

## **Typification of Joseph Freyn's names in the genera Celsia and Verbascum (Scrophulariaceae)**

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## Typification of Joseph Freyn's names in the genera *Celsia* and *Verbascum* (*Scrophulariaceae*)

### Abstract

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Twenty-five names (20 species, three infraspecific taxa and two hybrids) were published in the genera *Celsia* and *Verbascum* by the Bohemian botanist Joseph Franz Freyn (1845–1903). These names are typified, in most cases by material preserved at the Herbarium of the Moravian Museum (BRNM) in Brno, Czech Republic, and in all but four cases a lectotype is designated. *V. xomissum* is published as a nomen novum for *V. divaricatum* Freyn & Sintenis, which is a younger homonym of a name published by Kittel, and a lectotype is designated also for *V. xfreynianum* Borbás.

Additional key words: taxonomy, J. Bornmüller, E. Brandis, A. Kronenberg, A. Manissadjian, P. Sintenis, Bosnia and Herzegovina, Greece, Turkey, Iran

### Introduction

The Bohemian botanist Joseph Franz Freyn (7 December 1845–16 January 1903) described 25 new taxa of the genus *Verbascum* (incl. *Celsia*). Only two published names (*V. xgeminatum*, *V. xtomentosulum*) were based on Freyn's own collections, while in 23 cases, the material was sent to him by other collectors. Most of the names are based on collections by P. Sintenis (16 taxa) and J. Bornmüller (3 taxa). Both collectors appear as co-authors of the published names with Freyn. Three names were based on collections by E. Brandis (*V. phlomoides* var. *ramosa*), A. Kronenburg (*C. brevicaulis*) and A. Manissadjian (*V. hadschinense*). Three names were published as nomina illegitima (*V. divaricatum*, *V. stachydifolium*, *V. viscidulum*).

The material was collected in Bosnia and Herzegovina, Greece, Turkey and Iran, and probably sent initially to Freyn with provisional handwritten labels only. Freyn

commented on the identification of the material and sent it back to the collectors. These added some further details on the locality and printed definitive labels with notes concerning Freyn's identification. Material with these definitive labels was then distributed to Freyn and elsewhere. Hence there are in most cases two labels (a provisional and a definitive one) on the specimens under discussion (Fig. 1A).

Consequently we can conclude that the material provided with "provisional" labels was studied by Freyn at the time of description. These specimens thus should preferably be used for the designation of lectotypes. The material distributed later may not have come into his hands and should be considered as duplicates to be used for lectotypification only in the case when no material with provisional labels is extant (ICBN Art. 9.2 and Note 2, McNeill & al 2006) "original material comprises ... those specimens .... upon which .... the description ... was based". However, Recommendation

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9A.4 of this Code "... it should be assumed that the specimen housed in the institution where the author is known to have worked is the holotype ..." supports the necessity to choose the lectotypes preferably from the material held in the Herbarium of the Moravian Museum (BRNM) in Brno, Czech Republic, which purchased Freyn's herbarium in 1905. Only two of the type specimens (*V. pindicolum*, *V. stachydifolium*) are preserved at the herbarium in Berlin (B).

The currently accepted names covered by Flora of Turkey are given according to Huber-Morath (1978) and those for the remaining regions by Murbeck (1933). The material was personally searched in B, BP, BR, JE, LD, P (only partly accessible), PR, PRC, SARA, W, WU and Z. Herbarium catalogues accessible online (Botany Collection Database NHM 2012; CHG 2012; Type Database GOET 2012) were used in search for isolectotypes in BM, G and GOET, respectively. Herbarium abbreviations follow Thiers (2008+).

## Typifications

*Celsia brevicaulis* Freyn in Bull. Herb. Boissier, ser. 2, 1: 276. 1901.

= *Verbascum nudicaule* (Wydler) Takht.

