

Typification in *Iris* L. s.l. (Iridaceae) from Middle Asia

F. O. KHASSANOV* & N. RAKHIMOVA

Abstract: During typification studies in the herbaria TASH, LE, and K one lectotype was designated here and the neotype of *Iris svetlanæ* VVEDENSKY became superfluous. Types of eleven species are still left to be revealed.

Zusammenfassung: Während Typifizierungsarbeiten in den Herbarien TASH, LE und K wurde ein Lectotyp designiert und der Neotypus für *Iris svetlanæ* VVEDENSKY wurde überflüssig. Für elf weitere Arten ist ein Typus noch ausständig.

Keywords: Taxonomy, *Iris*, Middle Asia.

*Correspondence to: fkhasanov1@mail.ru

Prof. Dr. Furkat O. KHASSANOV, Dr. Nargiza Rakhimova, SPC Botanika, Academy of Sciences, F. Khodzaeva, 32 700143, Tashkent, Republic of Uzbekistan

INTRODUCTION

Most *Iris* species are of great interest as they are considered one of the best ornamental plants and many of them have been collected and described from Middle Asia. Unfortunately, some of them were described from material introduced into botanical gardens of Europe and United States. That's why the questions of type material and classical localities are very important. Recently, some revisors of the genus suggested to distinguish 16 genera (CRESPO, MARTINEZ-AZORIN & MAVRODIEV 2015), but authors are so far following the trusted researches (WENDELBO & MATHEW 1975; IKINCI et al. 2011) who showed large conformity of all Irises of the world. There are about 60 species in the genus *Iris* L. in the flora of Middle Asia (KHASSANOV & RAKHIMOVA 2012) and more than a dozen new species were described recently.

RESULTS AND DISCUSSION

1. *I. songarica* SCHRENK, FISCH. et C.A. MEY. Enum. pl. nov. 1: 3 (1841).

Typus: Ad fl. Ajagus, 30 Mai, 1840, Schrenk, (LE, isotypus K).

2. *I. loczyi* KANITZ, Anov 58, tab. 6, fig. 11, 5 (1891).

Holotypus: Kan-szu N. 82. In m. Nan-san collinis circa Czia-kou-ye, VI. 10. 1879, LOCZY (BP).

3. *I. tenuifolia* PALL., Reise 3: 714, tab. C, fig. 2 (1778).

Typus: LINN 61.13 (Herb. Linn).

4. *I. ruthenica* KER GAWL., Bot. Mag. 28, tab. 1123 (1808).

Typus: BM (LINN).

5. *I. lactea* PALL., Reise 3: 713 (1776).

Typus: Russia, Sibir-orient. [Ad Jarei Nor?]. Pallas, #s.n. (LE; isotype BM 000958418).

6. *I. oxypetala* BUNGE, Enum. Pl. China Bor. 63 (1832).

Holotypus: Sina bor. circa Peking (LE).

7. *I. spuria* L., Sp. Pl. 39 (1753) subsp. halophila (Pall.) Mathew & Wendelbo ex Wendelbo, Flora Iranica 112: 23 (1975).

Typus: LINN-HS 92.44 (Herb Smith).

8. *I. falcifolia* BUNGE, Mem. Ac. Petersb. Sav. Etrang. Acad. Petersb. 7: 505 (1852).

Typus: In deserts between Buchara and Kermine, collected by A. Lehmann, determ. Olga Fedtsch. (in Russian), (LE, isotypus K). There are 2 specimens in LE: Alexandri Lehmann Reliquiae botanicae. *I. falcifolia* m. Al. Bunge without place of collection and 1 specimen determined by O. Fedtschenko, which could be treated as a type.

9. *I. longiscapa* LEDEB., Fl. Ross. 4: 83 (1853).

Typus: Kyzylkum, Chakyrata (LE).

10. *I. lineata* FOSTER ex REGEL, Gartenfl. 36:201, tab. 1244, fig. 1-7 (1887).

Typus: Unknown.

11. *I. darwasica* REGEL, Acta Hort. Petrop. 8: 679 (1884).

Holotypus: Iter Turkestanicum. In monti Ala-Kesrik ad orientae Kuljab, 7000', VI/1883 (LE).

12. *I. korolkowii* REGEL, Acta Hort. Petrop. 2: 432 (1873).

Holotypus: Ex horto bot. Petropolitano. n.73, sem. m. Korolkoff (LE). There also 2 labels with writings (Typus!) by O. Fedtschenko and V. Botschantzev.

