

Three New Species of *Thesium* from Kurdistan and Samos

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Abstract — In this paper, three new species are described: *Thesium carduchorum* HEDGE and *Thesium orogetum* HENDRYCH from the mountains of Turkish Kurdistan, and *Thesium coarctiflorum* HENDRYCH from the Aegean island of Samos. The new section *Coarctiflora* HENDRYCH is described to include *T. coarctiflorum*. A synopsis is given of the species of *Thesium* from Turkey and the adjacent islands.

S. W. Asia is one of the Palearctic regions richest in species of this very interesting genus. This is particularly true of Asiatic Turkey and the offshore islands with 17 recorded species, 8 of which have very limited distributions. The three new species which we describe raise this total to 20 of which 11 are endemic. In addition to the numerical abundance of species, several different sections are represented—of the 9 sections recognised by HENDRYCH (1962) in his synopsis of the Palearctic species 4 occur in Turkey.

Including the new species, the following is a synopsis of the species and supra-specific taxa that occur in Turkey and the offshore islands:

Subgenus: *Thesium*

Sectio: *Thesium*

Series: *Repentia* BOBROV

T. orogetum HENDRYCH in HEDGE et HENDRYCH (1964) in Preslia 36 : 243.

Series: *Linophylla* BOBROV

T. linophyllon LINNÉ subsp. *montanum* (EHRHART ap. HOFFMANN) ČELÁKOVSKÝ (1867) Prodróm. Fl. Böhmens 1 : 170.

Series: *Procumbentia* BOBROV

T. bergeri ZUCCARINI (1837) in Abhandl. Kön. Bayer. Acad. Wiss., math.-phys. Cl. 2 (1831—36) : 324.

Series: *Divaricata* HENDRYCH

T. humifusum DECANDOLLE in LAMARCK et DECANDOLLE subsp. *divaricatum* (JAN ap. MERTENS et KOCH) BONNIER (1927) Fl. Compl. Fr. Suis. Belg. 9 : 110.

Series: *Ramosa* BOBROV

T. arvense HORVÁTOVSZKY (1774) Fl. Tyrnav. 1 : 27.

T. carduchorum HEDGE in HEDGE et HENDRYCH (1964) in Preslia 36 : 241.

Series: *Micrantha* BOBROV

T. brachyphyllum BOISSIER (1844) Diagnos. Pl. Orient. 1/5 : 48.

Series: *Humilia* HENDRYCH

T. humile VAHL (1794) Symb. Bot. 3 : 43.

Series: *Alpina* HENDRYCH

T. alpinum LINNÉ (1753) Sp. Pl. 1 : 207.

Sectio: *Coarctiflora* HENDRYCH

T. coarctiflorum HENDRYCH in HEDGE et HENDRYCH (1964) in Preslia 36 : 242.

Sectio: *Compressia* HENDRYCH

T. compressum BOISSIER et HELDREICH in BOISSIER (1853) Diagnos. 2/12 : 104.

T. tauricolum BOISSIER et HAUSSKNECHT ap. BOISSIER (1879) Fl. Orient. 4 : 1067.

T. lycanicum BORNMÜLLER (1931) in Fedde Repert. 29 : 301, em. HENDRYCH (1961) in Acta Bot. Hungar. 7 : 38.

Sectio: *Macranthia* (BOBROV) HENDRYCH

T. macranthum FENZL (1834) in Flora 26 : 401.

T. kotschyanum BOISSIER (1846) Diagnos. 1/7 : 86.

T. billardieri BOISSIER (1844) Diagnos. 1/5 : 48.

T. scabriflorum DAVIS (1956) in Notes Royal Bot. Gard. Edinb. 22/2 : 83.

T. bertramii AZNAVOUR (1919) in Magy. Bot. Lap. 17 (1918) : 66.

Subgenus: *Chrysothesium* (JAUBERT et SPACH) HENDRYCH

T. stelleroides JAUBERT et SPACH (1844) Illustr. Pl. Orient. 2 : 104.

T. aureum JAUBERT et SPACH (1844) l.c.

T. cilicicum HAUSSKNECHT ap. BORNMÜLLER (1931) in Fedde Repert. 29 : 301.

The distribution of the Turkish species is still comparatively little known. It is likely that some of the local species which appear, with our present knowledge, to be stenoendemies or untopic species, will prove, with further botanical exploration, to have wider distributions.