Type indication: [Turkey], "Armenia turcica, Wan [Van]: locis nudis 2850 m s.m. die 12. Junio 1899, leg. A. Kronenburg (Exsicc. 53)".

Lectotype of *Celsia brevicaulis* (designated here): Specimen with a provisional label handwritten by Kronenburg "53 Alpen Flora v. Wan . . . v. Warak Dagh kahlem Sandboden, 9000 Fuss" and one from Freyn's herbarium "Armenia, Wan: auf Kahlem Sandboden bei 2850 m, com C. G. von Tubergen jun., leg. A. Kronenburg, 12.6.1899, det. J. Freyn, 7.6.1900" (BRNM 116/37, Fig. 1B); isolectotypes: JE, WU.

Note. — The specimen in JE has Murbeck's determina-



Fig. 1 Herbarium specimen labels – A: definitive label (above) and provisional label (below) of *Verbascum divaricatum* by P. Sintenis; B: *Celsia brevicaulis*, overwritten label from Freyn's herbarium (above), provisional handwritten label by A. Kronenburg (below); C: handwritten label of *V. phlomidoides* var. *ramosa* by E. Brandis; D: label of *V. tomentosulum* by J. Freyn.

tion "*Celsia persica* C. A. Mey (forma)" dated 1923 and Bornmüller's undated remark "nur Standortsform der *C. persica* !"

*Celsia freynii* Sint. in Oesterr. Bot. Z. 44: 297. 1894 = *Verbascum freynii* (Sint.) Murb.

Type indication: [Turkey], "Paphlagoniae ad Tossia [Tossya] in silvaticis subalpinis montis Giaurdagh [Gavur Da.] ad Tossia [Tossya] die 10. junio et 4. julio 1892, leg. Sintenis (Exsicc. 4210)".

Lectotype (designated here): Fruiting plant, supposedly from 4.7.1892, on the right side of the sheet with the definitive label "P. Sintenis: Iter orientale 1892. No. 4210. Paphlagonia. Wilajet Kastambuli. Tossia: Giaurdagh, in silvaticis subalpinis, 10.6. & 4.7.1892" (BRNM 117/37); isolectotypes: B, BP, G, JE, LD, PRC, WU; paralectotypes (flowering, collected 10.6.1892): BRNM, G, LD.

Note 1. — Freyn (1894) ascribed the authorship of the species to Sintenis alone ("Sint. in litt."), while other species in the same article have the authorship "Freyn & Sint."

It is assumed that the flowering individuals are from

the earlier and the fruiting individuals from the later collecting date.

*Note 2.* — The species must not be confused with *Verbascum xfreynianum* Borbás in Oesterr. Bot. Zeitschr. 26(3): 88. 1876, which is the hybrid *V. chaixii* × *V. thapsus*, and which I also typify at this occasion:

Type indication, p. 89: [Croatia], “Inveni inter parentes in pascuis montanis inter pagos Veprinac et Vela-Utzka [Vela Učka] Istriae prope montem Monte Maggiore [Učka].(31.7.1875. Oesterr. Bot. Zeitschr. 1875, p. 304) [published as nomen nudum without description] et ad vias publicas inter pagos Brussani [Brušane] et Ostaria [Baške Oštarije] in monte Velebit (23. August) Croatiae, et dicavi scrutatori florae istriacae, hungaricae et transsilvanicae strenuo ac felicissimo, J. Freyn mihi amicissimo”.

Lectotype (designated here): “Flora litor. Austriaci, folium radicale, Vela Utzka in pascuis montanis sub montis Maggiore radicibus, 31.7.1875, *Borbás*” (BP 636589); isolectotype BRNM. The specimen consists of two basal leaves and the lower part of the inflorescence evidently added later. The blank printed label headed “Herbarium Reg. Scient. Univ. Hung. Budapest” carries the note “In herb. Borbas apud *Verbascum freynianum* Borb.”. Already Hayek (1931: 109) endorsed this parent combination for this specimen.

