A single specimen is fixed to the sheet which bears three other labels in addition to the *indicatio loci* by Tineo (a), the first of them (b) is a provisional handwritten diagnosis by Tineo. The second (c) refers to *Orobanche cumana*, excluded from the Sicilian flora by Lojacono himself (1887). The last is the revision label by A. J. Pujadas Salvà.

Orobanche thapsoides Lojac., Naturalista Sicil. 2: 60 (1822)

Ind. loc. In arvis sabulosis (?) Siciliae meridionalis, Terranova alle case della Lupa. Aprili.

Lectotype (here designated): PAL 43238 (Fig. 2)

(a) **Herbarium horti Bot. Panormitani** / *Orobanche/ thapsoides /Mihi / 33 / Terranova Citarda / Aprile 1869* [manu Lojacono].

(b) *sub O. canescens / Sic. Merid. / Mag. '69 Cit.* [manu Lojacono].

Note: According to Beck (1930), *Orobanche thapsoides* Lojac. is to be relegated to a synonym of *O. versicolor* F. G. Schultz but the type and other original material (PAL, PRC) clearly belong to a quite distinct species by the very dense spike and the shape of the corolla. In Sicily it frequently occurs on *Galactites tomentosa* and other *Asteraceae*.



Fig. 2. Sheet PAL 43238 designated in this paper as the Lectotype of *Orobanche thapsoides* Lojac.

Orobanche todaroi Lojac., Naturalista Sicil. 1: 215 (1883)

[*O. gracilis* var. *todaroi* (Lojac.) Domina & Mazzola, **comb. nov.**]

Ind. loc. In fruticetis maritimis in Insulis Aeolicis rarissima Aprili 1877.

Lectotype (here designated): PAL 43241 (Fig. 3)

(a) *Flora Eolica exsiccata* / *Orobanche* / *todari* Mihi / *Isole Eolie* / Leg. M. Lojacono.
[manu Lojacono]

(b) **Herbarium horti Bot. Panormitani** / *Orobanche* / *todari* Mihi / *Ins. Aeolicis* 1877
[manu Lojacono].

(c) *O. Spartii* Guss ?? / an *O. spruneri* Reut. / cum *O. spartii* non confundenda ! *species insignis* / *Ins. Aeolicis* / *Aprile 1877* Leg. M. Lojacono [manu Lojacono].

Note: Distinctive characters of this variety are: stem thickened; corolla very large; central lower lip lobe smaller than the external ones.

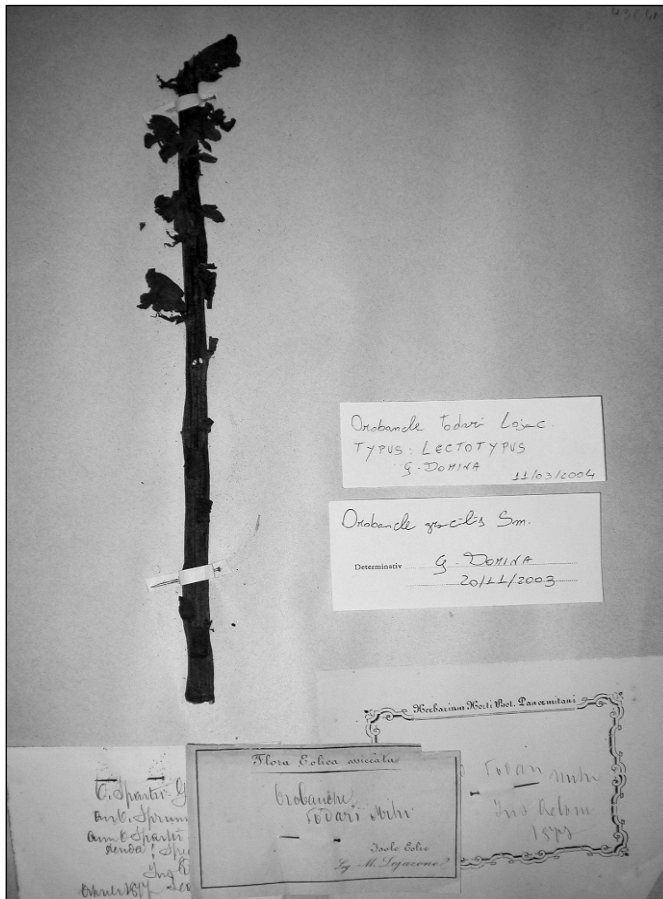


Fig. 3. Sheet PAL 43241 designated in this paper as the Lectotype of *Orobanche todaroi* Lojac.