***Thesium carduchorum* HEDGE, sp. n.**

Planta rhizomate estolonifero, caule ramosiore, foliis linearibus, uninerviis, inflorescentia subcontracta apice subspicata, ramulis floriferis unifloribus, brevioribus, oblique patentibus, bractea floribus fructibusque duplo vel triplo longiore, bracteolis floribus fructibusque aequilongis, floribus infundibulibus, fructu longitrorsu nervato.

Descriptio:

Planta perennis. Rhizoma perpendiculare vel obliquum, estoloniferum, crassum, lignosum, caules nonnullos (—15) emittens.

Caulis suberectus, a dimidio ramosus, robustus, 2—3 mm in diametro, laevis, infra sybcylindraceus, supra angulatus, totus distincte sulcatus, satis foliosus, a parte tertia aut quarta superiore in inflorescentiam transiens. Rami laterales in angulo 45° erecte patentes, apicem versus abbreviati.

Folia ima squamiformia, brevia, ca 2—3 mm longa, subtilia, diluta, inconstipata. Folia caulina oblongo-linearia, (2)2,5—3,5(4) cm longa, 1,5—2 (2,5) mm lata, uninervia, laevis, sub lente satis delicate denticulata, breviter acuminata, glaucescentia, usque dilute viridia, alternata.

Inflorescentia racemosa, composita, laxa, vaga, heteromalla vel paene subsecunda, multiflora.

Bractea lineariter oblonga, floribus fructibusque ca duplo vel triplo longior, ergo 5—8 (10) mm longa, 0,5—0,7 mm lata, uninervia, laevis, subtiliter denticulata, acuminata, dilute usque transparenter anguste marginata, viridis. Bracteolae duae, lineariter oblongae, plus minusve floribus vel fructibus aequilongae, ergo 2—2,5 mm longae, 0,3—0,5 mm latae, bractee aliter consimiles.

Ramuli floriferi subtenues, 2—4 mm longi, ad apicem inflorescentiae versus sensim abbreviati, patuli, distincte quadrangulati, scabri, semper unice uniflori.

Flores infundibulales, minuti, ca 2 mm longi, pentameri, breviter sed conspicue stipitati. Perigonium intus albidum (?), extus viridulum, in lobos quinque dissectum; lobi triangulati, integerrimi, acuti.

Fructus ellipsoideus, mediocris, 3—3,5 mm longus, 2 mm latus, distincte subemerseque sed tantum longitrorsu nervatus, viridulus, postea brunescens, breviter sed conspicue stipitatus;

stipitellus angulate alaticulus. Perigonium siccum defloratum inconspicuum, 0,5—0,8 mm longum, subcylindraceum, intra inflexum et tantum laxo constipatum.

Floret: Junio-Augusto. Fructificat: Julio—Augusto.

Stationes: In devexis rupestribus saxosisque, solo serpentino.

Locus classicus: Turcia asiatica: Provincia Van: Districtus Bascale: In monte Ispiriz Dag, 2,800 m s. m.

Typus: A P. H. DAVIS et O. POLUNIN 31. mense Julio anni 1954 sub no. D. 23, 651 lectus.

Conservatur: In herbario Horti botanici regalis Edinensis (Britannia).

Icon: Ut phototypus in tab. 11 nostra adlata.

Positio in systemate generis: In serie *Ramosa* sectionis subgenerisque *Thesium* positum.

Differentia: A *T. linophyllo* subsp. *montano* floribus infundibuliformibus, perigonii laciniis absque dentibus, ramulis unifloris, foliis uninervibus et lineariter oblongibus distat. A *T. humifuso* subsp. *divaricato* floribus infundibuliformibus, ramulis solum unifloris, inflorescentia racemosa similiter differt. A *T. humili* et *T. bergeri* fructibus solum longitudinaliter nervatis et distincte ellipsoideis abhorret. A *T. alpino* perigonio sicco deflorato fructu quadruplo quinqueve brevior differt. A *T. brachyphyllo* caule crassiore elatioreque, inflorescentia laxiore, heteromalla, foliis multo longioribus abhorret. A *T. oreogeto* rhizomate estolonifero, caule elatiore, ramoso, inflorescentia multiflora, floribus infundibuliformibus distat.

Affinitas: A *T. arvensi* caule ramosiore, foliis imis squamiformibus inconstipatis, ramulis floriferis brevioribus, non subhorizontaliter patentissimis, ergo inflorescentia paene contractiore, apice sub apiceque subspicata, bractea bracteolisque brevioribus et angustioribus differt. Cum eo imprimis rhizomate estolonifero, habitu, caractere foliorum, ramulis unifloribus et typo florum fructuumque convenit.