*Verbascum adpersum* Freyn & Sint. in Oesterr. Bot. Z. 44: 296. 1894 = *Verbascum stachydifolium* var. *adpersum* (Freyn & Sint.) Murb.

Type indication: [Turkey], “Paphlagoniae Tossia [Tosya]: in campis ad Sabadscha [Sapaca] typo promiscue invenit die 23. Junio (floriferum; exsicc. 4360) et 4. Aug. 1892 (fructif. exsicc. 4360b), leg. Sintenis”.

Lectotype (designated here): Specimen with the provisional label “4360, Tossia: Sabadscha in campis, 23.6.92” and the definitive label “P. Sintenis: Iter orientale 1892. Paphlagonia. Wilajet Kastambuli. Tossia: in campis ad Sabadscha. 23.6.1892” (BRNM 12/37, sheet no 1); isolectotypes: BM, BP, BR, BRNM, G, JE, LD, M (2), LD (7), PR, PRC, SARA, WU, Z; paralectotypes (4.8.1892, *Sintenis 4360b*): B, BRNM, G, LD, PR, PRC, WU, Z.

*Note.* — A specimen deposited in W and its duplicate in G (obtained via Huber-Morath) have the date “6.–7.” not corresponding with the protologue.

*Verbascum aphyllopodum* Freyn & Sint. in Oesterr. Bot. Z. 44: 264. 1894

= *Verbascum lasianthum* Boiss. ex Benth.

Type indication: [Turkey], “Paphlagoniae ad Tossia [Tosya]: in glareosis rivuli Devrek-tschai [Devrez Çai?] prope Sufler die 23. Julio 1892, leg. Sintenis (Exsicc. 4361)”.

Lectotype of *Verbascum aphyllopodum* (designated here): Specimen on two sheets with basal and apical part of the plant and two definitive labels “P. Sintenis: Iter

orientale 1892. No. 4361. Paphlagonia. Wilajet Kastambuli. Tossia: in glareosis ad Devrekschai prope Sufler. 23.6.” as well as the provisional label “4361, Tossia: in glareos. fluv. Devrekschai prope Sufler. 23.6.92” (BRNM 54/37); isolectotypes: G, JE, LD (3, of which LD 1035869 only has the basal part of the plant), WU.

*Verbascum bracteosum* Freyn & Sint. in Oesterr. Bot. Z. 44: 294. 1894.

Type indication: [Turkey]: “Paphlagoniae Tossia [Tosya]: in monte Giaurdagh [Gavur Da.] ad Tossia [Tosya] die 10. Junio 1892, leg. Sintenis (Exsicc. 4209)”.

Lectotype (designated here): Specimen with the provisional label “4209, Tossia: Giaurdagh. 10.6.92” and the definitive label “P. Sintenis: Iter orientale 1892. No. 4209. Paphlagonia. Wilajet Kastambuli. Tossia: Giaurdagh, 10.6.1892” (BRNM 1020/32, with determination label from Murbeck dated 1932); isolectotypes: G.

*Note.* — Huber-Morath (1978) cited a “holotype” at LD, but actually LD preserves only a photograph of the BRNM specimen with Murbeck’s inscription “Typus!” and a note stating “specimen in herb. Freyn”.

*Verbascum caudatum* Freyn & Bornm. in Oesterr. Bot. Z. 42: 346. 1892.

Type indication: [Turkey], “Cappadocia, ad vias inter Caesaream [Kayseri] et Yosgat (inter pagos Köprüzköi et Keller) 1300 m s.m. mare die 23. junii. 1890, leg. Bornmüller (Exsicc. 2181)”.

Lectotype (designated here): Specimen with Bornmüller’s original label “J. Bornmüller, plantae Anatoliae orientalis 1890, No 2181, Cappadocia: inter Caesaream et Yosgat (inter pag. Köprüzköi et Keller) ad vias, alt. 1300 m s.m., 23.6.890” (BRNM 1021/32, with determination label from Murbeck dated 1932); isolectotype: B.