Orobanche stenantha Lojac. Naturalista Sicil. 2: 62 (1882)

[*O. hederæ* Duby, Bot. Gall.: 350 (1828)]

Ind. loc. In fruticetis submontanis sylvaticis ad radices... in Val Demone. Junio.

Lectotype (here designated): PAL 43234 (Fig. 4)

a) *n.16 / Orobanche / stenantha / mihi ! / (forse O. glaberrima Guss.)* [manu Lojacono]

b) *Bracte floral. basim labelli attingenti sepala vix ...corolla longitudinis at brevioribus / integris basi angustis lineari [...], corolla angusta tubulosa circonferenza vix / 1 cent ½ lutei e odorosa ad apice anguste [...] valde hyalinum rubri parvi, lobi parvis / obov, cochl muro conspicue retusi omnibus irregulari anguste denticulati / plurimum ad tertium inferi [...] / antere parvis conspicue acutis [...] exsertis ! affine alla O. laurina* [manu Lojacono].

Phelipaea gussoneana Lojac., Naturalista Sicil. 1: 199-200 (1882)

[*Orobanche oxyloba* (Reuter) G. Beck in Koch, Entwickl.-Gesch. Der Orob.: 209 (1887)]

Ind. loc. In elatioribus montosis. Ficuzza sulle basse rupi alle falde settentrionali di Busambra ad radices *Rumici triangulari* parasitica, (legi ann. 1878-81). S. M. del Bosco (Tin!) Polizzi al salto della Botte (Tin!) Toccata Grande (Cozzo della Mufera aliorum) Madonie Tin! In saxosis al piano della Battaglia di Petralia (M.L. Junio 1881).

Lectotype (here designated): PAL 43009.

Phelipaea n. sp. / rufescens Gris. / *opp. caesia / ad radices Rumex / tuberosa / sotto Busambra / 13 Jun 1878* [manu Lojacono].

Note: This species was found at the basis of the cliff of Rocca Busambra and in the Madonie Mountains parasite on *Rumex intermedius*, *Arabis alpina* and several *Asteraceae*.

Phelipaea elongata Lojac., Naturalista Sicil. 2: 133 (1883)

[*Orobanche ramosa* subsp. *mutelii* (F. W. Schultz) Cout., Fl. Portugal: 566 (1913)]

Ind. loc. In fruticetis sylvaticis in herbis parum apricis ad pedes parietum calcareum versuras boreales M. Galli in consortio cum *Orob. denudata*, *sanguinea* etc. satis rara! Inveni Majo 1882.

Lectotype (here designated): FI

(a) *sec Beck forma Ph. aegyptiaca / sed non vero / Piantae siculae rariores / 557 Phelipaea elongata / n. sp. / In herbis collinis [...] / sferracavallo / majo 1882 / leg M. Lojacono* [manu Lojacono]

Note: Three plants are fixed on the sheet, which was revised by G. Beck who identified the first from the left as a smaller form of *O. aegyptiaca*:

(b) *O. (trionychon) aegyptiaca Persoon. / forma floribus paulum minoribus, lobis denticulato-crenatis / = P. serotina Haussk. exsicc. / Beck* [manu Beck].

the second as *O. mutelii*:

(c) *forma O. (trionychon) muteli Schultz / VIII/84. Beck.* [manu Beck].

and the third he did not revise, probably because too injured. The lectotype specimen, however, under the definition of the term "specimen" in the ICBN (Greuter & al. 2000, Art. 8.2), is the whole sheet, because the three plants belong to one and the same taxon and were gathered at the same place and date by the same collector.