Etymologia: Secundum gentem Carduchi appellatam in territorio loci classici antea habitantem denominatur.

***Thesium coarctiflorum* HENDRYCH, sp. n.**

Planta caule plus minusve ascendente, foliis linearibus, uninervibus, subcarnosis, inflorescentiis lateralibus fasciculos dichasiales e floribus tres usque quinque subarcte contractis, imprimis bractea sub inflorescentia posita conspicua, floribus infundibuliter campanulatis, fructu reticulate emerse nervato.

Descriptio:

Planta perennis. Rhizoma perpendiculare, estoloniferum, relative longum, satis crassum, lignosum, caules nonnullos (3—5) emittens.

Caulis ascendens, suberectus aut subdecumbens, 10—20 cm longus, ramosus, robustus, ca 2—3 mm in diametro, laevis, in parte inferiore cylindricus usque tantum subangulosus, in parte superiore obsolete angulosus et longitudinaliter sulcatus, sparse foliosus, a quarta vel tertia parte inferiore, simili modo ut rami laterales in inflorescentiam transiens.

Folia ima desunt. Folia caulina linearia, 2—3 (3,5) cm longa, ca 1 mm lata, obsolete aut inobsolete uninervia, leavia, integerrima, acuminata, glaucescentia, usque viridia, sessilia, alternata, subcarnosa.

Inflorescentia composita, cum axi primario racemoso usque apice subspicato, laxo; inflorescentiae laterales in fasciculos dichasiales subarcte contractos, e floribus 3—5, rarius e multis compositae, in parte suprema item flores subsolitarii, in ramis brevibus, 2—5 mm longis, angulatis vel supra nullis.

Bractea sub fasciculo florum posita linearia, fasciculo usque duplo longior, ergo (0,7) 1—1,5 cm longa, ca 1 mm lata, paene inobsolete uninervia, glabra, integerrima, foliis item aliter

consimilis. Bractea florum bracteolis consimilis. Bracteolae duae, oblongo-lanceolatae, ca flore aequilongae aut illo paene longior, ergo ca 3–3,5 (4) mm longae, 0,5–1 mm latae, inobsoletae uninerviae, glabrae, subtiliter denticulatae, acuminatae, dilute marginatae.

Ramuli floriferi desunt.

Flores infundibuliter subcampanulati, minores, 2–3 mm longi, pentameri, brevissime stipitati usque sessiles. Perigonium intus albido-flavescens (?), extus flavo-brunescens, in lobos quinque dissectum; lobi triangulati, integerrimi, apice intra paulo inflexi.

Fructus ovate globosus, subparvus, ca 3 mm longus et 2,5 mm latus, distinctae reticulate emerse nervatus, viridulus, postea flavo-brunescens, brevissime et indistincte stipitatus. Perigonium siccum defloratum inconspicuum, 0,5 mm longum, conicum, intra paene contracte inflexum.

Floret: Julio—Augusto. Fructificat: Augusto—Septembre.

Stationes: Ignotae, a collectore non indicatae.

Locus classicus: Solum „Samos“ ut localitas allata, absque dubio ad insulam Samos, olim latine Samus dictam mari Aegeo pertinens.

Typus: A cl. Bertram Van Dyck Post 20. mense Augusto anni 1900 lectus, e collectione „Plantae Turcaicae asiaticae“ instituti Robert College Constantinopolitani et e herbario Postio origine.

Conservatur: In herbario Horti botanici Genevensis, Geneva (Helvetia).

Icon: Ut phototypus in tab. 12 nostra adlata.

Positio in systemate generis: In sectione *Coarctiflora*¹⁾ subgeneris *Thesium*.

Differentia: A speciebus omnibus regionis geographicae latioris floribus ramis lateralibus fasciculis subarcte contractis differt.

Affinitas: Species solitaria et separata e speciebus cognitis speciei nullae affinis est.

Etymologia: Secundum characterem inflorescentiae cum floribus in fasciculis coarctis denominatur.

***Thesium oreogetum* HENDRYCH, sp. n.**

Planta rhizomate breviter stolonifero, caule prostrato vel ascendente, humili simplicique, foliis plus minusve linearibus, uninerviis, inflorescentia racemosa, simplici pauciflora, ramusculis unifloribus brevibusque, bractea floribus aequilonga usque duplo longiore, bracteolis brevioribus, floribus late campanulatis.