*Note.* — JE preserves a specimen *Bornmüller 2183* of this species from “Cappadocia: ad Caesaream”. LD only preserves a photograph without data about the location of the original material.

*Verbascum cylindraceum* Freyn & Sint. in Oesterr. Bot. Z. 44: 295. 1894.

= *Verbascum cheiranthifolium* var. *asperulum* (Boiss.) Murb.

Type indication: [Turkey], “Paphlagoniae Tossia [Tosya]: in montibus prope urbem die 13. junio et 28. julio 1892, leg. Sintenis (Exsicc. 4212)”.

Lectotype of *Verbascum cylindraceum* (designated here): Specimen “1”, collected on 13.6.1892 with the provisional label “4212, Tossia: in montos. supra urbem, 13.6.92” and the definitive label “P. Sintenis: Iter orientale 1892. No. 4212. Paphlagonia. Wilajet Kastambuli. Tossia, in montosis supra urbem, 13.6. & 28.7.1892” (BRNM 23/37); isolectotypes: B, BP, BR,

G, GOET, JE(2), M(2), LD(3), PR, PRC, Z; paralectotypes (collected on 28.7.1892): BP, BRNM, G, LD(2), W, WU, Z.

*Note.* — A further specimen, BRNM 22/37, has the same collection number as the type, but the collecting locality is given more precisely as “Tossia, in montosis Tschinonbaba” and collecting date is 28 July. The specimen only has a definitive label.

*Verbascum divaricatum* Freyn & Sint. in Oesterr. Bot. Z. 44: 265. 1894 [non Kittel, Taschenb. Fl. Deutschl., ed. 2, 352. 1844] ≡ *Verbascum xomissum* Sutorý, **nom. nov.** = *V. mucronatum* × *V. stachydifolium*

Type indication: [Turkey], “Paphlagoniae ad Tossia [Tosya]: in montosis inter Dikmen et Sufler [Sofular] die 23. Julio 1892, leg. Sintenis (Exsicc. 4362)”.

Holotype (Fig. 1 A): Specimen with definitive label “P. Sintenis, Iter orientale 1892, No. 4362, Paphlagonia. Wilajet Kastambuli. Tossia: in montosis inter Dikmen et Sufler, 23.6.1892” and the provisional label “4362, Tossia: in montos. inter Dikmen et Sufler, 23.6.92” (BRNM 62/37); isotypes: LD(2).

*Note.* — Murbeck (1933: 200) described the hybrid between *Verbascum mucronatum* and *V. stachydifolium* citing Freyn and Sintenis's illegitimate name in the synonymy and the collection *Sintenis 4362*, but without providing a binomial for this hybrid. Huber-Morath (1978: 599) changed nothing about this situation.

*Verbascum fallax* Freyn & Sint. in Oesterr. Bot. Z. 44: 264. 1894.

= *Verbascum glomeratum* × *speciosum*.

Type indication: [Turkey], “Paphlagoniae, Tossia [Tosya]: in valle Kaiseri-dere die 26. junio 1892, leg. Sintenis (Exsicc. 4510)”.

Lectotype (designated here): Specimen of two sheets, one, carrying the middle part of the stem and a basal leaf, with a provisional label with the collecting number only, the other, carrying a part of the inflorescence and one leaf, with the definitive label “P. Sintenis: Iter orientale 1892. No. 4510, Paphlagonia. Wilajet Kastambuli. Tossia, Keiseridere, 26.6.1892” (BRNM 30/37); isolectotypes: B, LD(3), PR.

*Verbascum xgeminatum* Freyn in Oesterr. Bot. Z. 26: 370. 1876.

= *Verbascum blattaria* × *sinuatum*.

Type indication: [Croatia] “... ad tuguria militaria sub castro Fort Max dicto non procul ab oppido Pola Istriae australis”.