13. *I. hoogiana* DYKES, Gard. Chron. 29: 397, fig. 84 (1816).

Typus: Unknown.

14. *I. stolonifera* MAXIM., Bull. Ac. Sc. Petersb. 26: 535 (1880).

Holotypus: Zarafshan valley, Sangy-Dzhuman canyon (in Russian), 25 May 1969, 3561'–7113', O. Fedtschenko (LE).

15. *I. bloudowii* LEDEB., Ic. Pl. Fl. Ross. 2: 5, tab. 101 (1853).

Typus: Altaici, Ledebour (LE).

16. *I. scariosa* WILLD. ex LINK. in SPRENG., SCHRAED. et LINK. Jahrb. 1: 71 (1820).

Typus: Unknown.

17. *I. alberti* REGEL, Acta Hort. Petrop. 5: 260 (1877).

Holotypus: Iter Turkestanicum 1877. IV/10. n. 38. Kleine Almatinka bei Werny, 4000' (LE).

18. *I. acutiloba* C. A. MEY., Verz. Pfl. Cauc. 32 (1831) subsp. *lineolata* (TRAUTV.) MATHEW & WENDELBO ex WENDELBO, Flora Iranica 112: 32 (1975)..

Holotypus: In collibus sicci prope Baku (LE).

19. *I. kolpakowskiana* REGEL, Acta Hort. Petrop. 5: 263 (1877).

Holotypus: Pr. Werny, 2/4.77, Fetissow (LE). There are 2 specimens collected in 1879 and holotype is presented by 2 plants in the lower part (Fig.1) collected by Fetissow.

20. *I. winkleri* REGEL, Acta Hort. Petrop. 8: 677 (1883).

Holotypus: Iter Turkestanicum. Pass Jassy pr. Urgent nider Alabuga. 9-11000 ft.01.06.1880 (LE).

21. *I. kurbanovii* F.O. KHAASS. et RAKHIMOVA, Stapfia 97: 177 (2012).

Holotypus: Turkmenistan, Western Koppehdagh, 10 km southern village Garaul, nearby snow, on the clay slopes within juniper trees, 2000 m.s.l., (in Russian), 6 IV 1997, fl., fruit., J. Kurbanov, N. Cherepova, V. Cherepov, (LE). There is the only specimen in LE with determination of R. Kamelin as "*I. reticulata* M.Bieb."

22. *I. pskemensis* RUKSANS, Buried Treasures: 363, fig. 138 (2007).

Holotypus: Uzbekistan, Pskem Range, Ihnachsai, stony slopes, altitude 2500-3000 m, Ruksans & Seisums 1998-17-6, ARJA 9865 (GB, holo, ex culturae in horto Janis Ruksans). Ic.: Buried Treasures (Portland, OR, 2007), Plate 138 (GB).

23. *I. fosteriana* AITCH. & BAKER, Trans. Linn. Soc. Bot. 3: 114 (1888).

Typus: Aitchinson, 128 (K, isotypus LE).

24. *I. bucharica* FOSTER, Gard. Chron. Ser. 3, 31: 385 (1902).

Typus: Mountain slopes in Eastern Bokhara at an elevation of 5000-6000' near the river Surkh-ab, a tributary to Amu Darya. This species was described on the base of cultural plants and we did not find type species nor in LE, neither in K.

25. *I. orchioides* CARRIÈRE, Rev. Hort. 52: 337 (1880).

Typus: Unknown.

26. *I. kuschakewiczii* B. FEDTSCH. ex O. et B. FEDTSCH., Bull. Jarb. Bot. Peters. 5: 158 (1905).

Typus: Kurdai, Turkestanicae, 20/III.1879, leg. Fetissow (LE). There are 2 specimens with the same labels.

27. *I. inconspicua* (VVED.) T. HALL et SEISUMS, Bot. Journ. Linn. Soc. 167, 3: 300 (2011).

Holotypus: Angren, 1957, Z. Filimonova, n. 512 (in Russian). There is also one more label (Grown in the Botanical Garden of the UzSSR Academy of Sciences from the roots, brought in 1957 by Z. Filimonova from Kurama Mountain Range opposite the Mount Angren, 28 May 1971, A. Vvedensky (in Russian) (TASH0000315).

28. *I. subdecolorata* VVED. ex POPOV, Key Fl. Tashkent: 75 (1923).