Descriptio:

Planta perennis. Rhizoma perpendiculare vel obliquum, plus minusve breviter stoloniferum, sublignosum, multiceps, caules nonnullos usque plures emittens.

Caulis prostratus usque ascendens, (3) 4–6 cm longus, simplex aut tantum paulo ramosus, potius debilis, ca 1–1,2 mm in diametro, laevis, quadrangulatus, a dimidia parte in inflorescentiam transiens.

Folia ima squamiformia, brevia, 2–3 mm longa sed sparsa, luteo-brunescens. Folia caulina linearia usque lineariter oblonga, 0,7–1,2 cm longa, 1 mm lata, uninervia, laevia, integerrima, breviter acuminata, viridia, sessilia, alternata.

Inflorescentia racemosa, simplex, vaga, heteromalla, pauciflora, cum 3 vel maxime cum 7 floribus summatis.

Bractea oblongo-linearis, floribus aequilonga vel usque duplo longior, ergo 4–7 (8) mm longa, 1 mm lata, uninervia, laevis, integerrima et aliter foliis consimilis. Bracteae duae, oblongae, floribus distincte breviores rarius subaequilongae, ergo 2–4 mm longae, 0,5–0,7 mm latae, aliter bracteae consimiles.

Ramuli floriferi subtenuis, (1) 2–4 mm longi, in apicem inflorescentiae versus sensim abbreviati, patuli, quadrangulati, glabri, laeves, semper unice uniflori.

¹⁾ Sectio *Coarctiflora* HENDRYCH, sect. n.: Inflorescentiae laterales fasciculos dichasiales subarcte e floribus 3–5 contractos. (Typus sectionis species supra nota.)

Flores late campanulati, relative magni, 4—5 mm in diametro, pentameri, brevissime stipitati. Perigonium intus viridule luteum, extus luteo-brunescens, in lobos quinque dissectum, lobi late triangulati, subtiliter (sub lente!) denticulati, apice inconspicue intra inflexi.

Fructus adhuc ignotus.

Floret: Julio.

Stationes: In lapidum cacuminalibus parietinis et in rupium rimis zonae alpinae.

Locus classicus: Turcia asiatica: Provincia Van: Districtus Gevas: In monte Artos Dag dicto, ca 4,000 m s. m. (12,000 ped.).

Typus: A P. H. DAVIS et O. POLUNIN 15. mense Julio anni 1954 sub no D. 22,878 lectus.

Conservatur: In herbario Horti botanici regalis Edinensis (Britannia).

Icon: Ut phototypus in tab. 13 nostra adlata.

Positio in systemate generis: In serie *Repentia* sectionis subgenerisque *Thesium* positum.

Differentia: A *T. linophyllo* subsp. *montano* et *T. humifuso* subsp. *divaricato* habitu humili, caule prostrato, rhizomate stolonifero, inflorescentia simplici, pauciflora, racemosa, ramulis floriferis unifloris et a *Thesii* specie prima insuper item foliis uninerviis et plus minusve linearibus distat. A *T. arvensi*, *T. carduchorum* et *T. alpino* rhizomate stolonifero, caule prostrato, eramoso, inflorescentia pauciflora, bractea brevior, ramulis floriferis brevibus, floribus late campanulatis, relative magnis praecipue abhorret. A *T. humili* perenitate, inflorescentia brevior, satis pauciflora, bractea bracteolisque brevioribus, floribus late campanulatis majoribusque differt. A *T. bergeri* caule prostrato, habitu humiliore, inflorescentia pauciore, bractea bracteolisque brevioribus, floribus triplo majoribus differt. A *T. brachyphyllo* inflorescentia paucissima, sparsa, vaga et heteromalla, floribus majoribus, late campanulatis distat.

Affinitas: A speciebus seriei, *T. repente*, *T. ebracteato*, *T. hookeri* et *T. afghano* praecipue habitu humili, caule prostrato, inflorescentia valde pauciflora, bractea brevior, a *T. ebracteato* et a *T. repente* absentia comae bractearum steriliis apice inflorescentiae et a *T. ebracteato* insuper bracteolarum praesentia differt. Cum speciebus eiusdem forma magnitudineque florum, inflorescentia simplici racemosaque, florum dispositione remota vagaque praesertim convenit.

Etymologia: Secundum characterem loci natalis (oros = graece mons, ergo ut species montana) denominatur.