Holotype: Specimen with Freyn's original label “Pflanzen aus Österreich-Ungarn Nr. 1165. *Verbascum geminatum* Freyn in Ö. b. Z. XXVI. p., *V. blattaria* – *sinuatum* G. G. fl. fr., sterile Orte bei dem Militairbaraken unter F. Max, Bodenunterlage Kalk, Seehöhe 15 m, 20.8.1876, leg. J. Freyn” (BRNM 19951/36).

*Verbascum hadschinense* Freyn in Bull. Herb. Boissier, ser. 1, 4: 45. 1896.

Type indication: [Turkey], “Cappadocia australis, Hadschin [Saimbeyli]: in valle arido Sassak die 23. majo 1893, leg. Prost. Manissadjian (Exsicc. 1001)”.

Holotype: Specimen with the original label “Manissadjian Pl. or. 1001, Süd-Cappadocien, Hadschin: im trockenem Thale Sasak, 23.5.1893” (BRNM 1022/32, with determination label from Murbeck dated 1932).

*Note.* — LD preserves a photograph of the holotype with the note “Typus in herb. Freyn (Brno)”.

*Verbascum haesareense* Freyn & Bornm. in Mem. Herb. Boiss. 13: 27. 1900.

Type indication: [Iran], “Persiae austral. prov. Kerman in monte Kuh-i-Häsar (inter Kerman et Bender Abbas siti) c. 3600 m supra mare die 11.8.1892, leg. Bornmüller (Exsicc. 4996)”.

Lectotype (designated here): Specimen with the original label “J. Bornmüller: Iter Persico-turcicum 1892–93, No. 4996, Persiae austr.: prov. Kerman: in monte Kuh-i-Häsar (inter Kerman et Bender-Abbas), c. 3600 m s.m., 11.8.1892”, with Freyn's date of identification 18.12.99 and a small label with pencil-drawn details of the flower (BRNM 67/37); isolectotypes: B [with Freyn's determination from 18.12.1899 and with Bornmüller's note for Murbeck: “Es wird Ihnen willkommen sein, wenn ich das Expl. nochmals schicke. Vielleicht ist nur noch im Herbar Freyn diese Art vertreten, daher alles auch nur dürftig!”, Murbeck added a note for Bornmüller: “Das hiesige Museum [LD] hat von Ihnen ein Ex.[emplar] bekommen!”, LD [with Bornmüller's note “Leider nur diese Probe abgebar! Die Pfl.[anze] ist wohl ein “Unicum“ meines Herbars!”].

*Verbascum inaequale* Freyn & Sint. in Oesterr. Bot. Z. 44: 295. 1894.

Type indication: [Turkey], “Paphlagoniae Tossia [Tosya]: Güwekbaschi ad montem Bellova die 9. Julio 1892, leg. Sintenis (Exsicc. 4701)”.

Lectotype (designated here): Specimen with the definitive label: “P. Sintenis: Iter orientale 1892. No. 4501, Paphlagonia. Wilajet Kastambuli. Tossia, Güwekbaschi ad montem Bellova, 9.7.1892” and a note added “dieses vielleicht Bastard von 4510 mit einer Art mit langen Blütenstielen” (BRNM 36/37); isolectotypes: B, BP(2), G, JE, LD(2), PR, Z.

*Verbascum nitidulum* Freyn & Sint. in Oesterr. Bot. Z. 42: 347. 1892.

= *Verbascum diversifolium* Hochst. in Lorent.

Type indication: [Turkey]: “Armenia turcica. Kharput [Elazığ]: prope Schuschnas [Şuşnaz] die 8. junii 1889, leg. Sintenis (Exsicc. 659b)”.

Lectotype of *Verbascum nitidulum* (designated here): Specimen with the original label “P. Sintenis: Iter

orientale 1889. No. 659b, Armenia turcica, Kharput: Schusnas, 8.6.” and a label with Murbeck’s determination *V. mesopotamicum* Boiss., dated 1932 (BRNM 71/37); isolectotypes: JE, LD.