Lectotypus: Syrdarya district, Tashkent region, Tashkent suburbs, Nikiforovsky, 9 April 1920, V. Drobov, s.n. (originally in Russian) (TASH0000467, isolectotypus TASH0000468; designated by Boltenkov 2016: 145).

29. *I. albomarginata* R.C. FOSTER, Contr. Gray Herb. 114: 42 (1936) = *Iris coerulea* B. FEDTSCH., Bull. Herb. Boiss. 4: 917 (1904) = *I. fedtschenkoii* F.O. KHAASS. et RAKHIMOVA, Stapfia 97: 178 (2012).

Lectotypus (designated here): Tien-Shan occ., Pskem valley, Sjemessas, 9 August 1902, B. Fedtschenko (originally in Russian) (LE).

30. *I. vicaria* (VVED.) T. HALL et SEISUMS, Bot. Journ. Linn. Soc. 167, 3: 300 (2011).

Typus: Herbarium Florae Asiae Mediae. M. m. Tadshikorum, inter lapides ad declivia saxosa in montibus Hissaricis supra p. Schargun, alt. ca. 1250 mt., 14 April 1928, Vvedensky s.n., (TASH0000322, isotypus LE, K). E.V. Boltenkov in 2015 selected this specimen as a lectotypus, but A. Vvedensky himself mentioned duplicates as isotypes.

31. *I. warleyensis* FOSTER, Gardn. Chron, 31: 386, fig. 134 (1902).

Typus: Unknown.

32. *I. magnifica* (VVED.) F.O. KHASS. et RAKHIMOVA, Stapfia 97: 178 (2012).

Holotypus: Experimental department of botanical garden Central Asiatic University, n 110, Aksaj, Butkov, 1931 (in Russian), 27.03.1932, determ. Vvedensky, 119050 (TASH0000018). The plant was collected in 1931 and planted in the garden by Butkov (Fig. 2).

33. *I. leptorrhiza* VVED., VVED., Bull. Univ. As. Centr. 21: 151 (1935).

Lectotypus: Iris violet-green, Tabakchi Mountains to the Vakhsh River, 19 March (1913), fl., rare, 195 (in Russian) (LE00050076, isolectotype LE00050077; designated by Boltenkov 2016: 145). Michelson is not mentioned as a collector! There are more specimens with determinations of A. Vvedensky and O. Fedtschenko (as *Juno hissarica*) without place of collection.

34. *I. pseudocapnoides* RUKSANS, Buried Treasures: 362, fig. 108, 109 (2007).

Holotypus: Uzbekistan, Chimgan, on rocky outcrops, Ruksans 1975, Ruksans & Seisums 1996-28-4, ARJA 9622 (GB, ex culturae in horto Janis Ruksans).

35. *I. zaprjagaevii* (N.V. ABRAMOV) T. HALL et SEISUMS, Bot. Journ. Linn. Soc. 167, 3: 300 (2011).

Holotypus: Pamir austro-occidentalis, fl. Bizhun-Dara prope pag. Nischusp, 2200 m s. m., 24/ IV 1968, N. Abramov (LE).

36. *I. willmottiana* FOSTER, Gardn. Chron. 29: 261, fig. 100 (1901).

Typus: Unknown.

37. *I. zenaidae* (VVED. ex TSCHERNEVA) F.O. KHASS. et RAKHIMOVA, Stapfia 97: 178 (2012).

Holotypus: E bulbis a Z. Botschantseva in jugo Ferganico ad r. Aubek sub rupibus a. 1933 lectis in Horto Botanico Universitatis Asiae Mediae sub no. 581 enatus, 7 April 1934, Vvedensky s.n. (TASH0000323).

38. *I. svetlanae* (VVED. ex TSCHERNEVA) F.O. KHASS., Red Data Book of Uzb. ed. 4: 85 (2009).

Holotypus: E bulbis a Kovalevskaja, Tscherneva et Vvedensky in collibus gypsaceis inter p.p. Tojtschi et Kzyltscha in valle fl. Kaschka-Darja a. 1958 lectis in Horto Botanico Academiae Scientiarum UzSSR. enatus. 12.III.1962 fl. Kovalevskaja et Vvedensky (TASH 000321). There is a label with handwriting of Vvedensky “*I. svetlanae* VVED. Typus! 9/X/69. This makes neotype of Boltenkov (2016: 147) superfluous.

39. *I. maracandica* (VVED.) WENDELBO, Bot. Not. 128, 2: 216 (1975).