In the locality of Sferracavallo, at the foot of the northern slopes of Monte Gallo, *Orobanche ramosa* subsp. *mutelii* is rather frequent.

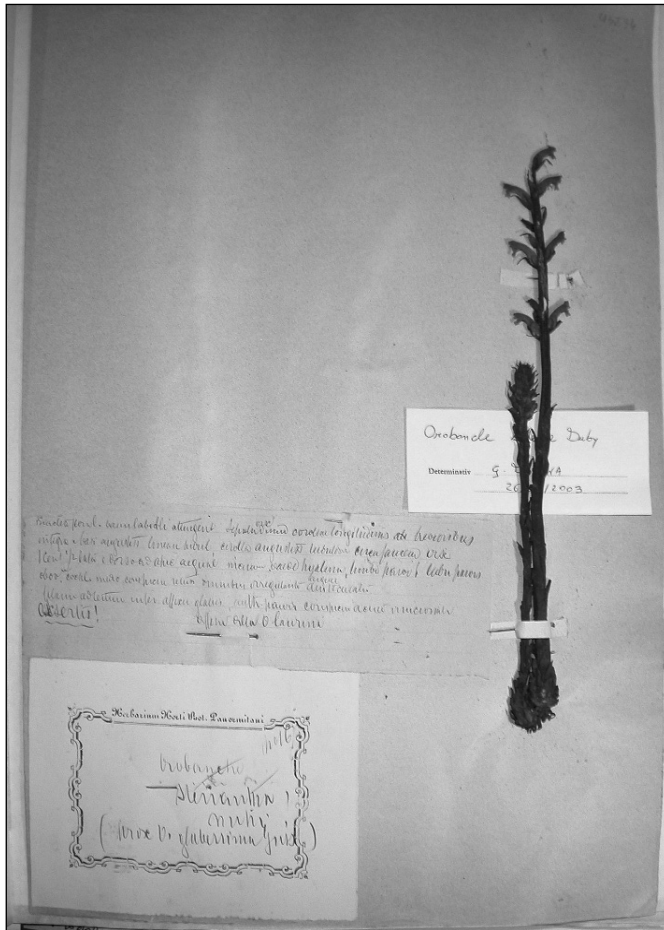


Fig. 4. Sheet PAL 43234 designated in this paper as the Lectotype of *Orobanche stenantha* Lojac.

Phelipaea panormitana Lojac., *Naturalista Sicil.* 1: 174 (1883)

[*Orobanche ramosa* subsp. *mutelii* (F. W. Schultz) Cout., *Fl. Portugal*: 566 (1913)]

Ind. loc. In collibus calcareis apricis ac in herbis maritimis copiosa ad radices *Leguminosarum* ac *Syngenesiacarum* parasitica, circa Panormum legi alli Ciaculli (aprile 1879) al Castellazzo sopra Monreale, alla Torretta ad rad. *Hypochaeridis*, et in herbis a Capaci.

Ic.: *Naturalista Sicil.* 1: t. 6, f. 1.

Lectotype (here designated): PAL 43001

Herbarium Horti Bot. Panormitani / n. 9 / *Phelipaea* / *albiflora* Gren. *Godr.* ? / *cum Ph. emarginata mea* / *et Ph. ramosa non confundenda.* / *flor albescen / tubus vix color sed differis / circulatim infer ... / leg. M. Lojacono.* [manu Lojacono].

Orobanche lutea Lojac., Naturalista Sicil. 1: 256 (1882) [nom. Illeg. non Baumg.]
[*O. variegata* Wallr., Orob. Gen.: 40 (1825)].

Ind. loc. In sylvaticis, in dumetis umbrosis nemorum. Ficuzza alla macchia di Zingaro sulla via delle Quattro Finaite a sinistra salendo, rarissima (Jun. 1878).

Neotype (here designated): PAL 56360

Herbarium Mediterraneum Panormitanum / *Orobanche variegata* Wallr. / su *Calycotome infesta* / Ficuzza alla macchia di Zingaro (Palermo) / 26.05.2004 / leg. G. Domina.

Note: This name has been attributed to yellowish individuals that occasionally occur within the *Orobanche variegata* Wallr. population.

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