*Verbascum phlomoides* var. *ramosa* Freyn & E. Brandis in Verh. K.-K. Zool.-Bot. Ges. Wien 38: 621. 1888.

= *Verbascum phlomoides* L.

Type indication: [Bosnia and Herzegovina], “... am Tarabovac”, [leg. Erich Brandis].

Holotype of *Verbascum phlomoides* var. *ramosa*: Specimen with the original handwritten label (Fig. 1C) “N. 9. Tarabovac 18.7.1885 EB [Erich Brandis]” (BRNM 19718/36).

*Verbascum pindicum* Freyn & Sint. in Bull. Herb. Boissier, ser. 1, 5: 793. 1897 = *Verbascum epixanthium* var. *pindicum* (Freyn & Sint.) Murb.

Type indication: [Greece], “Thessalia graeca; Pindus tymphaeus: in subalpinis montis Plaka prope Chaliki die 4. julio 1896, leg. Sintenis (Exsicc. 922)”.

Lectotype (designated here): Specimen with Freyn’s original description with his corrections of the text “P. Sintenis: Iter thessalicum 1896, No. 922, Pindus tymph. Chaliki: in subalpinis montis Plaka, leg. 4.7.” and determination labels by Bornmüller (undated) and Murbeck (dated 1929) (B 100278346); isolectotypes: BP, BR, BRNM (2), LD (5, one with Bornmüller’s comments), M (2), P, PR, SARA.

*Verbascum stachydifolium* Freyn & Bornm. in Oesterr. Bot. Z. 42: 346. 1892 [non Boiss. & Heldr. in Boissier, Diagn. Pl. Orient., ser. 1, 12: 25. 1853] = *Verbascum cappadocicum* Bornm.

Type indication: [Turkey], “Cappadocia. In apricis prope Caesaream [Kayseri] 1300 m, supra mare, die 22. junii, 1890, leg. Bornmüller (Exsicc. 2103 [lapsus calami, recte 2183])”.

Lectotype (designated here): The specimen in Bornmüller’s personal herbarium acquired by B with the original label “Turkey: Cappadociae in apricis ad Caesaream, alt. 1300 m, 21.6.1890, leg. J. F. N. Bornmüller 2183”, and determination labels by Bornmüller (undated), Murbeck (dated 1930) and Huber-Morath (dated 1976), the last also designating the specimen as “holotype” (B 100184609); isolectotypes: JE, LD.

Note. — No material is present in Freyn’s collection at BRNM. The material most consistent with the protologue in respect of collecting date and altitude of the collecting locality is the one at LD. It has a note by Bornmüller stating “Diese Art dürfte bisher nur in meinem Herbar vertreten gewesen sein! Ev. noch in Herb. Freyn”. Murbeck added on Bornmüller’s label “eine Probe!” and “pl./lanta/ in omnibus herbariis desiderata!”. On the label is the name *Verbascum freynianum* Bornm. = *Verbascum stachydifolium* Freyn & Bornm. in Bornmüller’s handwriting. The material in B has a different date (21.6.).

There is another specimen issued with the same number (2183) but collected already on 15.6.1890 at altitudes of 10–1200 m. The specimen in JE has a similar altitude designation (10–1200 m) and again a different date, 14.6. It has two labels by Bornmüller, one of 1929, stating that he supposed the name *stachydifolium* was correct: “Der Name *V. stachydifolium* Fr. & Bornm. kann bleiben, da der ältere Homonym schon von Boiss. Fl. Or. 4: 391 eingezogen ist”. The second one of October 1930 reflects his doubts with respect to the Cambridge Nomenclatural Code of 1930, which resulted in the publication of his nomen novum *V. cappadocicum*. Despite the differences in the label data, I consider the material as isolectotypes. All of them were used for the description. Bornmüller is known for his inconsistencies in this respect. He used to add under one collection number also collections from different dates and probably even different though not too distant localities. According to Murbeck (1933) the specimens were collected on 15 and 21 June 1930.