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Reference

HENDRYCH R. (1962): Divisio generis *Thesium* L., cum specierum euroasiaticarum respectu praecipuo. — *Novitates bot. Horti bot. Univ. Carol. Pragen.* 1962 : 17—24.

Explanations of the plates:

Tab. XI — *Thesium carduchorum* HEDGE

Tab. XII — *Thesium coarctiflorum* HENDRYCH

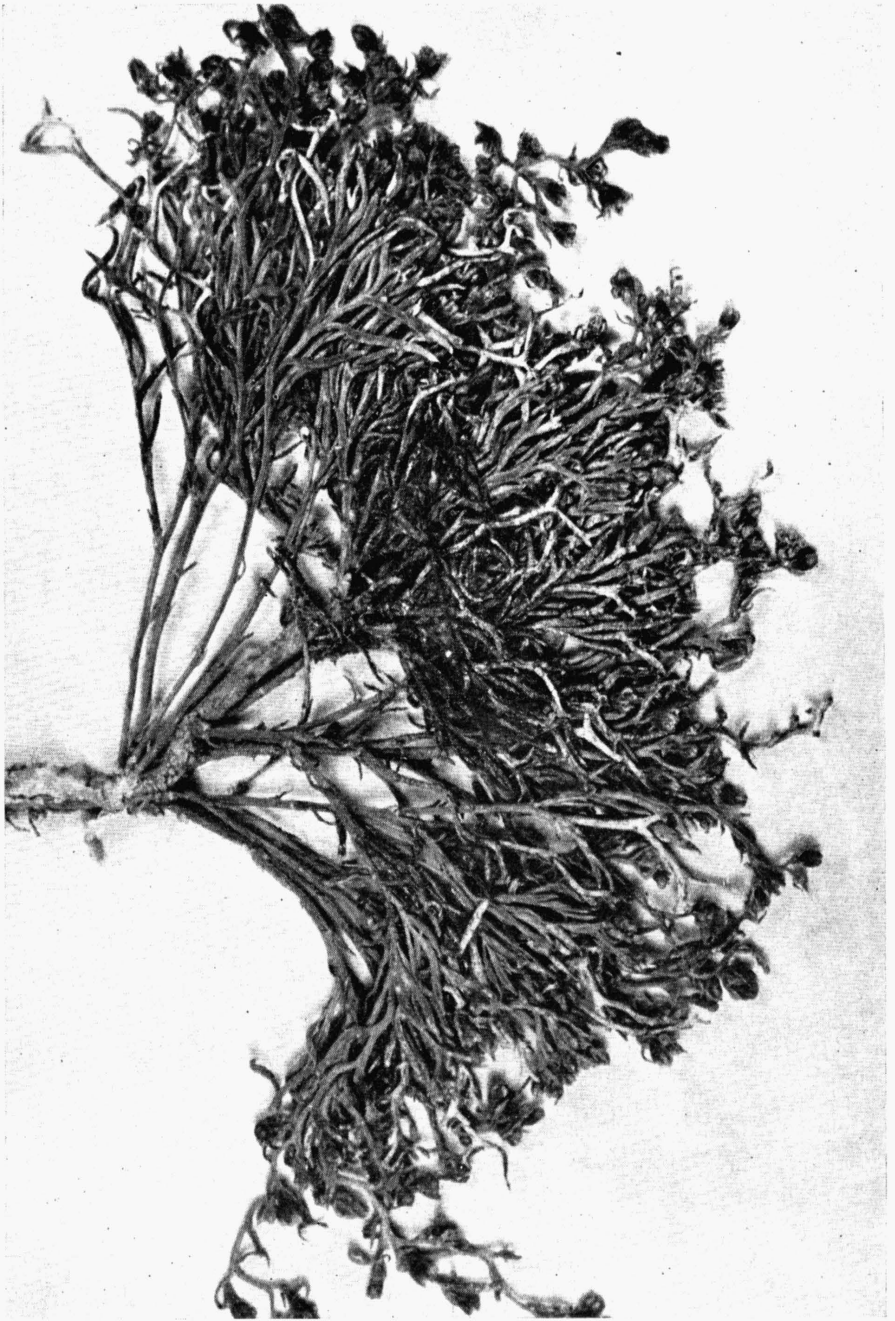
Tab. XIII — *Thesium oreogetum* HENDRYCH



I. C. Hedge and R. Hendrych: Three New Species of *Thesium* from Kurdistan and Samos



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