Lectotypus: Samarqand Oblast, Jizzakh Uyezd, hills on the right bank of the Sanzar River, 4 April 1921, A.I. Vvedensky 169 (in Russian) (TASH0000480; designated by Boltenkov 2016: 146).

40. *I. hippolyti* (VVED.) KAMELIN ex TAKHT., Redkie Izchez. Vidy Fl. SSSR, ed. 2: 102 (1981).

Holotypus: Southern Kysylkum. Kokcha mountain. Steep southern stony slopes with rare shrubby vegetation (*Amygdalus spinosissima*, *Zygophyllum atriplicoides*, *Atraphaxis* sp.). 1938. IV. 14. fl. (in Russian), I. Granitov, A. Evstafjev (TASH0000314).

41. *I. tubergeniana* FOSTER, Gardn. Chron. 25: 225 (1889).

Typus: Unknown.

42. *I. capnoides* (VVED.) T. HALL et SEISUMS, Bot. Journ. Linn. Soc. 167, 3: 300 (2011).

Holotypus: Mountain forest reserve, Bashkizylsay River basin, western slope exposure in the upper reaches of the Iransai River, on dry rocky stream bed, 10 May 1953, L. Nazarenko, n. 30 (in Russian) (TASH0000312, isotypus TASH0000313).

43. *I. tadshikorum* VVED., Bull. Univ. As. Centr. 21: 152 (1935).

Holotypus: Darwas, between Sary-Tash and Tavildara, on the pass, on stony soil (9000'-10000'), Turkestan, 17 April [18]97, S. Korshinsky, 5106 (in Russian) (LE00050120).

44. *I. parvula* (VVED.) T. HALL et SEISUMS, Bot. Journ. Linn. Soc. 167, 3: 300 (2011).

Lectotypus: M. m. Tadshikorum, ad declivia argilloso-saxosa montium Tschulbair supra p. Sina, alt. ca. 2600 mt., 23 May 1929 fl., 30 June fr., Vvedensky s.n. (TASH0000320, isotypus LE00050092; designated by Boltenkov 2016: 147).

In the protologue (VVEDENSKY 1963) was indicated the exsiccate no. 663 (“Herbarium Florae Asiae Mediae”) and mentioned TASH as a place of Type deposition. We found this exsiccate in LE only. In spite of this, we choosed as a type specimen in TASH with handwriting of the author, because of the same place and time of collection. The number mentioned in type (1005) was not mentioned in protologue and exsiccate (663) and do not contradict to each other.

45. *I. linifolia* O. FEDTSCH., Bull. Jard. Bot. Petersb. 5: 159 (1905).

Holotypus: Pass Kendyr-aus, zwischen Angren and Kokand, leg. Mussa 20/5.80 (LE).

46. *I. vvedenskyi* (NEVSKI ex WORON. et POPOV) NEVSKI, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 331 (1937).

Holotypus: Kughitang ridge near Khodzhfil-ata village, alpine meadows with spiny shrubs on a stony slopes (in Russian), 475, 27.06.31, Nevski (LE).

47. *I. narynensis* O. FEDTSCH., Bull. Jard. Bot. Petersb. 5: 159 (1905).

Holotypus: Iter Turkestanicum. In valle fluvii Naryn, 1881 (LE).

48. *I. narbuti* O. FEDTSCH., Izv. Ob. Ljub. Est. Antr. I Etn. 103: 147 (1902).

Holotypus: Iter Turkestanicum, iter Dengere et Sangtoba, III. 1884 (LE).

49. *I. rosenbachiana* REGEL, Acta Hort. Petrop. 8: 675, tab. 8 (1884).

Holotypus: Iter Turkestanicum. Sloikopa (?) ad fl. Aksuu Badachschanicum 5000, 17-29/III/ 1883 (LE). There is the only specimen where plants of the classical location are presented in the upper part above mentioned locality (Fig. 3). Such kind of compiled type specimens are usual for Regel's types.

50. *I. baldschuanica* B. FEDTSCH. ex O. FEDTSCH., Journ. Russ. Bot. 5: 77 (1909).

Holotypus: Flowers yellow (Fig. 4). Received by B.A. Fedtschenko from Tubergen as living (from Bukhara), determ. Olga Fedtschenko (in Russian) (LE).

51. *I. nikolai* VVED., Bull. Univ. As. Centr. 21: 151 (1935).