*Verbascum tempskyanum* Freyn & Sint. in Bull. Herb. Boissier, ser. 1, 4: 43. 1896 = *Verbascum armenum* var. *tempskyanum* (Freyn & Sint.) Murb.

Type indication: [Turkey], “Armenia turcica, Gümüşkane [Gümüştane]: in pascuis alpinis “Jaila” dictas die 6. aug. 1894, leg. Sintenis (Exsicc. 7254)”.

Lectotype (designated here): Specimen with the provisional label “7254, Karagoeldagh: Jaila, in pascuis alpinis, 6.8.94”, the definitive label “P. Sintenis: Iter Orientale 1894: No. 7254, Armenia turcica. Sanschak Gümüşkane Karagölldagh in saxosis alpinis dittonis jaila, 6.8.” and the printed description with corrections (BRNM 77/37); isolectotypes: B, BM, BP, BR, G, JE, LD, PR, WU, Z.

*Verbascum ×tomentosulum* Freyn in Oesterr. Bot. Z. 27: 397. 1877.

= *Verbascum chaixii* × *sinuatum*.

Type indication: [Croatia], “Bisher nur sehr vereinzelt in Südistrien auf Grasplätzen bei Batterie Corniale nächst Pola unter *Verbascum Chaixii chaixii* × *sinuatum*”.

Holotype: Specimen with the original label by Freyn (Fig. 1 D) “Pflanzen aus Oesterreich-Ungarn, ×*Verbascum tomentosulum* m., Ö.b.Z. XXVII 387 -8! Süd-Istrien. Gegend von Pola. Hügel unter Batt. Corniale, Kalk 10 m. 11.7.1877, leg. J. Freyn”, one label handwritten by Freyn with a short description and a small drawing, one small envelope with flowers with the name of the taxon (BRNM 20171/36).

*Verbascum tossiense* Freyn & Sint. in Oesterr. Bot. Z. 44: 263. 1894.

Type indication: [Turkey], “Paphlagoniae Tossia [Tosya]: in montibus prope urbem die 13. junio 1892, leg. Sintenis (Exsicc. 4213)”.

Lectotype (designated here): Specimen with the definitive label “P. Sintenis: Iter orientale 1892. No. 4213, Paphlagonia. Wilajet Kastambuli. Tossia, in montosis supra urbem, 13.6.1892” and the provisional label “4213, Tossia: in montosis supra urbem, 13.6.1892” (BRNM 78/37); isolectotypes: B, BM, BP, G, JE, LD (3), PR, Z.

*Verbascum tymphaeum* Freyn & Sint. in Bull. Herb. Boissier, ser. 1, 5: 795. 1897.

= *Verbascum epixanthinum* var. *pindicolum* (Freyn & Sint.) Murb.

Type indication: [Greece], “Thessalia graeca; Pindus tymphaeus: in subalpinis inter Dokimi et Ksiltepe die 9. julio 1896, leg. Sintenis (Exsicc. 923)”.

Lectotype of *Verbascum tymphaeum* (designated here): Specimen with the provisional label “923, P. T. in subalpinis inter Dokimi et Ksiltepe, 9.7.96”, the definitive label “P. Sintenis: Iter thessalicum 1896, No. 923, Pindus tymphaeus in subalpinis Dokimi et Ksiltepe, leg. 9.7.” and a label with Murbeck's determination dated 1932 (BRNM 19831/36); isolectotypes: G, LD.

*Verbascum varians* Freyn & Sint. in Bull. Herb. Boissier, ser. 1, 4: 44. 1896.

Type indication: [Turkey], “Armenia turcica, Gümüşkane [Gümüştane]: in declivibus silvaticis montis Darsosdagh die 5. junio 1894 leg. Sintenis (Exsicc. 5797)”.

Lectotype (designated here): Specimen of two sheets, with the provisional label “5797, Gumush. Darsosdagh, 5.6.94”, the definitive label “P. Sintenis iter orientale 1894, No. 5797, Armenia turcica, Sanschak Gümüşkane, Darsosdagh: in declivibus silvaticis, 5.6.” and a printed description with Freyn's corrections (BRNM 48/37); isolectotypes: B, BM, BRNM, BP, BR, G, JE, LD (2), PR, PRC, W, WU, Z.

*Verbascum varians* var. *pilosior* Freyn & Sint. in Bull. Herb. Boissier, ser. 1, 4: 44, 1896.

Type indication: [Turkey], “Armenia turcica, Kösvedagh [Köse Dağ]: in declivibus lapidosis ad Birachmed die 20. Aug. 1890, leg. Sintenis (Exsicc. 3372)”.

Lectotype (designated here): Specimen with the definitive label “P. Sintenis: Iter orientale 1890, No. 3372, Armenia turcica, Koesvedagh: in declivib. lapidos. ad Birachmed, 20.8.” and Freyn's determination dated 3.9.1895 (BRNM 47/37); isolectotypes: JE, LD (2), W.

*Note.* — Doubts about the systematic position of this taxon are discussed by Murbeck (1933: 388) and on the sheet in JE, which includes a note by Murbeck dated 1931: “Ob diese Pflanze zum Formenkreis des *Verbascum varians* gerechnet werden kann, scheint mir sehr zweifelhaft”.

*Verbascum viscidulum* Freyn & Sint. in Bull. Herb. Boissier, ser. 1, 5: 792. 1897 [non. Pers., Syn. Pl. 1: 215. 1805].

= *Verbascum epixanthium* var. *pindicolum* (Freyn & Sint.) Murb.

Type indication: [Greece], “Thessalia graeca, Pindus dolopicus: in valle fluvii Prion die 18. aug. 1896 unicum specimen tantum leg. Sintenis (exs. 1218).”

Lectotype of *V. viscidulum* (designated here): Specimens on two sheets (pair of leaves, part of inflorescence). The provisional label reads “1218. Sermeniko: in valle Prioni. 18.8.96”, the definitive label “P. Sintenis: Iter thessalicum 1896. No. 1218, Pindus dolopicus, Sermeniko: in valle Prioni. leg. 18.8., 16.5.97 determ J. Freyn”, and is has Murbeck's determination label *V. epixanthium* Boiss. & Heldr. γ. *pindicolum* (Freyn et Sint.) Murb. f. (*umbrosa*) calycis laciniis latioribus, dated 1932 (BRNM 19828/36).

*Verbascum xanthophoeniceum* subsp. *eriocarpum* Freyn & Sint. in Oesterr. Bot. Z. 44: 297. 1894 ≡ *Verbascum eriocarpum* (Freyn & Sint.) Bornm.

Type indication: [Turkey], “Paphlagoniae, Tossia [Tosya]: in silvaticis regionis subalpinae montis Giaurdagh [Giar Dag] die 10. junio et 29. julio 1892, leg. Sintenis (Exsicc. 4211)”.

Lectotype (designated here): Fruiting plant collected obviously on 29.7.1892, designated as “1” on the specimen with the definitive label “P. Sintenis: Iter orientale 1892, No. 4211, Paphlagonia. Wilajet Kastambuli. Tossia: Giaurdagh, in silvaticis regionis subalpinae. 10.6., 29.7.1892” (BRNM 63/37); isolectotypes: B, BP, G (2), JE, LD (2, one with pencil remark by Murbeck “Ett ex. liger också i Hb. Gött.!” [one specimen also in herb. Göttingen]; paralectotypes (flowering, collected 10.6.): G (2), GOET, BRNM, LD.

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