Holotypus: Surkhandarja basin, Tschulbair mountains, soft slopes upper village Sino (in Russian). Collected and determined by Vvedensky. 24.04.1926, 217 (TASH).

52. *I. popovii* VVED., Bull. Univ. As. Centr. 21: 152 (1935).

Holotypus: Bukhara khanate, Darvaz district, Peter 1 range, pass Gardan-i-Kaftar, 17, 07.1911, A. Goljbek (in Russian), 271 (LE).

53. *I. drepanophylla* AITCH. & BAKER, Trans. Linn. Soc. Bot. 31, 1: 115 (1888).

Holotypus: Aitchison 173 (K).

54. *I. khassanovii* TOJIBAEV & TURGINOV, Phytotaxa 158 (3): 224-228 (2014).

Holotypus: Pamir-Alai: border of the Hissar Range, Baisuntau, near the village of Gumatag, Parakhnaursaj, stony

slopes, 2123 m, N 38.35696 E 067.33598, 4 May 2013, Turginov, 1421 (TASH).

55. *I. rudolphii* F.O. KHASS., ESANKULOV et ACHILOVA, Stapfia, 99: 207 (2013).

Holotypus: Uzbekistan. Kelif-Sherabad range; nearby village Aktash (TASH).

56. *Iris victoris* F.O. KHASS., U. KHUZH. & N. RAKHIMOVA, Stapfia, 99: 207 (2013).

Holotypus: Uzbekistan. Kelif-Sherabad range; nearby village Aktash. (TASH).

57. *Iris austrotschatkalica* TOJIBAEV, F. KARIM. et TURGINOV, Turczaninowia 17 (4): 12-16 (2014).

Typus: West Tian Shan. Southern Chatkal. Ungor-Tepa mountains. 3 km north of the Paramon village. Stony slopes, 1200 m a.s.l. 41°25'18.69" N, 71°43'44.39" E. 24 IV 2010. F.I. Karimov, M.D. Turginov» (TASH, isotypus ALTB).

58. *I. petri* F.O. KHASS., N. RAKHIMOVA et ACHILOVA, Stapfia, 101: 207 (2014).

Holotypus: Uzbekistan. Kelif-Sherabad range; 25 km eastern town Bajssun. (TASH).

59. *I. rodionenkoi* LAZKOV et NAUMENKO, Turczaninowia 17 (2): 32–34 (2014).

Typus: Kyrgyzstan, north-western spurs of the Fergana ridge, between the rivers Uuru-Sai and Sary-Bel, 41°27'06,5"N, 72°17'35,6"E, 4 IV 2014, A.N. Naumenko» (LE, isotypus FRU, MW ALTB).

REFERENCES

- BOLTENKOV E.V. (2016): Typification of the Junos names (Iridaceae) published by A.I. Vvedensky. — Phytotaxa **252**(2): 143-148.
- CRESPO M., MARTÍNEZ-AZORÍN M. & E. MAVRODIEV (2015): Can a rainbow consist of a single colour? A new comprehensive generic arrangement of the '*Iris sensu latissimo*' clade (Iridaceae), congruent with morphology and molecular data. — Phytotaxa **232**(1): 53 [epublished].
- IKINCI N., HALL T., LLEDO M. D., CLARKSON J., TILLIE N., SEISUMS A., SAITO T. HARLEY M. & CHASE M.W. (2011): Molecular phylogenetics of the Juno irises, *Iris* subgenus *Scorpiris* (Iridaceae), based on six plastid markers. — Bot. J. Linn. Soc. **167**(3): 300.
- KHAASSANOV, F.O. & RAKHIMOVA, N. (2012): Taxonomic revision of the genus *Iris* L. (Iridaceae JUSS.) for the flora of Central Asia. — Stapfia **97**: 174–179.
- VVEDENSKY A. I. (1963): *Juno* TRATT. In: OVCHINNIKOV, P.N. (Ed.) Flora of the Tajik SSR, vol. 2. — Izd. Akad. Nauk SSSR, Moscow & Leningrad, pp. 425–426.
- WENDELBO P. & B. MATHEW (1975): *Iris* L. - In: RECHINGER K.H. (ed.) Flora Iranica, Vol. 112. — Akademische Druck- und Verlagsanstalt, Graz, Austria, p. 13-68.

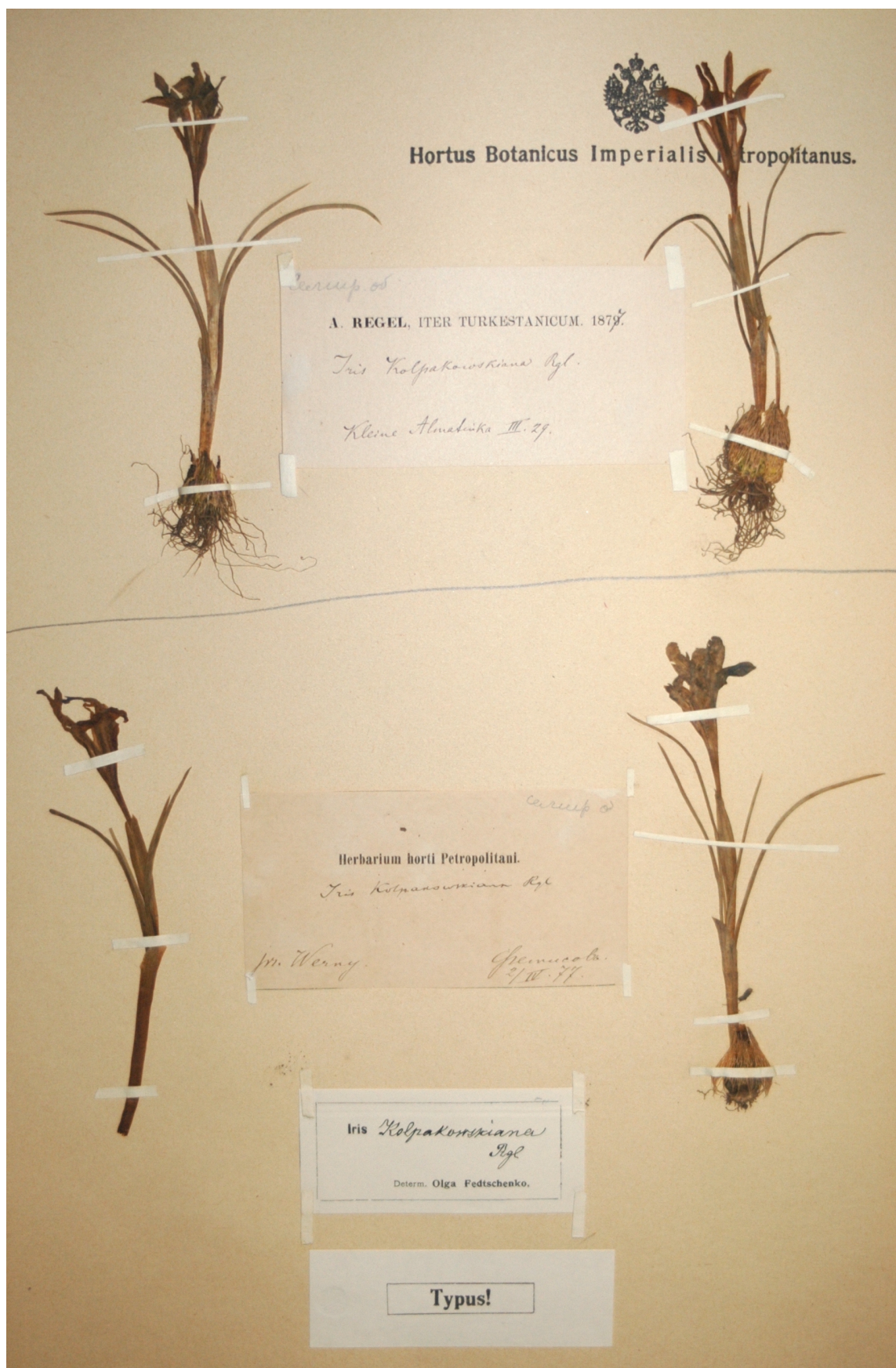


Fig. 1: Holotypus of *I. kolpakowskiana* REBEL



Fig. 2: Holotypus of *I. magnifica* (Vved.) F.O. KHASS. et RAKHIMOVA



Fig. 3: Holotypus of *I. rosenbachiana* REGEL



Fig. 4: Holotypus of *I. baldschuanica* B. FEDTSCH. ex O. FEDTSCH.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Stapfia](#)

Jahr/Year: 2016

Band/Volume: [105](#)

Autor(en)/Author(s): Khassanov Furkat O., Rakhimova Nargiza

Artikel/Article: [Typification in *Iris* L. s.l. \(Iridaceae\) from Middle Asia 51-58](#)